Reclaiming Wyoming:

A Comprehensive BLUEPRINT For Prevention, Early Intervention, and Treatment of Substance Abuse

A Study Prepared in Response to Wyoming House Bill 83

by the

Wyoming Department of Health

Substance Abuse Division

Cheyenne, Wyoming

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The contents of this report may be freely duplicated, provided the report is acknowledged.

What is possible in Wyoming? We have:

- The political will to make Wyoming the leader in the United States in safety from harm of substance abuse;
- The advantage of a small population, working together for mutual benefit; and
- The knowledge that if we cannot do the right and best thing for ourselves and our children, given our assets and willingness to overcome adverse odds, nobody will.

In Wyoming, we have the vision that our state is like no other place on earth, second to none:

By the year 2020, we will lead the country with the lowest rate of substance abuse.

By the year 2020, Wyoming will lead the country with indices of positive mental health.

Our victories will not come all at once. Victories will be daily, monthly, and yearly. Setbacks will provide understanding for discovery. Reclaiming the lives lost to, or in danger of, substance abuse will be one child, one teen, one adult, and one family at a time. Once reclaimed, we celebrate and protect that victory. That's how…

WyoWINS

Transmittal and Acknowledgements

In compliance with the provisions of Wyoming House Bill 83, a comprehensive blueprint for treatment, intervention, and prevention of substance abuse, misuse and use is hereby submitted the Wyoming Legislature and Governor on October 1, 2001. The report is simultaneously made available to the public at various web sites www.wyowins.net and www.paxtalk.com in electronic form. The web sites also contain other links and ancillary information related to this report, which may be updated from time-to-time.

The Report

The document that follows is approximately 300 pages, mapping out how Wyoming might respond to a major threat to the health, safety, and welfare of its citizens. Several tables follow, which briefly summarize the content of the report.

The tables depict a "lifespan" approach to organizing a Wyoming-specific approach to substance abuse. The lifespan approach has been used, because substance abuse has different faces and manifestations at different ages from before birth to old age.

The tables summarize how the Wyoming-specific approach has to be organized by individual, family, school, community, professional, policy, and other levels. One person or organization will not be able to solve this deadly problem alone.

The tables outline how the Wyoming-specific approach must be organized at various levels of intensity to get the job done. Some actions can be done across the board in Wyoming; other actions will need to be taken at a more focused or intensively level.

A review of the summary tables and table of contents enables a reader to understand better the scope and true comprehensive nature of the task required by the Legislature. The narrative report is about 250 pages, with some 50 pages of detailed references for the construction of this document.

Acknowledgements

The authors of this report want to recognize the extraordinary contributions we have received from four people. They are Governor Jim Geringer, State Representative Doug Osborn, Department of Health Director Dr. Garry McKee, and Substance Abuse Division Director Dr. Diane Galloway. The Governor has moved decisively to set the State of

Transmittal and Acknowledgements

Wyoming on a new course that will no longer accept the status quo. Through his leadership and that of key members of the legislature, those who are concerned about the challenge of substance abuse have been reinvigorated and have become active in seeking new and better ways of doing things.

One of those Legislative leaders is Doug Osborn. As chairman of the Subcommittee on Substance Abuse, Rep. Osborn has fully committed himself to this project. His hands-on involvement in the study has made it a better, more responsive product. Doug Osborn has worked tirelessly on the project, and his contribution needs to be recognized.

Dr. McKee and Dr. Galloway have, likewise, provided both the commitment and the direction without which this project could not have been accomplished. These are two public servants who understand the issues involved and, more importantly, understand how complex and interrelated they are. The knowledge that they will share substantial responsibility in implementing this plan should provide the Legislature great assurances about its ultimate success.

In addition, we would like to recognize the enormity of the contribution of other state officials as well. Judith Uphoff, the director of the Department of Corrections, Susan Lehman, Director of the Department of Family Services and Lisa Skiles, Director of the Department of Workforce Services, have each contributed significantly to this effort. They and key members of their staffs have spent considerable time and have provided helpful direction in the development of the plan.

The authors also gratefully acknowledge the contributions of scientist, national leaders, individuals, and other organizations such as: Dr. Tony Biglan, Dr. David Comings, Dr. Jim Derzon, Mr. Conrad Hogan, Dr. Harold Holder, Mr. Jerry Wells, Dr. Don Jorgensen, Dr. Gail Harris, Dr. Jack Hughes, National Institute on Drug Abuse, Center on Addiction and Substance Abuse, DATACORP and others.

There are others who should be recognized, but the list is far too lengthy. Many will recognize their "fingerprints" in the following pages. This has truly been a statewide effort. That, of course, is good. Substance abuse is a statewide problem; the solutions are Wyoming solutions.

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Executive Summary

This blueprint lays out a comprehensive plan for substance abuse treatment, intervention, prevention and control for the whole state. There are 11 major sections to the report.

The document describes the processes how the report and study were fashioned in the preface and introduction (chapter 1), inclusive of key definitions, guiding principles and the people, places and data consulted over the course of the study.

The science behind the causes of substance abuse, misuse and use are laid out in the chapter on the Nature and Nurture of Addiction, chapter 2. Without this foundation, the recommendations in later chapters make no sense.

About 100 pages of the report are devoted to the prevention of substance abuse or early intervention. The chapter 3 focuses on a life-span approach from birth to adulthood.

The chapter four is on the treatment system, and consumes about 75 pages ranging on policy and procedural issues for improving treatment outcomes in our state. Chapter 5 presents information on juvenile and family issues for substance abuse.

Substance abuse and crime are intertwined, and discussed in Chapter 6. Breaking the cycle of crime and substance abuse will improve our quality of life substantially.

The government cannot solve the problem of substance abuse by itself. Chapter 7 details how various stakeholders can be involved in reclaiming Wyoming.

Too often, government is approached with the idea, “just spend more money.” Chapter 8 details issues of accountability for public funds that must be addressed in reducing the epidemic of substance abuse in our state, using monitoring systems.

Over and over again, people say, “we must change the norms of Wyoming” with respect to the perception of substance use, misuse and abuse. Chapter 9 details how the real norm of Wyoming, which does not support substance abuse, can be magnified.

Chapter 10 documents assorted issues that need to be addressed with substance abuse in Wyoming, and Chapter 111 details management issues that will need to be developed in time to reflect the will of the Legislature.

Tables 1 and 2 that follow this page summarize the recommendations and findings of the report. This is the most efficient way of summarizing the 300 page report findings.

Table 1: Lifespan Strategy Summary for Substance Abuse Treatment, Intervention, Prevention, & Control

	Pre- and Postnatal	Infancy and Early Childhood	Middle Childhood	Puberty and Adolescence	Adulthood
Individual	▪ Brief alcohol & tobacco office interventions ▪ Special treatment priority grants or contacts ▪ Voluntary screening protocols	▪ Media campaign ▪ First Steps for Success ▪ Emergent Literacy ▪ Voluntary screening protocols ▪ "Grandma Please" Toll-free number	▪ Special social-skills stories and interventions ▪ Media campaign ▪ Voluntary screening protocols ▪ "Grandma Please" Toll-free number	▪ Self-initiated cessation programs ▪ Computer-assisted protocols for mental health ▪ Media campaign ▪ Voluntary screening protocols ▪ "Grandma Please" Toll-free number	▪ Self-initiated cessation programs ▪ Computer-assisted protocols for mental health ▪ Media campaign ▪ Correspondence programs for substance abuse & mental health ▪ Voluntary screening protocols
Family	▪ Strengthened Olds model ▪ Mother's Own Bazelton Neonatal assessment ▪ Media campaign ▪ Voluntary Developmental Record	▪ Strengthened Olds model ▪ Positive Parenting Program at multiple levels ▪ Reduce TV viewing campaign ▪ Media campaign (links to schools and community) ▪ First Steps to Success ▪ Voluntary Developmental Record	▪ Positive Parenting Program at multiple levels ▪ Media campaign (links to schools and community) ▪ Voluntary Developmental Record ▪ Project LIFT type activities	▪ Positive Parenting Program at multiple levels ▪ Media campaign (links to schools and community) ▪ Multi-systemic or Functional Family Therapy contracts/standards ▪ Voluntary Developmental Record	▪ Positive Parenting Program at multiple levels (helps address and improve marriages in research) ▪ Media campaign
Peers	▪ NA	▪ Play groups fostered through community coalitions	▪ Marketing campaign ▪ Playground interventions ▪ Social-emotional competence interventions ▪ Community-based club ▪ Special camps	▪ Marketing campaign ▪ Social-emotional competence interventions ▪ Community-based club ▪ Special camps	▪ Marketing campaign ▪ Toll free line ▪ Bar & tavern intervention campaigns

	Pre- and Postnatal	Infancy and Early Childhood	Middle Childhood	Puberty and Adolescence	Adulthood
Schools	▪ Youth development projects ▪ Informational campaigns ▪ Special out-reach for youth involving alternative school sites	▪ Voluntary screening protocols ▪ Health standards infusion & support ▪ Behavioral inhibition protocols ▪ Social skills enhancement ▪ First Steps to Success ▪ Emergent literacy ▪ Behavioral protocols & child-study protocols for special education ▪ Rapid diffusion (deployment) proven solutions on demand for prevention, intervention and "treatment"	▪ Voluntary screening protocols ▪ Tobacco free schools ▪ Health standards infusion & support School norms enhancement ▪ Behavioral inhibition training ▪ Instructional enhancement ▪ Behavioral protocols & child-study protocols for special education ▪ Activity clubs, focused mentoring ▪ Academic improvement strategies ▪ Rapid diffusion (deployment) proven solutions on demand for prevention, intervention and "treatment"	▪ Voluntary screening protocols ▪ Tobacco free schools ▪ Health standards infusion & support ▪ Life Skills (Youth Leaders) ▪ Infused health curriculum ▪ School norms enhancement ▪ Behavioral inhibition training ▪ Instructional enhancement ▪ Transitional camps ▪ Long-term mentoring ▪ Behavioral protocols & child-study protocols for special education ▪ Rapid diffusion (deployment) proven solutions on demand for prevention, intervention and "treatment"	▪ Voluntary college screening protocols ▪ Programs and efforts designed to reduce social isolation and parental depression (e.g., FAST or Iowa Strengthening families) ▪ Infusion of intervention and prevention strategies ▪ Cessation of alcohol and tobacco sponsorships of campus events in whole or in part supported by state funds
Neighbor-hood & Community	▪ Community Toolbox ▪ Geo-policing & corrections ▪ Community mobilization grants & technical assistance	▪ Community Toolbox ▪ Geo-policing & corrections ▪ Community mobilization grants & technical assistance	▪ Community Toolbox ▪ Geo-policing & corrections ▪ Reward & Reminder for Tobacco & Alcohol ▪ Community mobilization grants & technical assistance	▪ Community Toolbox ▪ Geo-policing & corrections ▪ Reward & Reminder for Tobacco & Alcohol ▪ Community mobilization grants & technical assistance ▪ Improvement funding to Community Mental Health and Substance Abuse Centers	▪ Community Toolbox ▪ Geo-policing & corrections ▪ Oxford Houses ▪ Community mobilization grants & technical assistance ▪ Improvement funding to Community Mental Health and Substance Abuse Centers
Economic	▪ Community Toolbox	▪ Community Toolbox	▪ Community Toolbox	▪ Community Toolbox	▪ Work Force Development ▪ Jobs Club

	Pre- and Postnatal	Infancy and Early Childhood	Middle Childhood	Puberty and Adolescence	Adulthood
Professional	▪ Developmental Record ▪ Medical screening & gene x treatment testing ▪ Capacity building for Olds Model ▪ Improved professional standards focusing on accountability of results ▪ Coherent standards on substance abuse by all state licensure boards	▪ Developmental Record ▪ Positive Parenting Program ▪ Medical screening & gene x treatment testing ▪ Capacity building for First Steps for Success ▪ Capacity building for Olds Model ▪ Improved professional standards focusing on accountability of results ▪ Coherent standards on substance abuse by all state licensure boards	▪ Developmental Record ▪ Positive Parenting Program ▪ Medical screening & gene x treatment testing ▪ Capacity building for research-based prevention and intervention strategies in multiple settings (e.g., CLASS, PEERS, Good Behavior Game & More) ▪ Improved professional standards focusing on accountability of results ▪ Coherent standards on substance abuse by all state licensure boards	▪ Developmental Record ▪ Positive Parenting Program ▪ Multi-systemic therapy or Functional Family Therapy capacity building ▪ Juvenile Intensive Probation ▪ Medical screening & gene x treatment testing ▪ Coaching, marketing, and support of effective practices by practitioners ▪ Improved professional standards focusing on accountability of results ▪ Coherent standards on substance abuse by all state licensure boards	▪ Brief interventions for tobacco, alcohol & other drugs ▪ Brief intervention for depression ▪ Adult Intensive Probation ▪ Relapse prevention ▪ Medical screening & gene x treatment testing ▪ Cognitive Behavioral Interventions ▪ Motivational interventions ▪ Coaching, marketing, and support of effective practices by practitioners ▪ Improved professional standards focusing on accountability of results ▪ Coherent standards on substance abuse by all state licensure boards

	Pre- and Postnatal	Infancy and Early Childhood	Middle Childhood	Puberty and Adolescence	Adulthood
Laws, Policies and Other Structural Initiatives	▪ Medicaid provider expansion ▪ Competitive purchase of services by state ▪ Pregnant mother treatment, intervention, & prevention standards ▪ Regional Action Teams for Treatment, Prevention, Intervention & Control ▪ Wyoming Futures Indicators, Data Warehouse & Accelerated Cohort Study ▪ "Changing the Dialogue" protocols ▪ Continuing research and study protocols ▪ Insurance parity issues ▪ Prescription drug reforms and strategies ▪ Warnings about serving pregnant women in bars ▪ Adoption of Statute, modified from Wisconsin that recognizes "unborn child abuse" ▪ Public-private co-sponsoring of prevention & intervention activities. ▪ Policies for all professional licensure boards on substance abuse	▪ Medicaid provider expansion ▪ Child treatment, intervention & prevention standards ▪ Competitive purchase of services by state ▪ Regional Action Teams for Treatment, Prevention, Intervention, & Control ▪ Wyoming Futures Indicators, Data Warehouse & Accelerated Cohort Study ▪ "Changing the Dialogue" protocols ▪ Insurance parity issues ▪ Prescription drug reforms and strategies ▪ Public-private co-sponsoring of prevention & intervention activities. ▪ Policies for all professional licensure boards on substance abuse	▪ Medicaid provider expansion ▪ Child treatment, intervention & prevention standards ▪ Competitive purchase of services by state ▪ Regional Action Teams for Treatment, Prevention, Intervention, & Control ▪ Wyoming Futures Indicators, Data Warehouse & Accelerated Cohort Study ▪ "Changing the Dialogue" protocols ▪ Insurance parity issues ▪ Prescription drug reforms and strategies ▪ Public-private co-sponsoring of prevention & intervention activities. ▪ Clarification of FERPA ▪ Policies for all professional licensure boards on substance abuse	▪ Medicaid provider expansion ▪ Juvenile Accountability Act ▪ Expansion and maintenance of reward & reminder campaign for tobacco and alcohol issues ▪ Tobacco Free Schools ▪ Fines for youth use of tobacco and alcohol ▪ Adolescent treatment, intervention, & prevention standards ▪ Competitive purchase of services by state ▪ Regional Action Teams for Treatment, Prevention, Intervention, & Control ▪ Wyoming Futures Indicators, Data Warehouse & Accelerated Cohort Study ▪ "Changing the Dialogue" protocols ▪ Insurance parity issues ▪ Prescription drug reforms and strategies ▪ Graduated licensing ▪ Public-private co-sponsoring of prevention & intervention activities. ▪ Clarification of FERPA ▪ Policies for all professional licensure boards on substance abuse	▪ Medicaid provider expansion ▪ Drug Court Act ▪ Addicted Offenders Accountability Act ▪ Drive-up alcohol window closure ▪ Server training ▪ .08 BAC ▪ Adult treatment, intervention & prevention standards ▪ Competitive purchase of services by state ▪ Technical assistance for Employee Assistance and workers' comp incentives ▪ Coordinator for faith based initiatives ▪ Regional Action Teams for Treatment, Prevention, Intervention, & Control ▪ Wyoming Futures Indicators, Data Warehouse & Accelerated Cohort Study ▪ Wyoming Governor's Citizens Fellowships ▪ "Changing the Dialogue" protocols ▪ Insurance parity issues ▪ Rx drug reform strategies ▪ Surcharges on drug & alcohol convictions ▪ Responsible Beverage Service and sales ▪ Public-private co-sponsoring of prevention & intervention activities. ▪ Policies for all professional licensure boards on substance abuse

Table 2: Dose Level Prevention, Intervention and Treatment Strategies

	Universal Dose Everyone Exposed	Medium Dose Benefits Some Who Need it	High Dose High Intensity Service
Individual	▪ Social marketing campaign (e.g., social-emotional-cognitive competencies; social norms enhancement; and individual actions to benefit community) ▪ Toll-free lines for different developmental ages	▪ Prescribed interventions such as Positive Parenting Program strategies via health-care providers ▪ Rapid delivery of cognitive-behavioral interventions or brief treatments via professionals, toll-free or internet ▪ Social marketing targeted to elevated risk individuals	▪ Tier 1 or 2 services from Community Mental Health and Substance Abuse Centers (directed by revised State Standards for Treatment, Intervention and Prevention) ▪ Drug Courts ▪ Intensive Juvenile or Adult Probation (using identified state standards interventions) ▪ Medication treatment protocols to assure maximum benefits and low side effects for individuals in state care[a]
Family	▪ Social marketing campaign (e.g.. parenting skills, emergent literacy, and community norms) ▪ Voluntary Screenings ▪ Voluntary Developmental Records ▪ Toll-free number ▪ Brazelton Assessment or similar newborn assessment by mother ▪	▪ Positive Parenting Program Tips and brief interventions from multiple providers and sources ▪ Olds Home visitation ▪ First Steps for Success or Project LIFT type strategies ▪ Iowa Strengthening Families or Families and Schools Together (FAST) type interventions	▪ Contracted DFS services ▪ Therapeutic Foster Care Treatment ▪ Multi-systemic or Functional Family Therapy ▪ Level 5 Positive Parenting Program ▪ Other proven research practices designed to reduce symptoms leading to lifespan factors associated with substance abuse ▪ Program for children of incarcerated parents

[a] See HOPE Algorithm at tin the data section for persons in state care.

	Universal Dose Everyone Exposed	Medium Dose Benefits Some Who Need it	High Dose High Intensity Service
Peers	▪ Social marketing campaign on actions to help peers and support positive norms. ▪ Internet tools, products, and activities ▪ Toll-free number	▪ Bar and tavern interventions to reduce substance abuse, based on geo mapping and other info	▪ Therapeutic communities (e.g., Oxford House)
School	▪ Social marketing campaign focused on voluntary solutions by teaches and site leaders ▪ Wyoming Futures Indicators ▪ Rapid solutions for use by individual teachers ▪ Rapid diffusion of voluntary school-based strategies, which interact with solutions implemented by choice by teachers ▪ Health standards promotion	▪ Early intervention strategies such as First Steps, CLASS, PEERS, Project LIFT ▪ Standards for Child Study and IEPs ▪ Rapid delivery of indicated solutions to teachers and schools ▪ Coaching and other support services by regional action teams	▪ Technical assistance from regional action teams for using high-dose proven research practices. ▪ Linkages to professional services in community or via Medicaid, DFS, or other entities
Neighborhood & Community	▪ Social marketing campaign ▪ Randomized .08 BAC enforcement for adults & "zero" BAC for teens ▪ Community Toolbox ▪ Wyoming Futures Indicators ▪ Reward and Reminder Campaign for alcohol and tobacco. ▪ Responsible beverage service	▪ Special intervention protocols organized with technical support (regional action teams) ▪ Law enforcement of control and access issues related to alcohol and tobacco	▪ Geo-policing, corrections and public health interventions using research-based practices
Economic	▪ Social marketing campaign ▪ Community Toolbox ▪ Wyoming Futures Indicators ▪ Grants assistance development	▪ Special brief interventions delivered via books, computer or other self-help means in conjunction with workforce development ▪ Screening of all applicants for benefits	▪ Treatment services for high-impacted individuals as part of return to workforce ▪ EAP credits

	Universal Dose Everyone Exposed	Medium Dose Benefits Some Who Need it	High Dose High Intensity Service
Professional	▪ Social marketing campaign ▪ Direct marketing of science-based practices to professionals similar to drug companies ▪ Wyoming Futures Indicators ▪ Standards for Treatment, Intervention, and Prevention of Life Span Issues ▪ Standards for substance use by all licensed professionals in Wyoming ▪ Rapid delivery of selected materials or services to support proven practices. ▪ Universal screening incentives ▪ Universal incentives for brief treatment or interventions	▪ Site coaching and feedback on difficult cases by regional action teams ▪ Screening and brief treatment tools or procedures ▪ Provision of rapid receipt of brief interventions and solutions required by clients or patients who need additional support from science-based practices.	▪ Access to HOPE Algorithm ▪ Toll-free consulting on difficult cases, and liaison support.
Laws, Policies and Other Structural Initiatives	▪ Voluntary Child Development Record and Screening ▪ Reward and reminder campaign for tobacco and alcohol ▪ Responsible beverage service ▪ EPA incentives ▪ Insurance parity	▪ Pharmacy standards to reduce substance abuse ▪ Enforcement of tobacco and alcohol access issues for minors ▪ Juvenile Court Procedures	▪ Monitoring of Medicaid records for potential substance abuse situations ▪ Drug Court Rules ▪ Addicted Offenders Act

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Preface

The people of Wyoming have spoken. In meetings in libraries, schools, town halls, and churches they spoke. On phone calls to radio stations, they spoke. In letters to the editor, they spoke. They said, "Something has happened. Our kids, our young adults, and even our mature citizens are having more and more trouble with drugs in our community. What can we do? Please, somebody, tell us what we can do."

These voices, these words, these pleas have been recorded by teams traveling around the state, taking the pulse of citizens young and old about Wyoming's problem with drugs. At first, it was mostly a cry about the terrible plague of methamphetamine. Later, people have voiced a larger concern about alcohol, tobacco, prescription medications, marijuana, and even injected drugs.

Our leaders—from the Governor to the Legislature—have heard these tales, and have been touched. The stories have not been about "those people from over there." The stories have been about our friends, our relatives, our co-workers, and our neighbors' children. Against that backdrop, the Wyoming Legislature acted.

We may be first state in the Union to undertake a comprehensive blueprint for substance abuse control, treatment, early intervention, and prevention. House Bill 83, enacted into law by the Wyoming Legislature with active support the Governor, House Leadership, and Senate

State of Wyoming
Substance abuse control plan. Sponsored by: Joint Labor, Health and Social Services Interim Committee
A BILL for

AN ACT relating to administration of the government, authorizing the department of health to create a substance abuse control plan to reduce drug and alcohol abuse; requiring a report; providing an appropriation; and providing for an effective date.

Be It Enacted by the Legislature of the State of Wyoming:
Section 1. W.S. 9-2-122 is created to read:
Substance abuse control plan.
(a) The department of health shall develop a detailed, comprehensive substance abuse control plan for prevention, early intervention and treatment designed to curb alcohol and controlled substance abuse in the state of Wyoming.
(b) The department of health may contract with any entities or individuals to develop the plan. Any entity or individual contracted with shall have a strong background in science, a knowledge of the particular conditions in Wyoming and an ability to work with diverse stakeholders. The contractor shall possess an ability to produce innovative solutions for the conditions in Wyoming.
(c) The substance abuse control plan developed by the department of health or contractor shall indicate the best programs and methods of prevention, early intervention, control, treatment and aftercare which may be utilized to limit drug and alcohol problems in Wyoming.
(d) The department of health or contractor shall work, to the greatest extent feasible, in collaboration with the University of Wyoming statistical analysis center in determining appropriate data regarding early warning signs of substance abuse. Data obtained shall be designed to signal needs for prevention, early intervention, control, treatment and aftercare and shall be obtained for all ages, from early childhood through adulthood. Additionally, data shall be developed to support analysis of the effectiveness of substance abuse programs employed by the state and local communities.
(e) Based on the data obtained pursuant to subsection of this section, the Department of Health or contractor make recommendations in the substance abuse control plan for practical, science-based strategies for early intervention into substance abuse problems. The recommended programs may deal either directly or indirectly with the substance abuse problem in Wyoming, but they shall attempt to create both short term and long-term effects which can be sustained across the state by multiple stakeholders. The recommended programs, to the greatest extent possible, shall utilize and recommend how the services of community mental-health centers, social service providers, local health care providers, law enforcement, corrections and any other entities presently available in the state of Wyoming can better serve the state in responding to substance abuse problems. The substance abuse control plan should decrease the potential overlapping of these services while maintaining a collaborative effort among state and local governmental entities and other organizations to assure maximum leveraging of resources, including people and money. The substance abuse control plan shall also include recommendations to the executive, legislative and judicial branches of the state of Wyoming regarding programs and funding determinations, which those entities may make.
(f) The department of health shall report its activities under this section to the governor and the joint labor, health and social services interim committee not later than October 1, 2001. The report shall include a review of the data obtained in developing the substance abuse control plan and an analysis of similar data available on the date of the report.
Section 2. Three hundred thousand dollars ($300,000.00) is appropriated from the general fund to the department of health for purposes of this act.

Section 3. This act is effective immediately upon completion of all acts necessary for a bill to become law as provided by Article 4, Section 8 of the Wyoming Constitution

Leadership, made this blueprint possible.

House Bill 83 reflects the political will of the citizens and leaders of Wyoming to change the future of the state for the better. The intent of the bill brings urgency to reduce the daily tragedy of substance abuse on the productivity, peace, health, and happiness of our citizens.

In the context of HB 83, the Department of Health has prepared this comprehensive blueprint, which will be presented to the Legislature on or before October 1, 2001, after review and discussion of various drafts of the document. The Department has assigned the Division of Substance Abuse Treatment and Prevention to lead the task, and the Division has contracted with a number of entities and individuals to bring the landmark recommendations into reality.

Goals

The Blueprint emerging from the study process has several key objectives:

- Launching a rapid scope of activities that can produce a 50% reduction in substance abuse and related problems within five years for targeted groups, once the plan is set into motion.
- Reinforcing a broad statewide consensus for action by individuals, groups and communities throughout our state.
- Averting the terrible financial, emotional, and social costs of substance abuse and related problems across all ages of Wyomingites.
- Providing accountability for all who participate that our collective and individual actions are helping.

> Wyoming could well lead the country by what is happening with this blueprint…
>
> —Dr. Tony Biglan, one of the national experts involved in advising the State on the scientific possibilities of prevention.

Glossary

The subject matter of substance abuse has many key words and concepts, a few of which are defined here.

All Ages. Embraces the entire developmental lifespan of human beings from conception through death.

Control. For the purposes of the blueprint, the word "control" will refer to law enforcement, statures, rules and policy, or taxation strategies.

Cost Effectiveness. The Wyoming Tobacco Use Prevention Blueprint defines cost-effectiveness in the following formula, which has been used for this document:

Figure 1: Cost-Effectiveness Formula for Wyoming

$$\frac{\text{Likely Prevention Effect} = \text{Power of Prevention Tools (effect size)} \times \text{Percentage of population reached} \times \text{Effects across time, people \& places} - \text{Negative Side Effects}}{\text{Resource Cost (e.g., people, time and/or money)}}$$

This same formula has been an important issue in thinking about components of this broader context blueprint.

Data Indicators or Signals. This refers to reliable or valid information that can be repeatedly collected over time to predict risk and protective factors for well-being vis-à-vis substance abuse at different ages, and which can be used to estimate need for control, early intervention, prevention, and treatment.

Intervention. The phrase "intervention" refers to early actions undertaken to change *existing* behaviors, circumstances, or physiological states that predict substance abuse from a lifespan perspective.

Effectiveness Data. These data refer to proximal outcomes produced by intentional activities to control, intervene with, prevent, or treat substance abuse or its lifespan precursors.

Long-Term Effects. Long-term effects refer to strategies having effects that last or extend three or more years.

Prevention. This is a term used to describe actions undertaken *universally* to reduce risk factors and increase protective factors in the developmental lifespan predicting substance abuse and related problems.

Science. In the context of this blueprint, it was necessary to consult many domains of organized human knowledge, which has been experimentally tested. Some areas of science that will be consulted include: medicine, psychology, anthropology, biology, marketing, health promotion, organizational development, criminology, and education.

Science-Based Strategies. Since science is continuing to add to our knowledge base, the term shall mean:

- **Large Effect Sizes.** This blueprint embraces multiple strategies with large "effect sizes." An effect size is a standardized term in statistics. A +.5 means one-half a standard deviation in difference. Because we want our citizens to improve quickly, we are looking for strategies that have at least a +.3 effect size. When possible, we will recommend methods that have been tested in a well-designed randomized control group studies or replicated time-series studies, comparing results for different practices.
- **Lasting Effects.** Strategies with lasting effects may impact for many years. Wyoming goals are most likely to be met if the results of strategies and methods last for several years. That's called longitudinal, long-term effects. While some techniques we recommend might have brief positive effects, even those need to leverage more long-lasting results.
- **Generalizable, Replicable Effects.** The Wyoming plan recommends tactics that work under a variety of conditions. Our search was focused on strategies and methods that cut across a number of models and strategies. We searched for strategies that are well grounded in good theory. Strategies with a longer history of testing in diverse circumstances will be more likely to work with Wyoming communities and families.
- **Parsimonious Effects.** This means facts and findings fit together like a good puzzle.

We searched for proven innovative methods that have a way of fitting together. For example, several scientific studies indicate that the best behavioral procedures to deal with serious problems seem to work in the same parts of the brain as the drugs used in treatment. This kind of understanding helps us create or select innovations to confront Wyoming challenges better.

Short-Term Effects. In the context of HB 83, short term refers to effects lasting less than 6 months.

Substance Abuse.[b] Generally speaking, substance abuse has three or more of the following:

1) Substance is taken in larger amounts or over a longer period then the person intended;

2) Persistent desire or one or more unsuccessful efforts to cut down or control substance use;

3) A great deal of time spent in activities necessary to get the substance (e.g., theft), taking the substance (e.g., chain smoking) or recovering from the effects;

4) Frequent intoxication or withdrawal symptoms then expected for major role obligations at work, school, or home (e.g., does not go because hung over, goes "high", intoxicated while caring for children) or when substance use is physically hazardous to self or others (e.g., drives while intoxicated);

5) Important social, occupational, or recreational activities given up or reduced because of substance use;

6) Continued substance use despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by the use of the substance (e.g., keeps using heroin despite family arguments about it, cocaine-induced depression, or having an ulcer made worse by drinking);

7) Marked tolerance–need for markedly increased amounts of the substance (i.e., at least a 50% increase) in order to achieve intoxication or desired effect, or markedly diminished effect with continued use of the same amount;

8) Characteristic withdrawal symptoms (which may not occur with certain substances); and

9) Substance often taken to relieve or avoid withdrawal symptoms (again, may not apply with some substances).

Treatment. In the response to HB 83, the word "treatment" refers to therapies or services designed to reduce harm or achieve abstinence from legal, prescription, or illegal drugs with addictive consequences for individuals, families, and communities.

[b] From the American Psychiatric Association.

Guiding Principles

This Blueprint is guided by some key principles:

- **Substance abuse has biological, medical, genetic, social, and environmental causes**, which are well established scientifically. People used to describe most diseases a hundred years ago in terms of character defects until medicine advanced. Similarly, many people have blithely dismissed substance abuse as a character issue, which cannot be supported based on extensive scientific evidence. Because of advances in the last 10 years, Wyoming is able to make better choices of programs and policies. Scientific advances in the next decade will further our actions more.

- **Wyoming trends are real.** The increases in substance abuse in Wyoming are not statistical aberrations or flukes, resulting from fluctuations in small numbers. They are corrected for per capita population. Too many data converge to tell the same story.

- **Effective control, intervention, prevention, and treatment exist**. Extensive examples exist in the United States and abroad that demonstrate that the scourge of substance abuse can be controlled, intervened with, prevented, and even treated effectively. Unfortunately, many current practices do not use effective strategies, which helps explain the "average" person's view that "nothing can be done."

- **Bad approaches can kill or harm people**. Rather extensive science and case studies (even in Wyoming) show that common practices can make the situation worse, which means the search for effective strategies is all the more necessary.

- **Actions must be results- or data-driven not program or "authority" driven.** A good sports team keeps its eye on the score, and the decisions serve the scoring. Thus, our plan focuses on the results and indicators, not just the program manual or what the prevailing guru or authority says to do.

- **Many myths about substance abuse are wrong.** Sufficient science has now accumulated to challenge common folktales about substance abuse:
  - "Treatment can't be forced." This is extensively disproved in a variety of studies and practices, such as drug courts.
  - "There is only one kind of treatment that works." Again, this is not substantiated in controlled scientific studies.
  - "You have to want to be cured." Again, this is not correct based on repeated scientific studies.
  - "Effective treatment cannot be measured." This is patently false.
  - "There is a best way to get into treatment." In fact, there are many doors to treatment.
  - "Kids and youth can't change unless you change families." This again is false, and even hazardous to the health of children and youth.
  - "The only research on these things is in big cities, who aren't like us." Again, this is an ill-informed error.
  - "Everything effective costs too much money." Again, there are many strategies that are inexpensive.
  - "Only professionals can make a difference." Again, many examples abound for easy action today. This report is the effort of many people, who have contributed their understanding and talents to the health and well being of Wyoming.

Blueprint Study Team

First, Rev. Rodger McDaniel was team leader for this effort. Rev. McDaniel is a former legislator and attorney.

Second, our consulting scientist was Dr. Dennis Embry, who is the president of PAXIS Institute and well known in our state. Other scientists and experts who helped in ways large and small were:

- Dr. Michael Loos, University of Wyoming, Training and systems for Wyoming
- Dr. Brian Villa, University of Wyoming, Theory and practice for Wyoming
- Dr. Narina Nunez and Dr. Kami London, University of Wyoming, Wyoming data and applications; statistical analysis center
- Dr. Tony Biglan, Oregon Research Institute: Prevention and early intervention strategies for adolescents & children
- Susan Foster, V-P, Center for Addiction and Substance Abuse, Columbia University, Costs, Corrections and Policies
- Dr. Jim Derzon, Pacific Research Institute, Social marketing for prevention
- Dr. Ted Miller, Pacific Research Institute, Injury and alcohol issues and costs
- Dr. Gail Harris, University of Arizona, Pregnant women, infants and very young children.
- Jerry Wells, executive director, Koch Crime Institute Juvenile Justice and other legal policy issues
- Conrad Hogan, former commissioner for corrections and secretary of human services, State of Vermont, Systems management and infrastructure
- Dr. David Comings, City of Hope Hospital, California, Genetics and treatment interactions; neuroscience issues
- DataCorp, Rhode Island, Development of treatment research

Reclaiming Wyoming: A Comprehensive Plan

For Prevention, Early Intervention, and Treatment of Substance Abuse

INTRODUCTION

Figure 2: Wyoming Youth Summit Learning About the Interconnections of Our Lives

Criminologists James Q. Wilson and George Kelling have written extensively about what they call "The Broken Window Theory." Their theory is that if a window is broken and not soon repaired, people walking by will conclude that no one cares. Quickly they will begin to break other windows in the area, rapidly spreading the damage to other adjacent buildings. They argue that in a city, relatively minor problems like graffiti become invitations for more troublesome activity.

Wyoming's addiction problem is like that. For years, the treatment system has gone unattended and has been woefully under funded. Wyoming spending for addiction prevention, treatment, and research is about one-half the national average. Like all other states, Wyoming spends a great deal of money on the substance abuse problem but shamefully little goes to efforts that hold the greatest promise for breaking the cycle of substance abuse, i.e. prevention, early intervention, and treatment. For each state dollar spent on programs related to substance abuse, e.g. law enforcement, corrections, special education, health care related to addiction, child welfare, etc, only two cents is spent on treatment. Another penny is spent on prevention.[c]

The lack of adequate funding has given birth to inadequate care, poor results, and an image that treatment doesn't work. The "broken window" has come in the form of chronically relapsing addicts, longer prison sentences, and high recidivism rates. Left un-repaired, these have resulted in the lack of effective and affordable treatment and worse, denial and apathy in communities even as they began to experience widespread growth in substance abuse measured by a variety of indicators.

In his recent book, The Tipping Point, Malcolm Gladwell, a former business and science writer for *The Washington Post*, offers what has become the metaphor for this plan. Gladwell describes the crisis of the 1970's in the New York subway system. Over years of neglect, the system had become an unpleasant, even dangerous place frequented by criminals and addicts to such a degree that decent folks stayed a way in such numbers as to create a financial crisis for the New York Transit Authority. In the early 80's a new director, David Gunn, was hired to revitalize the system.

After some review, he concluded that the first necessary step was to clean up the subway cars. Others had argued for "bolder" action such as placing policemen in every car and massive arrests. Gunn, however, believed the necessary first step was to "repair the broken windows." For the New York subway system, that meant removing the graffiti from the cars, painting them, reupholstering the seats, and making them pleasant places to be. While many felt there were larger problems that required immediate attention, Gunn

[c] *Shoveling Up: The Impact of Substance Abuse on State Budgets*, The National Center on Addiction and Substance Abuse (CASA), January 2001 at pages 25 and 78

decided that the graffiti was symbolic of the system's greater problems.

Most important to the success of this endeavor was the commitment Gunn and the Transit Authority made "that there should be no retreat, that once a car was 'reclaimed' it should never be allowed to be vandalized again."[d]

After having conducted a thorough review of the problem of substance abuse in Wyoming, we have adopted these reclaimed subway cars as a metaphor for this plan. In a less than coordinated, effective manner, Wyoming spends significant amounts of money on substance abuse. Meeting the challenge will require additional funding. It is wasted, however, unless we also make the commitment "that there should be no retreat." Once a school or a community is reclaimed, we must commit ourselves to make personal and financial investments in making certain it will not be lost again. Once the life of an addict is reclaimed, a continuum of services and care must be in place to assure, to the maximum extent possible, that the person is not again lost to chronic addiction.

As you read this report, you will see the futility of prior programs that have in many cases done exceptional work in sobering up severe addicts and getting them in recovery only to see them relapse and return to drugs and alcohol because of the lack of transitional services and after care. This trend is evident not only in treatment but also in prevention, where arguably, the continuing commitment is even more important. In some measure, we have relied on a brief intervention during 5th and 6th grades to inoculate our children from substance abuse. As one DCI agent told me, "We spend six weeks warning these kids about the dangers of drugs, walk them across the stage and give them a tee shirt. But, we forget that they will soon outgrow that tee shirt!"

As will be made clear in this report, Wyoming cannot withstand the status quo. It leads to an unacceptable future for our youth, their families, and our community life together. A bold commitment must be made now and that commitment revolves around a promise that once reclaimed, we will commit the resources necessary to make sure we will not lose that person, family, school, or community again.

It is important to note that the rapid rate of addiction research in recent years has provided us with a greatly increased "base of knowledge about substance abuse."[e] Most state-level policymakers, in Wyoming and the other 49 states, have failed to keep pace with the changing understanding of addiction research in prevention, early intervention, and treatment. Lacking good research and data, Wyoming's addiction prevention and treatment programs have been neither comprehensive nor targeted. They have grown up around existing programs, driven largely by individual interests and

[d] Gladwell, Malcolm, The Tipping Point, Little Brown & Company (2001) at page 143

[e] *Changing the Conversation*, U.S. Department of Health and Human Services, November 2000 at page 73

without the benefit of good outcome evaluations.

Few state leaders have acted as boldly as Wyoming's Governor and Legislature. This political commitment is the key element to the creation of a common statewide approach to meeting the challenge. It is the glue that will hold together a system as it evolves into one based on common understandings and goals. With a political commitment to rebuild our efforts around good science and to keep it on track by collecting and employing good data, Wyoming will lead the nation in reducing the abuse of drugs and alcohol, leading the way to healthier families and safer communities.

THE HB83 STUDY PROCESS

The Substance Abuse Division concluded from the outset that the process by which the recommendations in this plan were reached was, in many ways, as important as the conclusions themselves. The *process* needed to be as comprehensive as the plan.

The substance abuse problem is much like the story of the proverbial blind men attempting to describe the elephant. There are many people involved at some level in the issue. They include judges, prosecuting and defense attorneys, parents, foster parents, grandparents, families, the addicts - some of whom are in recovery and some of whom are not, the treatment professionals, teachers and school administrators, the law enforcement community, private and public corrections programs, caseworkers, healthcare personnel, state and local agencies, state and local programs, probation officers, the business community, the faith community, and many others. Each has a perspective. For the most part, however, that perspective is limited by their role in the system.

Each player in this system can tell you what the substance abuse problem looks like from their perch, but no one agency has a broad system-wide, lifespan view of the challenge…until now. As a result of the leadership of the Governor and the Legislature in enacting HB83, Wyoming has achieved what has been accomplished in virtually no other state, i.e. a system-wide, lifespan analysis of substance abuse.

The process by which this has been accomplished has included hundreds of hours of meetings and interviews with people who are laboring in the vineyard. Since HB83 was enacted, the writers of this plan have met with all of the state agencies involved in the issue. We have conferred with the Department of Health, the Department of Corrections, the Department of Family Services, the staff and some of the youth at the Wyoming Boys and Girls Schools, the Department of Education, the Department of Employment, the Board of Judicial Policy and Administration, the Department of Revenue and the Office of the Public Defender, among others.

Additionally, we have met with and interviewed a wide variety of community and professional

organizations. They include the Wyoming Association of Mental Health and Substance Abuse Centers with whom we have met frequently, the Wyoming Association of Municipalities, the Wyoming School Boards' Association, the Wyoming Association of School Administrators, the Wyoming Education Association, the Wyoming Prosecuting Attorneys' Association, the Wyoming Association of Broadcasters, and the Wyoming Business Alliance. We have met with many community groups including Project SAFE in Casper, Cheyenne CAARES, the Link, Project Paycheck, and the Casey Family Program.

In the course of the study, all public, substance abuse providers have participated in a services and staffing survey. Professional licensing boards have been surveyed to learn of their policies toward impaired professionals and schools have been surveyed to determine local policies on substance abuse and tobacco use.

The Division has contracted with Dr. Dennis Embry, president of the PAXIS Institute, and Rodger McDaniel to conduct the study and write the report. Dr. Embry has subcontracted with a number of the brightest experts in America to provide their expertise on selected aspects of the plan. These experts include the Center on Addiction and Substance Abuse (CASA) at Columbia University in New York; Dr. Anthony Biglan of the Oregon Research Institute; Dr. Alan Marlatt, a renowned international expert on addiction relapse prevention; Jerry Wells of the Koch Crime Institute; Dr. Jim Derzon of the Pacific Research Institute, an expert on social marketing for prevention; Dr. Gail Harris of the University of Arizona, an expert on issues of substance abuse in pregnant women and the impact on infants and young children; Conrad Hogan, former Commissioner for Correction in Vermont; and DataCorp of Rhode Island; among others. Copies of their *curriculum vitae* are attached as appendices to this report.

Wyoming experts have also contributed heavily to this effort. Along with the experts working in the agencies listed above, contributors include Dr. Narina Nunez of the Statistical Analysis Center at the University of Wyoming, and UW professor Dr. Michael Loos. Literally hundred of pages of data have been collected and reviewed. The authors have conducted site visits of several community programs including the detox units at Cheyenne and Riverton, the therapeutic communities at Rock Springs and Sheridan, and the men's and women's prisons including time spent talking with prisoners receiving treatment in the intensive treatment units.

After hundreds of hours of gathering information from these and other sources, we took our formulating ideas to the "real experts", i.e. the folks working on the frontlines. The Substance Abuse Division invited more than 1600 Wyoming people to attend meetings on selected, substance abuse topics between June 11 and June 20, 2001. Invited were all Wyoming judges, licensed therapists, county commissioners, city council

members, mayors, school board members, state legislators, mental health and substance abuse professionals, state agency officials and staff, members of the juvenile and adult recovering community, members of the faith community, staff of treatment programs at the state and local level, and others.

These "nuts and bolts" sessions included a day and a half devoted to corrections and criminal justice programs, another day and a half devoted to juvenile issues, and specific discussions of topics such as elderly addiction, women's treatment issues, school prevention efforts, and detox programs. Nearly 300 Wyoming citizen-experts took part in these brainstorming sessions. Participants were encouraged to candidly assess what we are doing right and what we are not doing so well, identifying gaps and gaffes in services, to think outside the box, and to be bold in using their vast experience to help us find bold, innovative ideas. These meetings were pivotal to our efforts and produced significant information that the participants will find at the heart of our recommendations.

The Division has sponsored two public meetings, one in Casper and the other in Buffalo. Additional community meetings will be scheduled once the report is made public so that other community input may be obtained. In addition to the public meetings, there are plans to survey judges, prosecutors, county sheriffs, and municipal police chiefs about the study recommendations. We have made a continuing effort to provide information to all members of the Legislature, recognizing there is much to share and that the budget session alone will not afford sufficient time to digest the finding. The authors of the study have continuously encouraged legislators to share their thoughts, concerns, and questions so that, in the end, we can be satisfied that the final product is responsive to them.

In a word, the Substance Abuse Division took the Legislature seriously when we read HB83 as calling for a "*comprehensive substance abuse control plan for prevention, early intervention and treatment…" W.S. 9-2-122(a).* We look forward to continuing this important dialogue with the Governor, members of the Legislature, other elected officials, community leaders, parents, and addicts.

After all of this work, it is important to say that our most significant finding is the existence of *hope*. As you read the grim statistics and stories that paint the picture of Wyoming's substance abuse problem, please know that while it is clear we have an undeniable problem, there is every reason to be hopeful. Wyoming can win. While the statistics show we now lead the state in several troubling categories, we have attempted to provide a blueprint for changing that so that Wyoming leads the nation in providing safe communities where families thrive and our people achieve.

Together, we can reclaim Wyoming.

The Nature and Nurture of Addiction

According to J.D. Rolleston, a British medical historian, a medieval Russian cure for drunkenness consisted in "taking a piece of pork, putting it secretly in a Jew's bed for nine days, and then giving it to the drunkard in a pulverized form, who will turn away from drinking as a Jew would from pork." [Quoted in Roueche, op. cit. p. 144]

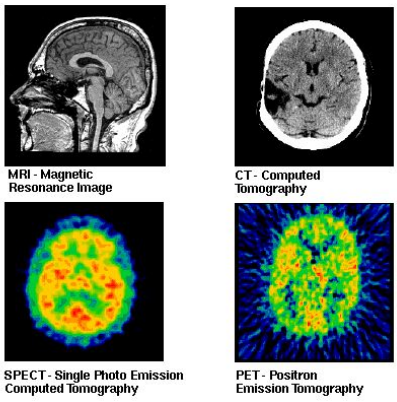
Treatment of addiction in times past has included such things as sterilization, enemas, electric shock, forced drunkenness, public humiliation, flogging, and other bizarre if not sad attempts to address a problem that has tortured mankind for thousands of year.

Introduction

Old medical texts sometimes make us laugh, and sometimes make us cry. Addictions have been with humans for thousands of years, and there have been about as many ideas about the causes of addiction. "Nothing," said one sage, "is as useful as a good theory."

About 10 years ago, the scientific study of the brain changed with the introduction of machines capable of studying the living brain. The first commercial scanner was sold in 1989, and the science of brain and behavior as not been the same since. Many different types of scanners exist, as shown in the Figure 2.

Figure 3: Different Types of Brain Scans

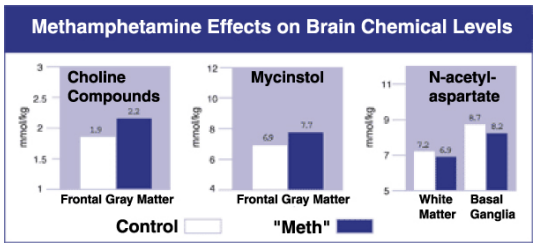


The language of addiction has historically been filled with pejorative language about the people who are addicted, with little sympathy for their plight or addiction. Less than 50 years ago the same was true for mental illness. Theories of mental illness 50 years ago were potentially more toxic than the disorders in creating human suffering.

Understanding of the changes in the human brain for bipolar disorder and schizophrenia have allowed for huge advances in the treatment both by behavioral medicine and pharmacology.

The research on brain mechanisms is dramatically advancing our understanding of addiction. The same is true for the expanding research on neurotransmitters and the action of substances or activities associated with addiction: alcohol, tobacco, other drugs, food, sex, and gambling. A recent study supported by the National Institute on Drug Abuse illustrates the relationship between drugs (methamphetamine), brain structures and brain chemistry.[1]

Figure 4: Research on Meth Effects



We know much more today about the "how" of addiction. The recent discoveries go beyond brains, behavior, and chemicals. The discoveries also go to human genes and how they predispose individuals to addiction. Other scientific advances, particularly in evolutionary psychology, give us understanding of "why" addictions happen.

The request for a comprehensive report to the Wyoming Legislature and citizens must include an overview of scientific understanding, as a foundation for effective treatment, intervention, prevention and control. This report only touches the surface of the science of addictions, and new discoveries will change some of the current ideas and give us a greater chance for achieving the vision of this report.

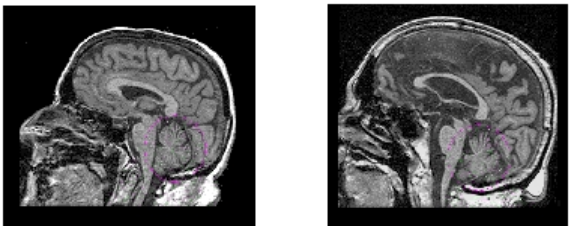
A note of caution needs to be remembered. Science is mankind's humble attempt to understand the world. It is a process. Scientists are prone to the same foibles as any human. The very process of science, since it is dedicated to the pursuit of truth, ferrets out poor logic, bad theory, corrupt data, and sloppy methods over time. What follows is a summary of key ideas of today.

Mapping the Brain and Addiction

The technology briefly described earlier makes it possible for us to understand that the seat of addiction is not in the drug but in the brain. The brain controls behavior and both events and drugs change the brain.

What follows below are a few brain scans, using different technology. Each shows the impact of different drugs on the human brain. The scans provide a visual foundation for the text that follows.

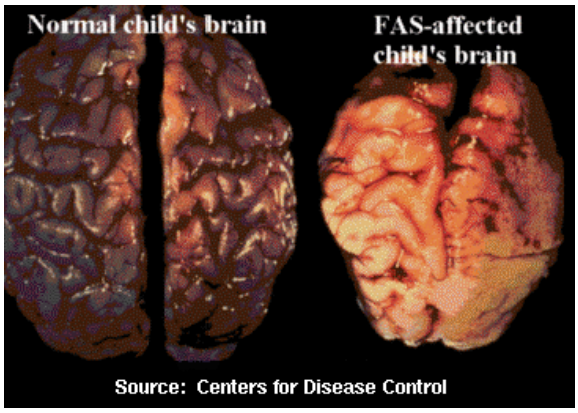
Figure 5: Various Brain Scans



Control Alcoholic

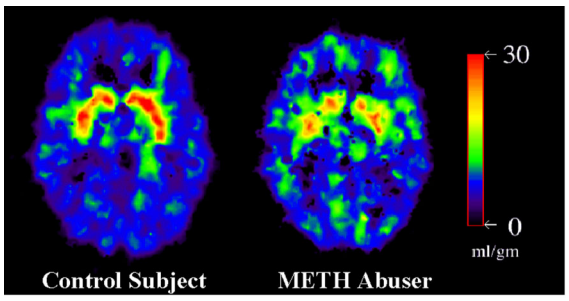
Magnetic Resonance Scan

The MRI scan here shows the impact of long-term alcoholism on the adult human brain. Considerable loss of pre-frontal capability (planning, goal setting, etc.) has happened. This is the loss of "will power" and intelligence in lay terms. This scan is important to Wyoming because our youth are likely to have earlier binge drinking, which predicts long-term alcoholism.



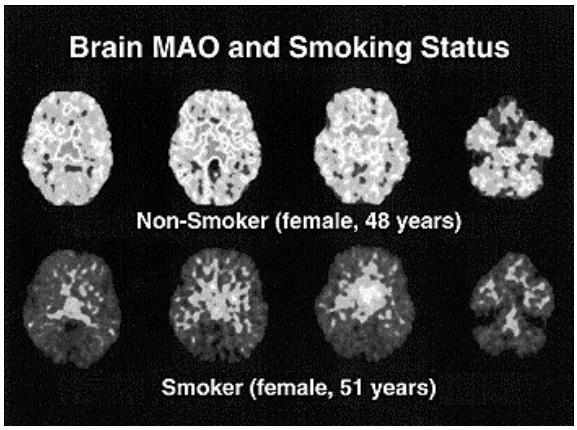
Forensic Brain Sample

Autopsies enable researchers to examine the actual brains and other organs of individuals. Here, one can see the brains compared of two children of the approximate same age who happened to die from accidental causes. One brain is of a normal child; the other brain is that of a child who was affected by fetal alcohol syndrome (FAS). Again, these data are important to Wyoming, because we have 2-3 times the national rate of serious alcohol, tobacco, and other drug consumption in our state by pregnant women.



PET Scan of Methamphetamine Use

Two studies by researchers at the U.S. Department of Energy's Brookhaven National Laboratory provide evidence that abuse of methamphetamine changes physiology in the brain. Here, 80 days after detox, a meth user still shows a major reduction of dopamine transporter, resulting in poor cognitive and motor function. This reduction lasts for as long as 11 months, and bodes poorly for Wyoming, where meth use is substantially above the national average.



Scan and Tobacco Use
In this scan, the brain of a smoker is working less actively than the brain of a matched non-smoker, as measured by monoamine oxidase.[2] Scientists believe that these differences help explain the long-term cognitive deficits that emerge among long-time users of tobacco. Over time, smoking reduces the cognitive ability of adults, making them less productive, a fact unknown even a decade ago. Smoking also leads to increased job instability. Again, these medical data are worrisome for us because of the high rates tobacco use by our young people and adults.

REPRINT: Addiction: 'Oops,' a brain disease with clear biological underpinnings

By Doug Toft

This article originally appeared in the Winter 2001 issue of the Hazelden Voice Newsletter. Permission to copy and reprint is granted by the Hazelden Foundation.

No one raises a glass of alcohol, snorts a line of cocaine, or lights up a nicotine-laden cigarette with a toast: "Here's to addiction." When first using these drugs, people simply choose to do something that makes them feel good. But with continued use, these people can find themselves addicted: They depend on the drug not simply to feel good but to feel *normal*. Using drugs is no longer a choice but a compulsion. These people don't plan to become addicts; it just happens.

In a recent article, Alan Leshner, PhD, director of the National Institute on Drug Abuse, calls this the "oops phenomenon." It happens when occasional use of a drug turns into weekly use, then daily use, and then eventually into a surprising, distressing realization: "I'm addicted."

"Every drug user starts out as an occasional user, and that initial use is a voluntary and controllable decision," Leshner writes. "But as time passes and drug use continues, a person goes from being a voluntary to a compulsive drug user. This change occurs because over time, use of addictive drugs changes the brain—at times in big dramatic toxic ways, at others in more subtle ways, but always in destructive ways that can result in compulsive and even uncontrollable drug use."[3]

The fact is, drug addiction is a *brain disease*, Leshner says. "While every type of drug of abuse has its own individual trigger for affecting or transforming the brain, many of the results of the transformation are strikingly similar regardless of the addictive drug used. The brain changes range from

fundamental and long-lasting changes in the biochemical makeup of the brain, to mood changes, to changes in memory processes and motor skills."

The changes Leshner refers to include specific alterations in the structure and function of the brain. Thanks to recent advances in research, we have a much more complete picture of those changes. With these discoveries have come new insights into the role of heredity—findings that may actually identify people at risk for addiction and prompt them to learn behaviors that prevent the disease.

Drugs change brain structure

Begin with structural changes in the human brain. Long-term drinking literally shrinks this vital organ. Autopsies consistently show that chronic alcoholics have lighter and smaller brains than other people of the same age and gender. Researchers have also observed this shrinking effect in living alcoholics through non-invasive medical tests that give a picture of the brain in action. These tests include magnetic resonance imaging (MRI), positron emission tomography (PET) scans, and computed tomography (CT) scans.[4]

The same techniques reveal how addiction harms or even kills brain cells. For example, research indicates that methamphetamine ("speed") damages cells that produce dopamine, a chemical in the brain that helps to create feelings of euphoria. Methamphetamine use can even trigger a process called aptosis, where cells in the brain self-destruct.

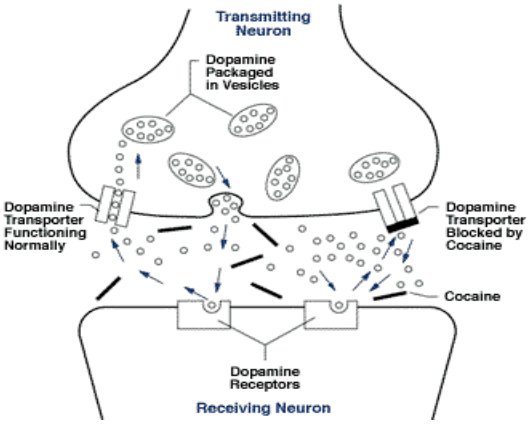
In long-term alcoholics, such changes can be devastating. Studies indicate that 50 to 75 percent of these drinkers show some kind of cognitive impairment, even after they detoxify and abstain from alcohol. According to the National Institute on Alcohol Abuse and Alcoholism, alcoholic dementia is the second-leading cause of adult dementia in the United States, exceeded only by Alzheimer's disease.[5]

Drugs change brain function

The effects of addiction on the brain don't stop with brain size. Research over the last decade reveals that addictive drugs also alter the function of the brain—the very way that cells work.

Human beings are "wired" with nerve cells (neurons) that extend from the brain and spinal cord throughout the body. Neurons with the same function group themselves into strands up to four feet long. However, the strands are not continuous. Between neurons is a small space called a *synapse*.

Figure 6: Synapse Diagram



Researchers used to think that neurons passed signals to each other by sending electrical impulses across synapses—something like the way that electricity jumps the gaps in a car's spark plugs. Today we know that what crosses the synapse are not "sparks" but chemicals. Those chemicals are called *neurotransmitters*. The constant exchange of neurotransmitters makes it possible for the brain to send messages through vast chains of neurons and direct our thoughts, feelings, and behavior.

Addictive drugs wreak havoc with this normal exchange of neurotransmitters in countless ways. For example, drugs can:

⇒ Flood the brain with excess neurotransmitters.

⇒ Stop the brain from making neurotransmitters.

⇒ Bind to receptors in place of neurotransmitters.

⇒ Block neurotransmitters from entering or leaving neurons.

⇒ Empty neurotransmitters from parts of the cells where they're normally stored, causing the neurotransmitters to be destroyed.

⇒ Increase the number of receptors for certain neurotransmitters.

⇒ Make some receptors more sensitive to certain neurotransmitters.

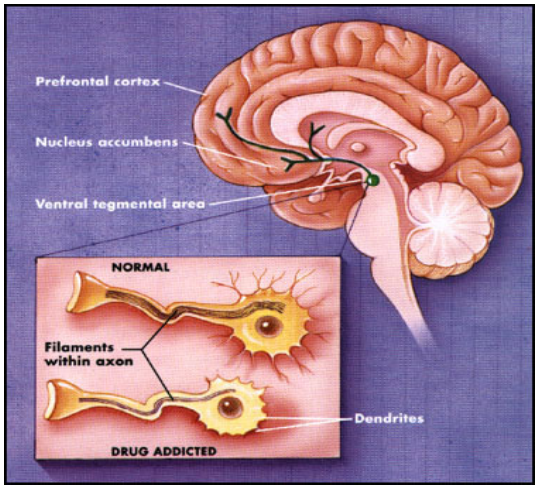
⇒ Make other receptors less sensitive to neurotransmitters (leading to tolerance).

⇒ Interfere with the reuptake system by preventing neurotransmitters from returning to the sending neuron.

A case in point—dopamine

Dopamine, mentioned above, is one of the primary neurotransmitters involved in addiction. All the major drugs of abuse—alcohol, nicotine, opiates, and cocaine—increase dopamine levels. That's a "good news-bad news" scenario. The "good" news, at least temporarily, is that the excess dopamine creates powerful feelings of pleasure. The bad news is that the excess levels take a long-term toll on brain chemistry and promote addiction.

Figure 7: Brain Changes From Drug Abuse



To understand this, remember the biological concept of *homeostasis*, a word that literally means "same state." The brain seeks to maintain a constant level of cell activity. That stable level is critical to regulating our behavior. When supplies of dopamine remain constant,

we can experience the ordinary pleasures of life — such as eating and having sex — without the compulsion to seek those pleasures in self-destructive ways.

When consistently subjected to artificially high levels of dopamine from use of a drug, however, the brain "downshifts" its internal supply of this neurotransmitter. The brain comes to depend on the presence of a drug in order to maintain homeostasis and function normally.

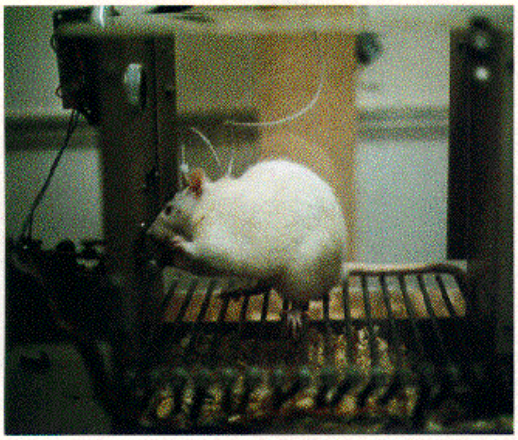
And that's the problem. If the extra dopamine supplied by drugs is missing, the alcoholic or drug addict feels much less pleasure. In fact, these people can experience symptoms such as depression, fatigue and withdrawal. To the addict, it seems that the only relief from these symptoms is to use more and more drugs. It all adds up to craving—addicts' constant drive to obtain their chemicals of choice.

Drugs hijack the brain's reward circuit

In addiction, craving becomes so powerful that it rules the addict's life. This power results in part from changes to a specific path of neurons throughout the brain—the "pleasure system" or "reward circuit." The reward circuit has been studied extensively in rodents. This is significant, since biochemical processes in these animals are strikingly similar to those of human beings.[6]

In a classic experimental design, researchers attach electrodes to points in the brains of living rodents—locations that correspond to the reward circuit. When rodents press a special lever in their cages, a small electrical current travels via the electrodes directly to the animals' reward circuit. Typically, some of the rodents press the lever compulsively—thousands of times, until they finally collapse in exhaustion.

Figure 8: Classic Rat Experiment and Drugs



These findings give a clue to the power of the reward circuit in human beings, which extends from the mid-brain to another section called the nucleus accumbens. This is where drugs of abuse create their effect by masquerading as natural chemicals. Steven Hyman, MD, director of the National Institute of Mental Health, described the action of drugs on this part of the brain in an interview with Bill Moyers (aired on public television as part of Moyers' series on addiction titled *Moyers on Addiction: Close to Home*):

The nucleus accumbens seems to have a particular role in telling us what might be pleasing, what might be good for us . . .. Cocaine and amphetamine put more dopamine in key synapses over a longer period of time in this brain

reward pathway than normal. And because they are so rewarding, because they tap right into a circuit that we have in our brains, whose job it is to say something like, "Yes, that was good. Let's do it again and let's remember exactly how we did it," people will take these drugs again and again and again.[7]

For the person who uses chemicals to repeatedly stimulate the reward circuit, the prospect of abstaining from those chemicals can seem as hopeless and absurd as the idea of abstaining from food. An overpowering drive to drink or use other drugs compromises the user's will, changing what was once a voluntary behavior into an involuntary one.

Heredity influences response to drugs

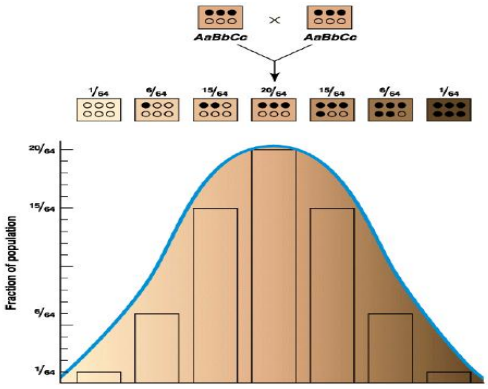
Not all people who use drugs will experience the changes in brain structure and function described above. Some people can use drugs occasionally and remain occasional users. Other people, however, start using drugs casually and seem to progress inevitably to addiction. Researchers don't understand why this is so, but they know that heredity plays a role.

Each of us carries about 100,000 genes located in our cells on structures called chromosomes. And each gene directs the body to produce a specific protein (a process that's influenced by the action of neurotransmitters). The production of these proteins creates a chemical blueprint that shapes every aspect of a human being, from height and weight to personality and behavior.

Unfortunately, the genetic blueprint is not fail safe; chance mutations in genes can produce hereditary diseases. A few of these—such as cystic fibrosis and Huntington's disease—result from a change in a single gene. Researchers have had some success in pinpointing the exact location of those genes and designing specific treatments in response.

In contrast, alcoholism and other forms of addiction result from changes in *many* genes. What's more, the genes that are involved can vary from person to person. These facts make the effort to locate the genes that influence addiction (gene markers) a task of overwhelming complexity. *[Editors note: The diagram below shows a poly genic distribution of the sort suspected in alcoholism].*

Figure 9: Poly Genic Gene Distribution



Still, we have abundant evidence that the predisposition to alcoholism is inherited. Identical twins born to alcoholic parents are more likely to become alcoholic than fraternal twins born to alcoholic parents. (Identical

twins share identical genes; fraternal twins do not.) And, adopted children of alcoholic parents show higher rates of alcoholism than adopted children of non-alcoholic parents. This is true even when children of alcoholics are raised by non-alcoholic foster parents.

Figure 10: Twin Studies Show A High Genetic Factor in Drug Abuse

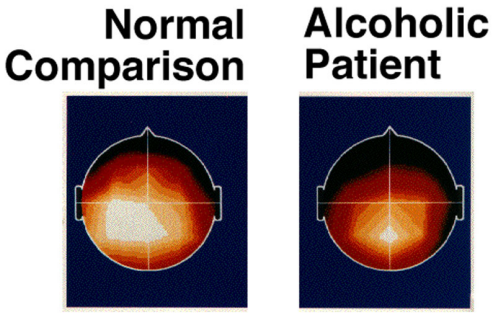
In a recent review article, Thomas McLellan, PhD, professor in the Department of Psychiatry at the University of Pennsylvania in Philadelphia, and his colleagues provide this summary of the relevant research: "Though there is need for more studies of heritability by drug and by gender, the evidence accumulated over the past several years suggests significant genetic contribution to the risk of addiction in approximately the same range as for chronic illnesses such as asthma and hypertension."[8]

Brain waves may predict risk for addiction

A promising development in this area comes from studies by Henri Begleiter, MD, PhD, professor of psychiatry and neuroscience at the State University of New York in Brooklyn, New York. While not able to identify precise gene markers for addiction, Begleiter has discovered another possible marker in the brain waves of people from alcoholic families.

Brain waves are recorded by a common medical device called an electroencephalograph and printed out as an electroencephalogram (EEG). When subjected to a significant sensory stimulus, such as a loud sound, most people respond with a common pattern: Between 300 and 500 milliseconds after the stimulus, their EEG shows a characteristic peak in brain waves. This part of the EEG is called the P3 amplitude. (The term *amplitude* refers to the height of the waves on the EEG.)

Figure 11: P300 Lead Example



In numerous studies that have been replicated by other researchers, Begleiter and colleagues discovered that the P3 amplitude tends to be lower in alcoholics—even those who have been abstinent for up to 10 years. In effect, people with this wave pattern often do not distinguish significant stimuli (those that are unique and unpredictable) from insignificant stimuli (those that are repeated and predictable). These people tend to process each sensory stimulus as

new, a characteristic called *hyperexcitability*. This characteristic plays a key role in conduct disorders and other forms of impulsive behavior.[9]

The lowered P3 amplitude has another implication: It has been discovered in non-alcoholic relatives of alcoholics, including their children. This fact suggests that the unusual brain wave pattern is inherited, and that it may help predict people who are at risk to develop addiction. Begleiter suggests that people at risk for alcoholism inherit a general state of hyper-excitability, and that drinking alcohol relieves this state. Yet the relief is only temporary and depends on drinking increasing amounts of alcohol over time.[10]

Research has treatment applications

Begleiter believes that his findings have clear applications in treating and preventing addiction. "There are several approaches that may be implemented," he says. One is "using behavioral and pharmacological means to reduce this hyper-excitability in young adolescents at risk to develop substance dependence. The other approach deals with prevention initiatives involving intense education starting at a very early age."

Each of these strategies holds promise. For one, knowing the effects of addictive drugs on the brain holds the hope of developing medications to reduce craving. This has already been done with methadone for heroin addicts, naltrexone for alcoholics, and buproprion for nicotine addicts.

In addition, research can shape the way we educate people about addiction. "Research gives us information to use with patients and families in treatment to understand what has happened to them, why the addiction has occurred, and how it is not a matter of lack of will power," says Patricia Owen, PhD, director of the Butler Center for Research at Hazelden. Also, people who know that they've inherited a risk for addiction can learn to abstain from alcohol and other drugs early on.

Equally important is placing people in treatment programs that reinforce changes in addictive behavior. To say that addiction involves biological factors does *not* mean that addicts are victims of biology. Indeed, the addict's initial behavior—casual drug use—sets biological factors in motion. And, we can expect addicts to enter and comply with a treatment program.

Besides, it's not only drugs that change the brain; stable changes in behavior can also alter brain function. For example, recovering alcoholics know that it's wise to avoid the people, places, and things that they used to associate with drinking. This new behavior weakens the link between drinking and pleasure that's been encoded in their brains.

Biology and behavior, then, must share the billing when it comes to explaining addiction and promoting recovery. According to the National Institute on Drug Abuse, the most effective treatment programs blend an array of strategies—medication, therapy,

social services, rehabilitation, and self-help groups.[11]

Leshner believes that these programs succeed because they treat the whole person. "Their treatment strategies place just as much emphasis on the unique social and behavioral aspects of drug addiction treatment and recovery as on the biological aspects. By doing so, they better enable those who have abused drugs to surmount the unexpected consequences of drug use and once again lead fruitful lives."

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Wyoming: The First State to Apply the Science of Addictions

Some of the science discussed here is new; some is better known. State policy however has rarely been informed by comprehensive research. Generally policy has been set piecemeal. Wyoming is in the unique position of having commissioned a thorough review of the science as a foundation for designing policy. This entire document has focused on the review of the research on addictions—not from the perspective of what have we done wrong—but what could we as a state do right, even better than any other state in the Union.

Think of the use of good science in this plan in the same way that a good rancher; farmer or businessperson might do with the best information to maximize the productivity of the ranch, farm or business. Throughout much of Wyoming history, a Wyomingite might have used the good offices of an extension agent to get the best information available to make a good plan. We have done essentially the same in this plan. With a good understanding of the nature and nurture of substance abuse will mean that our state might be in a strong position to turn around the terrible epidemic that sprang up around during the past 15 years.

How Plan Uses Science Of Substance Abuse

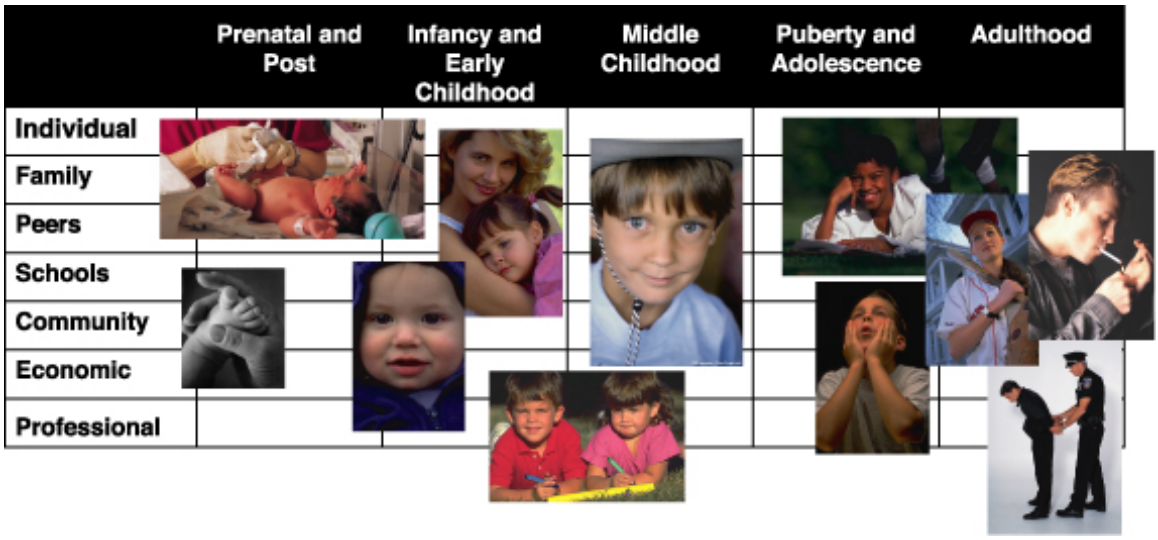
The next few pages highlight how this document integrates the science of treatment, intervention, prevention and control. Each section of the plan details more of the science, and some 10% of the entire report is composed of references to peer-reviewed scientific literature.

Brain and Medical Research

Human behavior becomes real through neural pathways. Just over 10 years ago, it was almost impossible to see and understand how the brain works. We are now making use of this emerging knowledge in several ways that bear enumeration, as examples:

- The early prevention components focus on affecting the inhibition circuits of the brain, since these have been strongly linked to elevated risk.
- The treatment and correctional interventions emphasize motivational enhancements, since clear evidence exists that individuals with substance abuse problems are more sensitive to rewards (which is precisely one of the areas affected by most substances that people abuse or misuse).
- The treatment and data systems emphasize monitoring of the gene, drug, and treatment interactions since powerful science shows these interactions determine significant risk and protection.
- The prevention and intervention plan involving teens reflects the recent research on brain changes during adolescence, which helps explain why treating adolescents is so much more difficult and expensive than helping adults.

Figure 12: Blueprint Lifespan Approach



Lifespan Research

Addicts do not just happen at age 24, 40 or whatever. Scientists now have fine-grained maps of developmental sequences that predict elevated risk for substance abuse that begin as early as

conception and flow the old age. These pathways are critical for likely success, and help explain why so many well-intentioned strategies—even backed by much money—failed to produce the result desired.

The Wyoming Substance Abuse Blueprint covers the developmental lifespan issues, using significant scientific findings for all age groups. Figure 11 below provides a map of the lifespan orientation.

Behavioral Research

Substance abuse, misuse, and use involve behaviors. Almost 50 years of accumulated scientific results shows how to change behaviors effectively in many diverse contexts and age levels. Often, the strategies may not be well known, because they are largely the provinces of peer-reviewed scientific publications.

Certain infant behaviors and early mother behaviors predict either positive or adverse outcomes. Those behaviors can be changed, and this plan contains substantial evidence based practices to alter those patterns in both the child and parent.

Impulsivity and disruptiveness in boys during early childhood predicts substance abuse a decade later. Those behaviors can be changed, and this plan contains strongly backed scientific methods to change those behaviors.

Social withdrawal and early depression in girls elevates the risk of substance abuse later in life. This plan contains research-based practices to address those behaviors.

Harsh, punishing, or overly permissive parenting styles of behavior elevate risk of substance abuse. This plan contains strong research based practices to address those behaviors effectively.

Teens and adolescents have a different pattern of risk taking behaviors that place them at elevated risk for substance abuse. This plan contains science-based strategies for addressing those behaviors.

Community adults engage in behaviors of giving substances to kids or making it easy for kids to obtain substances such as alcohol, tobacco, and other drugs. This plan holds out effective practices that change those adult behaviors.

How adults serve and interact with bar patrons' increases or decrease the risk of substance abuse in a community and increases or decreases the risk of murder, traffic fatalities and criminal assaults. This plan offers a number of well-proven strategies to improve those behaviors.

The choices that adults make can alter their risk for substance abuse. This plan offers any number of strategies emerging from good science on how to change those behaviors in a cost-effective way.

Good science shows that behavior change is possible, practical, and wise.

Summary of Nature and Nurture

Well-controlled science shows that substance abuse, misuse, and use are the function of both nature and nurture, interacting in predictable ways. Human genetics and brain functions predict addictions. Certain social or behavioral contexts trigger those genetic or brain effects. The Wyoming Substance Abuse Blueprint takes a balanced approach to understanding how the nature and nurture might be dealt with to reduce the problem of addictions and related multi-problem behaviors.

Substance Abuse Prevention & Early Intervention

Wyoming Vision 2020

The Wyoming Legislature hereby instructs and authorizes the Department of Health, acting in concert with the Youth Development Sub-Cabinet, to undertake a comprehensive, integrated program to prevent, or intervene with, substance abuse and related problems in young people from prenatal through young adulthood. The Department of Health shall:

1. *Promulgate standards for prevention and intervention of multi-problem behavior;*
2. *Collect and analyze data on prevalence and predictors of substance use and related multi-problems each year on Wyoming minors and adults for the purposes of guiding policy, procedures, and programs;*
3. *Use Wyoming specific data to design and alter the prevention program;*
4. *Select, adapt, rapidly deploy, and revise scientifically proven practices that have promise or proven utility for a cost-effective prevention results, which have been recommended in the report for House Bill 83 passed by the Wyoming Legislature in 2001, or that may discovered hereafter;*
5. *Seek out, develop, and test prevention or intervention strategies that address Wyoming specific problems, when published science offers only partial guidance for prevention or intervention strategies;*
6. *Develop a public-private partnership under the trademark wyowins.net™ for the purposes of leveraging people, logistical or financial resources for prevention and early intervention;*
7. *Incorporate the guidelines from the Tobacco Use Blueprint, regulating the funds from the Tobacco Settlement, into these efforts, as previously adopted into law by the Wyoming Legislature;*
8. *Seek the advice of the Governor's Advisory Board on Substance Abuse several times a year on the implementation of this Act;*
9. *Promulgate rules and regulations that may be necessary for the intent of this act to be fulfilled;*
10. *Report not less than annually to the Legislature on the progress of preventing substance abuse and related problems, with suggestions for Legislative Action that may be required to further the objectives of the Wyoming Vision 2020 Act of having Wyoming lead the country in indicators of well-being for its young people and reduced risk indicators for its young people on or before the year 2020.*

Could the Future Be Different?

The young people sat down, looking a bit nervous, a trifle uncertain about what might happen next. They began to tell their stories, taking turns. Their tales explain what might be done in Wyoming to create a different future.[f] A young, blonde woman spoke first:

> ***We moved many times, mostly because we didn't have any money. My dad wasn't really in the picture for much of much of my life. My mom had different boyfriends, and they always fought. The boyfriends even hit us, while they were doing heavy drugs. A cop lived next door to us for a while. He never stopped the craziness, and we kept hoping he would. One time, like when I was in first or second grade, I took some of my Mom's coke to school… I never really thought the world could be any different. I thought the world was filled with drugs, hitting, and stupid stuff…***

After the audience heard all the details, almost every adult in the room wondered, "Why didn't somebody do something early in that kid's life?" It was a good question. The next young woman spoke, with obvious keen intelligence.

> ***After I got raped, I learned that I could use drugs to make me feel anything I wanted. I could take this drug to feel happy. I could take something else to slow down. I figured I could use any drug to make me feel or think anything I wanted. I was so good with using the drugs I even did better in school. Nobody seemed to notice even when I came to school high and with my arms marked with needle- tracks from shooting up. I was in all the sports and clubs and stuff…***

The young woman had such insight into her experiences, and the adults again left wondering, "How could we have not noticed until she was in so much trouble?"

A really high-energy kid spoke next. He got up, used a flip chart to illustrate his points. He entertained the people at the hearing, talking about having used drugs as a bright teenager.

As soon as he finished, he left the meeting. During the break that ensued, most of the adults thought the young man sought thrills from the drugs and attention—just like he had done at the meeting. Said one person insightfully*; "I think you'd have to keep him really busy to stay away from drugs."*

The next young man to speak described a history of aggressive behavior and school failure, which seemed to start when the boy started public school. He started to hang out with other kids who egged each other on to do more and more crazy things, which included a whole laundry list of crimes. Troubles with the law and authority marked his whole history.

[f] These stories are summaries of testimony heard in Cheyenne, WY, on June 14-15, 2001. The stories are abbreviated.

Later after the young people finished their testimony, various professionals who worked with younger children and families began to tell their stories. A provider working with mothers with substance abuse problems in a residential setting spoke:

> ***We had a group of seventeen 2-3 year-old children with our moms. These children are so aggressive that our day care provider told us to find another facility. This is the first time such a thing has happened.***

Subsequently, a high-level supervisor in the state government for child mental health services spoke up:

> ***Approximately 1-2 serious cases of children needing expensive services are coming to the state office a day in Wyoming. These are children whose parents, most particularly moms, are also in the system for multiple problems. Many of the moms have been sexually abused. Some of the children have such serious impairments that we are sending them to residential treatment out of state for months or years at a time. These children often come with significant impairments, and we have little in place to address their needs in the state. They won't go away, though. They often start using drugs when they are teens, and later get sent to Lusk or Rawlins as adult criminals.***

The situations in Wyoming are not just about families from extreme poverty or adversity. During the preparation of this report, we accumulated stories of families from all walks of life who have been savaged by preventable substance abuse.

A different possibility

Ask anyone at the corner coffee shop, "Why do people do drugs, and what can be done to prevent it in kids?" Almost everyone will have a ready answer. Folks might say things like:

⇒ "Just stupidity. The kids don't know how harmful drugs are."

⇒ "Bad parents…there ought to be a license to be a parent…"

⇒ "Too much TV and loose Hollywood morals. The kids need to be scared straight…"

⇒ "Low self-esteem; the kids who use drugs don't feel good about themselves."

⇒ "Too much permissiveness in the schools and homes…How about bringing corporal punishment back?"

These and other intuitions were among the very first ideas to be tested as possible prevention strategies by scientists. In general, they turned out not to work. In a few cases, some interesting results started to emerge from good scientific studies, just like the kinds of studies that we expect from good medical research to test what works to cure cancer and other terrible diseases.

Almost 40 years have elapsed since scientists and major federal agencies started studying the prevention of substance abuse and related behaviors.

Various studies, various methods, and different models now show it is possible to cut the prevalence rates of tobacco, alcohol, and other drugs among young people by as much as one-half. Some prevention methods involve prenatal or early childhood interventions. Some prevention methods involve improving the early behaviors of parents and children that predict substance abuse. Some strategies involve altering how the community interacts with kids, families, and people who need help. Some strategies involve making common drugs like alcohol and tobacco less accessible to children and youth. Some powerful strategies are saved for when children, young people, or adults show signs of being in trouble but are not necessarily abusing drugs. Wyoming can be the first state to apply the most powerful findings to make the state number one in the country in prevention of substance abuse and related problems.

Wyoming Specific Data for Prevention Planning

Beginning in the 1997-1998 and the 1998-1999 school years, Wyoming began extensive data collection on substance use among its teenagers enrolled in schools, providing a general description of drug, alcohol, and tobacco patterns in the state using the American Drug and Alcohol Survey (ADAS). Unlike other surveys used in Wyoming since 1991, on risky behaviors such as the Youth Risk Behavior Survey (YRBS), the ADAS sampled most of the students in Wyoming.[g]

The present report involved an analysis of the combined ADAS data over two years (about 25,000 surveys before data reduction), and the analyses were designed to create a model for prevention in Wyoming based on Wyoming youth data. Such an analysis had not been conducted previously, and was prepared by the newly created Statistics Center and the University of Wyoming. Dr. Kami London prepared the analyses with support from Dr. Narina Nunez. The complete information on the results will be published as an appendix to the overall House Bill 83 report. The size of the data set is extremely large in terms of the population of Wyoming, which boosts our confidence in the results. The analyses provide a foundation for action to prevent substance abuse, specific to the needs and conditions of Wyoming. This document summarizes some key results.

Wyoming Specific Analyses

The authors of the report argue that it is important for Wyoming to have its own data-driven analyses of the predictors of substance use, misuse, and abuse. With a Wyoming-specific model, it is more likely that the State will devise, implement, and promote more cost-effective strategies for prevention and intervention. With a Wyoming-specific model, policy makers and stakeholders can chose research-based practices with greater probability of success, instead of just going down a menu of so-called "best practices."

[g] Extensive reports on the ADAS and YRBS have been previously published by the Wyoming Department of Health and the Wyoming Department of Education.

Wyoming Recommendation:
It is recommended that the State commission analyses of data sets to create a Wyoming- specific model of substance abuse, misuse, and use.

Substance Use, Misuse, and Abuse Among Wyoming Youth

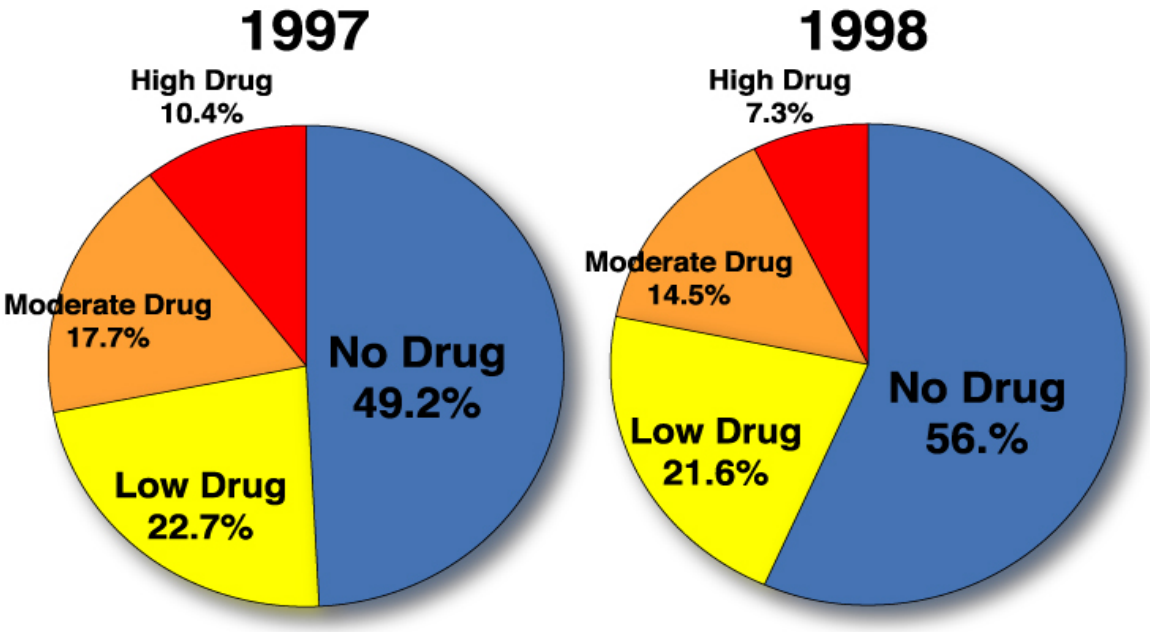
A major positive result emerges in the substance abuse data on Wyoming youth, which is displayed in a figure below. About 50% of all Wyoming youth enrolled in school have had no or neglegible involvement[h] with any drug—not tobacco, not alcohol, not marijuana, not meth.

A majority of young people does not use, and this item can be publicized to help correct the common view by young people that "everybody does it." In Wyoming, everyone does not do it. The bad news is about 25% of the youth enrolled in secondary schools in Wyoming have a moderate to serious problem in the use of various drugs.[i]

[h] Negligible use means simply trying a drug but not continuing with use.

[i] The analyses excluded some1,748 children from the database, because of a variety faking responses, inconsistent responses or other errors.

Figure 13: Substance Use Among Wyoming Secondary Students



Source: American Drug and Alcohol Survey of 22,122 Students in the 6th, 8th, 10th and 12th Grades in Wyoming, analyzed by Statistics Center, University of Wyoming

The data seriously underestimated the actual misuse of drugs among our young people, because the surveys do not sample youth who are not enrolled in school or enrolled in alternative education programs—both circumstances are known to have much higher rates of misuse and use of drugs, alcohol, and tobacco. How many teenagers have a serious problem with substance abuse in Wyoming? It would be safe to say that at least 2,000 young people in Wyoming have a potentially serious problem with substance use. The number may be twice that high in reality, but no one knows for sure.

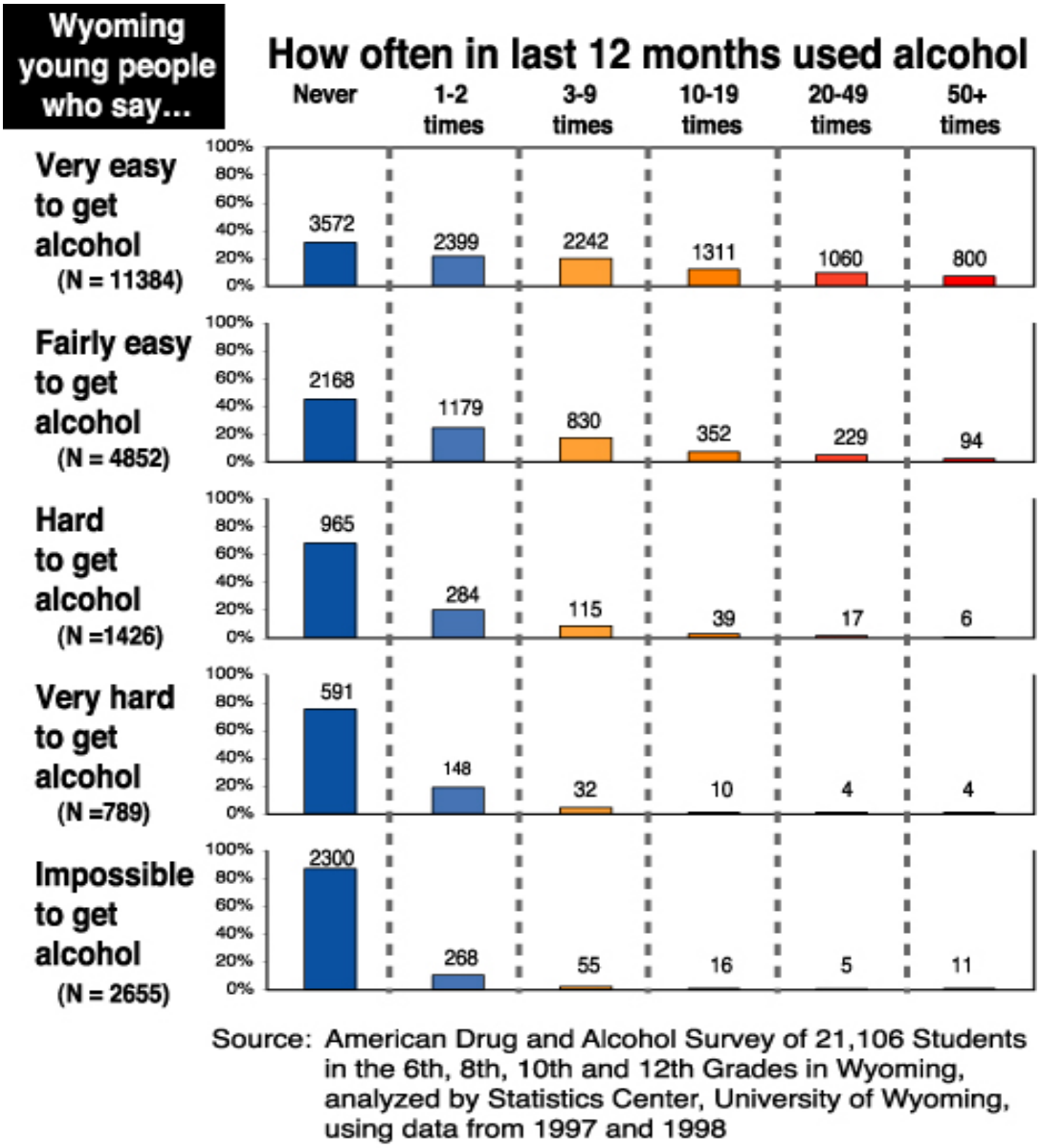
Are there differences in prevalence rates among Wyoming counties? Indeed there are. In Lincoln County, 75% of the young people have negligible drug use, while Converse County has only 42% of its young people who have not used drugs. Natrona County has the highest percentage of young people with multi-drug use—5.8%. The county with the lowest percentage of hard-core multi-drug using youth is Sublette County at 0.6%. A separate report will detail patterns of substance use, misuse, and abuse by each Wyoming county. Pronounced differences among the various communities in Wyoming are consistent with research in the Rocky Mountain area, showing lifetime prevalence and the frequency of occurrence of different types of drug users—indicating that rural communities are likely to develop idiosyncratic patterns of drug use.[12]

Wyoming Predictors of Serious Use

What predicts substance abuse among Wyoming young people, and can those predictors be altered? The next paragraphs describe some analyses yielding potent predictors specific to Wyoming.

Perceived Availability. One pattern quickly emerged predicts use, misuse, and abuse of various drugs—perceived availability by youth. The Figure below shows the relationship between perceived availability of alcohol and serious use of alcohol by our young people. The differences in the figure are 'statistically significant."

Figure 14: Perceived Availability and Minor Alcohol Use



Source: American Drug and Alcohol Survey of 21,106 Students in the 6th, 8th, 10th and 12th Grades in Wyoming, analyzed by Statistics Center, University of Wyoming, using data from 1997 and 1998

By knowing young people's views on availability of alcohol, we can reduce statistical error in predicting alcohol use in the past year by 52.4%. As the difficulty of getting alcohol increases, the number of times the child has drunk in the past year decreases. This is a powerful effect. An even more powerful effect is found between children's rating of the availability of marijuana and the number of times that the child has smoked it in the past year. As the difficulty in attaining marijuana increases, the number of times smoking it in the past year decreases. By knowing how difficult the child views getting marijuana, we can account for 72.7% of the variance in how many times they have smoked marijuana. In sum, the children's perception of the availability of marijuana and alcohol exerts a strong effect on the number of times they have partaken in the controlled substances in the past year. Fortunately, there are community-based strategies for reducing the availability of tobacco, alcohol, and other substances, which will be discussed.

Is perceived accessibility of tobacco a factor? Yes, according to the analyses. Perceived tobacco accessibility is an issue that may not be conscious to adults. In Wyoming it is illegal to have tobacco products where children and youth could have easy access to them. Recent snapshots of Wyoming supermarkets across the state show that a child or youth could easily steal tobacco, because of the fact that the displays are open to all as show below.

Figure 15: Various Pictures of Tobacco Accessibility to Kids and Near Kids Toys in Wyoming Stores

These displays may not seem important to the causal adult eye, and may even be completely unintentional by store clerks and managers. Both national and Wyoming data show that children steal tobacco frequently. This fact may not seem particularly important until one understands some of the psychopharmacology of tobacco smoke, which was not widely known until after the discovery phase of the Attorney General's lawsuit against tobacco companies. For some time, the tobacco companies have known that tobacco affects a basic part of the brain that remembers how one got reinforced. The nicotine in tobacco directly stimulates the reward circuits in the brain, and since children often steal tobacco at home or stores to get it, the drug action creates a pleasant memory associated with *stealing*. This is not something that any sensible adult would wish to teach, and accounts, in part, for how tobacco might be a stronger gateway to illegal drugs and illegal behavior.

Wyoming Recommendation:

A major part of a Wyoming-specific prevention effort must focus on reducing both perceived and actual access to tobacco and alcohol by kids. This will likely involve expansion of such techniques as "reward and reminder" and publicity, with some associated enforcement. Some changes in legislation or policies will be necessary for this to happen: 1) Use of minors to attempt purchase of alcohol, as was done for tobacco in 2000; and 2) rules published for display of tobacco products near children's products.

Factor Analyses of Wyoming Data

Typically, hundreds of variables can predict substance abuse. Each one might have a little predictive power or a lot. Statisticians have devised a way to cluster the predictive factors, for greater power or meaning. One such technique is a factor analysis. In the Wyoming context, the Statistics Center identified 10 possible factors, which are discussed in greater detail in an appendix. The ten factors are:

⇒ Antisocial/aggressive behavior

⇒ Depression/negative self-worth

⇒ Positive views towards school

⇒ How much family cares if student does drugs

⇒ Friendship relationships/concern for friends/views towards morality

⇒ Happiness/positive self-esteem

⇒ Family talked with student about doing drugs, alcohol, tobacco

⇒ Parents care and monitor child's actions

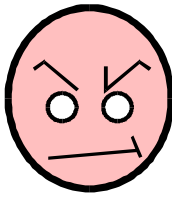
⇒ Have close friendships/likable person

⇒ Perception of trouble for different violations

Which of these factors are most relevant to Wyoming? That answer lies in something called a regression, which arranges the factors in an order of which predicts the most substance abuse in order of "power."[j] There were two potent predictors:

⇒ Protective Friends. How much a young person attempts to stop friends from using tobacco, alcohol, and other drugs is a protective factor.

⇒ Antisocial/Aggressive Behavior. How much antisocial behavior the young person does (hitting, fighting, stealing, risk taking, cheating, etc.) is a risk factor.



How powerful are these predictors? **Very.** "Protecting Friends" accounts for 17.5% of the variance in risk for substance abuse. By adding the factor of "Anti-Social/Aggressive Behavior" (the variable that is the second most powerful predictor of risk), the percentage of variance accounted for increases by .127. This indicates that "Protecting Friends" and "Anti-Social/Aggressive Behavior" together account for 30.2% of the variance of risk for substance abuse. The third most important factor for Wyoming youth was how much a young person's family cares about drug use. It added another 6% explained variance. Hence, the three variables together account for 36.1% of the prediction of substance abuse in Wyoming.

Wyoming Recommendation:

From a statewide policy perspective, primary focus on a Wyoming specific prevention and early intervention plan for substance abuse and related problems ought to focus on: 1) reducing perceived availability to alcohol, tobacco, and other drugs by minors, 2) reducing early antisocial behaviors, and 3) increasing peer networks that support non-use of substances. This recommendation is consistent with national research.

Additional research needs to be undertaken to understand why some counties have lower prevalence rates of use, misuse, and abuse using multiple methods of measurement.

Cross Validation of Substance Use, Misuse and Abuse in Wyoming

The following data documents the extent of youth problem behavior in

[j] The Statistics Center at the University of Wyoming conducted a step-wise multiple regression with risk factors serving as the predictor variables and drug involvement/risk categories (i.e., Risk Level Category) as the response variable. This is a classic research strategy.

Wyoming: *Wyoming Department of Health and the Center for Substance Abuse and Treatment Youth-Indicators of Substance Abuse 1987-97 (Ellis & Glover, 1998)*:

⇒ Since the 1990's, Wyoming young people have had nearly twice the rates of alcohol, tobacco, and other drug problems when compared to the rest of the country.

⇒ Wyoming youth use methamphetamine at a rate 3-5 times higher than the rest of our country.

⇒ Over 40% of students in grades 10-12 met DSM-IV definition of ATOD abuse. 33% of Wyoming students in grades 10-12 have used illegal drugs.

⇒ There was a 19% increase in alcohol-involved hospital discharges and a 42% increase in drug-involved discharges from 1997-1998.

⇒ Alcohol-related arrests in Wyoming were 90% above the national average.

⇒ Juvenile arrests (under 17 at the time of arrest) rose 48% for the most serious violent and property offenses while the nation saw a 12% decrease in this area.

⇒ Total juvenile arrests in Wyoming were 57% above the national level

Our Wyoming youth alcohol, tobacco, and other drug uses are dramatic, characterized by rates of use that consistently exceed national trends and averages.

Wyoming Recommendation

Wyoming has a substantial subset of young people who represent what is called "multi-problem" youth. Intervention strategies need to be tested in the Wyoming context to reach such children and youth, since they represent a major loss.

Our state needs to consider several actions to reduce the percentage of young people who drive and drink. This could include:

1) restrictions on drive-up windows for alcohol,
2) graduated licenses, and other interventions.

National Youth Risk Behavior Survey

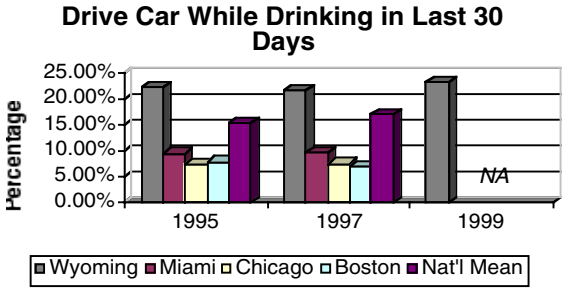
Since 1991, the state of Wyoming has participated in the Youth Risk Behavior Survey sponsored by the US Centers for Disease Control and Prevention. The most recent published data on Wyoming were released for student data for 1999. Highlights of the 1999 data are reported below in a table showing the rank of Wyoming against the whole country.[k]

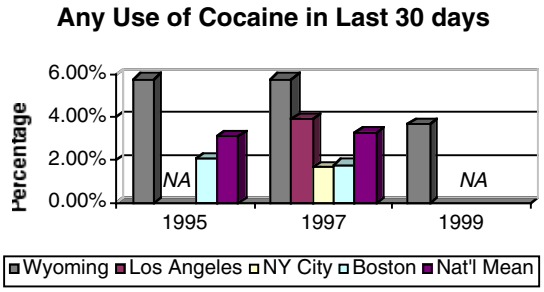
How does Wyoming compare to some of the United States big cities? Here are a few sample comparisons from the YRBS over time. What it shows is that Wyoming's young people have some substance abuse habits that exceed those of young people in Los Angeles, Boston, New York, Miami, Chicago, or nationally.

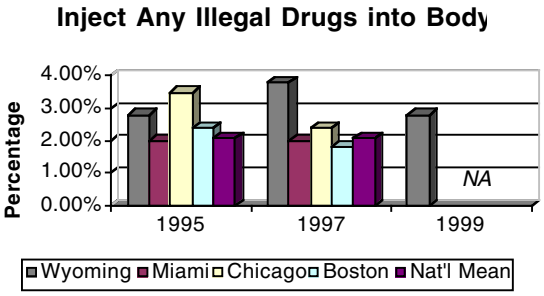
[k] The YRBS samples students in various states. It is not a universal sample of all students.

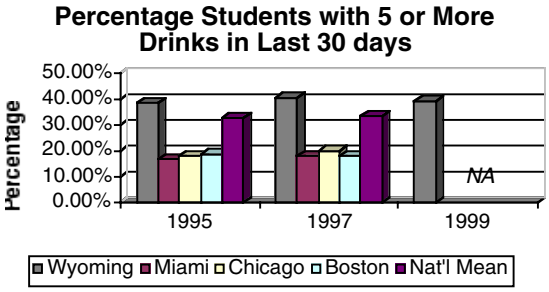
Figure 16: Centers for Disease Control and Prevention's Youth Risk Behavior Survey

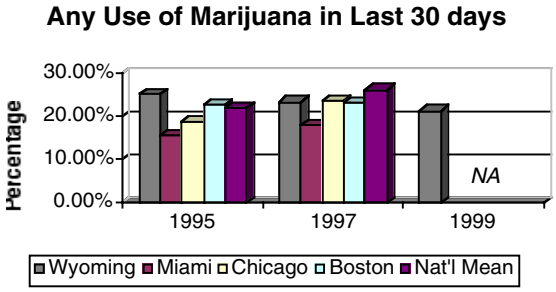
Prevalence of Behavior Among Secondary Students	**WY Current %**	**U.S. Current %**	**National Ranking**
Current smokeless tobacco use	18.0	8.0	2nd
Teen alcohol use	55.0	50.0	5th
Drinking alcohol and driving	23.0	13.0	3rd
Rode with a driver who had been drinking alcohol	39.0	33.0	5th
Motor vehicle crash deaths, ages 1-14	10.3	4.2	n/a
Binge drinking	40.0	32.0	4th
Teen suicide, ages 15-19	15.9	9.4	n/a
Ever abused toxic inhalants	18.0	15.0	4th
Ever used methamphetamine	13.0	9.0	5th
Used alcohol or drugs at last sexual intercourse	31.0	25.0	3rd (tie)
Tobacco use in pregnancy	22.5	13.2	n/a
Alcohol use in pregnancy	1.9	1.2	n/a
Note: A national rank of #1 means that a state would have the highest rate, but a rank of #50 would be the lowest rank. All rates or ranks are adjusted for per capita population.			











Wyoming Recommendation

Smokeless tobacco needs to be a prevention focus, because a very coarse analysis suggests that its use by young people (especially at school) is a predictor of methamphetamine use and very adverse health effects.

Wyoming Recommendation:

The Youth Risk Behavior data suggest Wyoming has a rather high number of youth who engage in "multi-problem" behavior, and they need to be a high-priority population focus in intervention planning, since such youth often use multiple drugs.

Wyoming Recommendation:

The Youth Risk Behavior Survey in 2001 was done for the first time as a census survey (all schools) in Wyoming. Previously, all data were samples. It is imperative that the Department of Health and the Department of Education undertake a multi-variant analyses of the 2001 data, similar to the analyses completed for this report as conducted on the American Drug and Alcohol Survey, also a census survey.

National Household Survey

The National Household Survey on Drug Abuse is an annual survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA). This survey has been the primary source of estimates of the prevalence and incidence of illicit drug, alcohol, and tobacco use in the population since 1971. The survey is based on a nationally representative sample of the civilian, non-institutionalized population of the United States age 12 years and older. Typically, reports from the National Household Survey (which are done on the telephone are lower than anonymous written surveys). Snapshots of 1999 data for Wyoming from the survey show that:

⇒ Wyoming children ages 12-17 are among the highest in the nation for past month use of any illicit drug other than marijuana; past month binge alcohol use; past year dependence on illicit drugs or alcohol, and past month use of cigarettes.

⇒ 5.6 percent of adolescent non-smokers reported past month use of an illicit drug.

⇒ 41.4 percent of teen smokers reported past month illicit drug use.

⇒ 19.2 percent of children living primarily in rural counties reported using cigarettes in the past month, compared to 13.3 percent of children living in metropolitan areas.

Annie E. Casey Foundation KIDS COUNT Data Book

Most states participate in the Kids Count project, and Wyoming is one of those states. The 1999 report finds:

⇒ The child death rate is more than 20% worse than the 50-states median with 36 deaths per 100,000 children ages 1-14.

⇒ Rate of teen deaths (15-19) by accident, homicide, and suicide is more than 20% worse than the 50-states median, a rate double the rest of

the nation. While the rest of the nation showed to have decreased their rates, Wyoming was 10% worse than in 1985.

⇒ Juvenile property crime arrest rates were higher than the rest of the nation.

Various studies suggest that Wyoming young people could change all of the variables or factors to prevent substance abuse and misuse.

Wyoming Recommendation:
We recommend caution in promoting the data on high rates of use in Wyoming by "multi-problem" youth. Over emphasis on these data in public relations may mistakenly increase the perception that substance abuse is the norm among Wyoming youth.

Case File Stories

From time-to-time during this study, we had the chance to examine case files from various departments on children and youth or adults with serious problems. The case files depicted early and costly histories. For example one youth, "Billy," alone had the following costs in the table below:

Table 3: Cost of "Billy" during adolesence

Boys Home expenses (one time)	$50,000
Medicaid (during teen years)	$110,000
Special Education (child's lifetime)	$28,000
State Hospital (9-month stay)	$128,000
Legal (estimated)	$20,000
Total	**$336,000**

Is Billy unique? No. The Mental Health Division of the Department of Health has provided some samples of other serious cases for children with high Medicaid expenses since 1995 for serious multi-problems related to ultimate substance abuse (caused by prenatal exposure or predicting abuse or both):

1) **14 year-old male**. In DFS custody. Currently in an out-of-state (Texas) neuropsych placement. He has received a full diagnostic work up and has been working on the treatment plan since his admit to his current program on 3/7/00. He is at his best right now and ready for discharge to a facility closer to home. However, optimal functioning for this young man is such that no facility within our region will take him. The state hospital has refused him unless special dedicated staff can be found. He will need 24-hour supervision in a safe, structured, predictable, and consistent setting. Total of Medicaid dollars since July, 1995 is: $244,809.49

2) **17 year-old male.** Currently discharged to home against professional advice from a neuropsych facility in Texas. Was previously in the Wyoming State Hospital for a long period of time. He has been in numerous residential treatment centers and has been jailed for threats and assaults. Has been in DFS custody for years. May have been remanded back to parents at this time. Diagnostic work-ups at the neuropsych facility revealed the following. Total of Medicaid dollars since July, 1995 is: $85,035.04* Note: This amount does not included the extended placements at the state hospital, DFS covered RTC placements, and detention/correctional placements, where this young man spent most of his life.

3) **12 year-old female.** In DFS custody. Currently in a neuropsych placement. Progress is slow and uneven. Will most likely discharge to a BOCES placement in Wyoming. Younger sibling just removed from Mother and is in a BOCES placement now. Behaviors put this young lady at high risk for victimization. She has little ability to interact appropriately with others and is agitated without much provocation. She can be very aggressive and displays little regard for others feelings or property. While her behaviors continue to improve bit-by-bit this young lady still continues to act out with oppositional, disruptive, agitate, impulsive, and sexually acting out behaviors. Total Medicaid cost since July, 1995 is $351,550.07

Typically, the costs and records are highly scattered. Department of Family Services typically notes more content when a child is an adolescent, and the Department of Health may show more information in Medicaid files for younger children. It is typically the case that powerful interventions do not happen until the child breaches the juvenile justice system, though the inferences from the schools is that there was a documented problem of early aggression in the primary grades for the most serious cases—when interventions deployed were weak and not science-based.

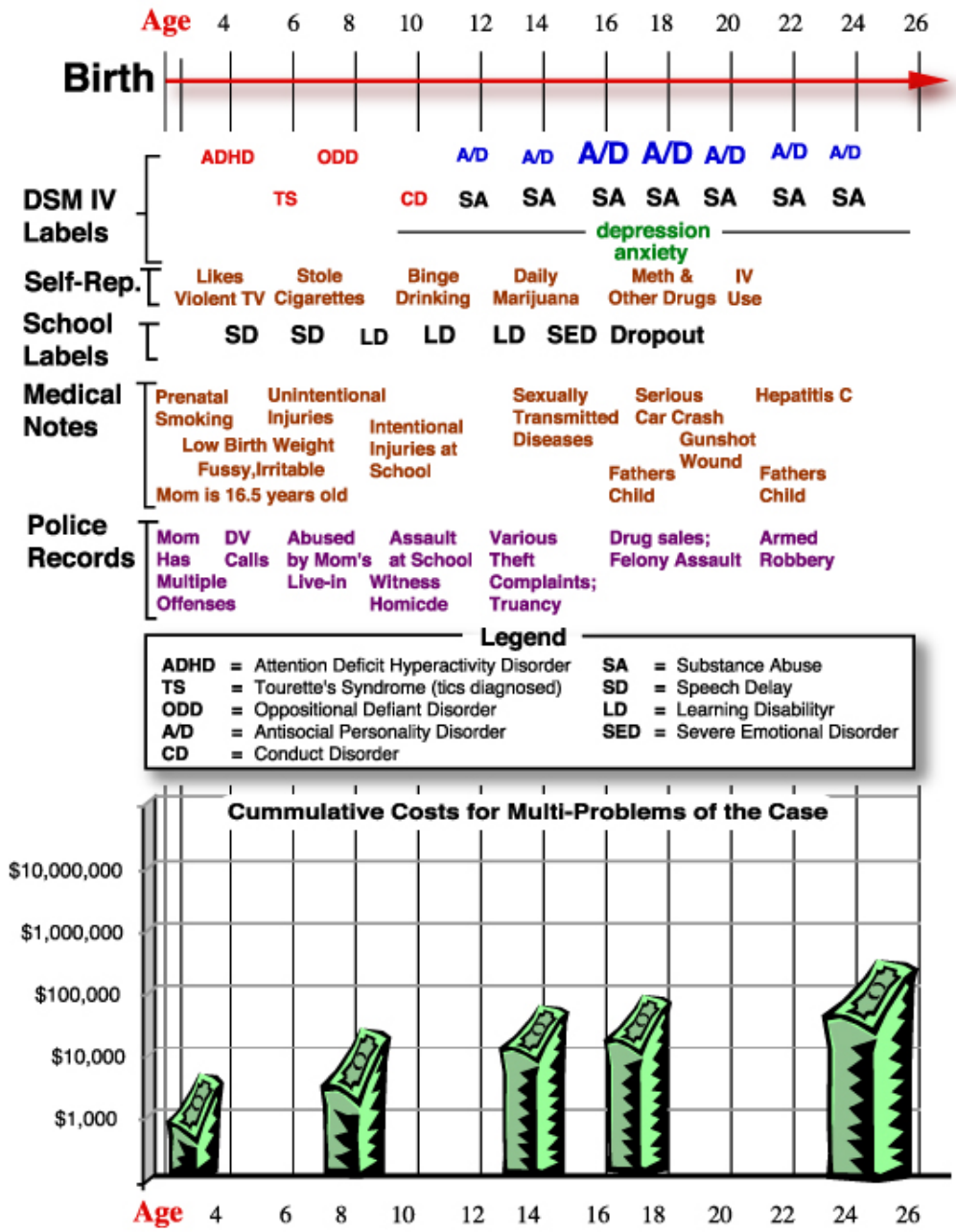
Records for children and youth not under state supervision were not available during the course of the study. However, during the course of the study, individual families told of their own experiences. It was not uncommon for families to report that: 1) they could not get appropriate early intervention; 2) they may have spent $50,000 to $70,000 out-of-pocket for services **out-of-state;** and 3) the exhaustion of personal resources led to involvement with the state system—typically through criminal activities on the part of the youth.

Are small numbers potentially significant in our state? Just 10 fewer cases per year entering the system like "Billy" could avert about $3,000,000 per year in annualized costs. How many children are there like "Billy"? Nobody really knows, and we need to find out and conduct some "forensic" examinations of their scattered records (e.g., Medicaid, Department of Family Services, Department of Education, etc.) to begin to

find out ways that such serious, multi-problem youth might have averted earlier.

What do case files look like graphically for some of these cases? We present one, which is a composite, showing multiple records and family history in the figures below.

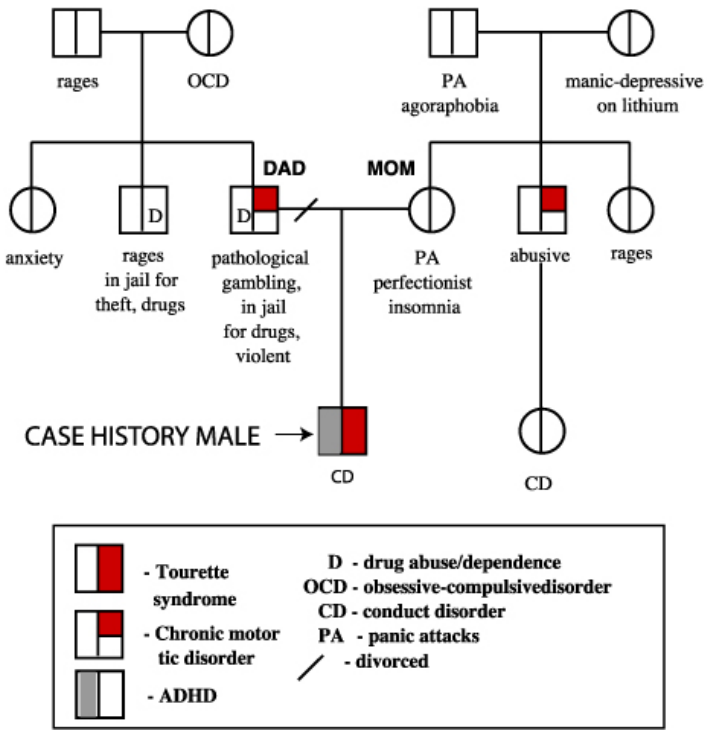
Figure 17: Multi-Records Case Study Time Line With Economic Impact Estimates



Wyoming Recommendation:

Multi-problem youth significantly account for most of the expenses by various state agencies. Wyoming would benefit by an analysis of such youth, and it is recommended that the state agencies undertake a joint review of such children so that more effective interventions could be developed.

Figure 18: Family History of Sample Case



Other Wyoming Epidemiological Data on Substance Abuse

Wyoming has been aggressively collecting other epidemiological information since about 1996. These data provide a further glimpse for Wyoming specific plan.

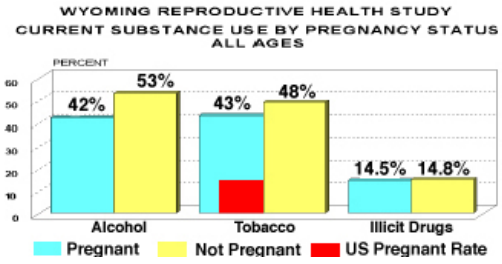
Pregnant mothers

The issue of pregnant mothers who use substances is an especially salient concern for Wyoming policy makers, since our pregnant mothers have much higher rates of tobacco, alcohol, and other drug use than most other jurisdictions.[1] It is clear

[1] See multiple recapture study on pregnant mothers published by the Wyoming Department of Health, Substance Abuse Division.

that the issue of pregnant mothers who are using tobacco, alcohol, and other drugs must be a focus of additional effort in Wyoming. The figure below shows the rate of drug use by pregnant and non-pregnant Wyoming women.

Figure 19 Current Substance Use by Wyoming Women



How do the Wyoming rates compare to national rates? The National Cancer Institute reports a national rate among pregnant moms of 13%. About 1 in 10 pregnant moms use tobacco nationally, but more than 4 moms out-of-10 use tobacco in our state.

What is the impact of this smoking rate on medical expenses for Wyoming taxpayers? If one uses national estimates from a study by the National Cancer Institute,[13] they estimate that each pregnant mom who smokes costs an average of $511 in additionally health care costs per pregnancy alone. With approximately 7,000 births in Wyoming, this means about $1.5 million dollars would be spent on the effects of smoking alone for Wyoming babies. These averages are sometimes deceiving though. First, women seldom misuse one drug during pregnancy. Second, interviews with local Wyoming health-care providers revealed one case of a mom who smoked and prematurely gave birth to twins. The time in the Denver hospital for those two infants alone cost the state about $500,000. Another hidden cost for the state is the long-term costs for such exposed children: 1) they are many times more likely to require special education services (which can easily add $50,000 to $100,000) directly as a bill against the state treasury; and 2) prenatal exposure to tobacco appears to elevate lifetime prevalence risk of criminal behavior.

The discovery that smoking during pregnancy might stimulate criminal behavior by the child 20 years later is new, and the result of long-term follow up of children—controlling for a number of variables. What is suspected is that tobacco chemistry exposure mimics high stress exposure to the baby's brain. This may turn on certain genes (if a child has those particular genes), which are triggered by early stress exposure. The genes turn on aggressive behavior, by being sensitive to cues that the world might be a bad place for the child. Early aggression predicts lifetime antisocial behavior.

How does that risk translate into policy? Here is one way to look at the possible effect. About 4 additional babies out of 100 will grow up to be involved in the corrections system.[14] That doesn't sound too bad, until you realize that this number results in 140 more criminals from each year of live births (20 years later)—or about 10% of the current corrections population in our state. Those additional 140 kids who become criminals will add at least $2.8 million dollars in direct prison costs for Wyoming, not to mention the court costs and human pain of the victims of such "criminals to be." If

we reduce the tobacco use by pregnant moms alone to the national average (13%) in Wyoming (43%), our net savings would save millions of dollars per year in annualized costs. *Wyoming would win big.*

Current Prevention Funding

A 'central depositary' or statewide Unified Budget does not currently exist for prevention although information sharing and networking are currently in process.

Nominal Substance Abuse Funds

To identify funding sources around the state, the Substance Abuse Division (SAD) contacted the communities receiving Juvenile Accountability Block Grant funding (JABG), who established Juvenile Crime Enforcement Coalitions, as part of their grant application. Further, state agency heads were asked to identify funding streams that passed through their agency. Additionally, stakeholders were contacted regarding Federal grants at the community level. The following types of funding in the state were identified several months ago. Some of the funds are categorical or related to specific grants, and do not necessarily represent conscious, statewide planning and policy efforts.

Figure 20 Types of Substance Abuse Prevention/Intervention Funds in Wyoming

Funding Source			
Program	***Agency***	***Amount***	***Activities***
Safe and Drug Free Schools	US Dept. of Ed.	$1,714,346	Funding $11.36 per student flow-through to school districts
		$426,587	Governor's portion for high-risk youth/prevention
Juvenile Accountability Block Grant	OJJDP	$1.4 million	Funding for grantees around the state to develop accountability-based programs to reduce juvenile offenses.
Safe Schools Healthy Students	NIJ, NIH, ED	$4.5 million over 3 years	Two grantees, Laramie and Arapaho, funded to develop community-based delinquency and substance abuse prevention programs.
Enforcing Underage Drinking Laws	OJJDP	$360,000	Funding for grantees to develop programs to combat underage drinking.
Drug Courts	NIJ	$394,000/yr for 2 years	One grantee to fund an adult and juvenile drug court.
WCCA-Non-participating grant	OJJDP	$1,708,650	Grant to help counties come into compliance with OJJDP requirements
Substance Abuse Centers	SAMHSA Block Grant	$500,459	20% of Block-grant Substance Abuse Centers for drug prevention
Substance Abuse Centers	State Funds	$378,773	Substance Abuse Prevention
Methamphetamine Initiative	State	$100,000	Wyoming 2020 Think Tank, 15,000 Hour Initiative: A Model Demonstration Site, Research consultation for best practices.
UPLIFT	SAMSHA	$96,123	Strengthening families (n=30) of at-risk children.
Diversion/After Care Program	SAMSHA	$126,420	Implementing a Hispanic-sensitive model of care.
Wyoming Community Coalition for Health Education	Wyoming Children's Trust Fund Maternal & Child Health	$20,100 $ 35,000	Community awareness on Search Institute Model of asset building.
Wyoming Early Start Program	SAMHSA	$1,000,000	Early intervention & screening for children ages 4-6 at-risk of emotional disorders, substance abuse, & anti-social behavior, accompanied by training for parents and professionals.
National Tobacco Control Program	USDHHS CDC Funds	$973,000	Reducing exposure to second hand smoke, prevent initiation among youth, promote quitting, reduce population disparity.
Healthier Communities, Healthier Youth Initiatives	Maternal & Child Health Block Grant	$100,000	Develop a community infrastructure to encourage local initiatives and partnerships with public health, to include suicide prevention, and adolescent pregnancy

Other Prevention and Intervention Resources

To the above funds, there are additional considerations that are or will affect Wyoming prevention and early intervention funding:

⇒ The Tobacco Settlement Funds, set-aside in Trust and allocated by formula adopted by the Legislature by incorporation of the Tobacco Use Prevention Blueprint. The Blueprint provides for community education, cessation, services for pregnant women, and school-based prevention. Some of the recommended practices and expenditures in the Tobacco Use Blueprint will affect tobacco and broader substance abuse issues.

⇒ Under the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) enacted by Congress, Medicaid funds can reach approximately 30,000 young people in Wyoming with prevention and intervention services, which were not possible until recently. Medicaid (Kid Care Health Care Plan A) and Kid Care B (the state plan) eligible providers can use the Health Check (CPT) codes. These services provide a powerful mechanism for reaching children and their caregivers with targeted, anticipatory guidance and prevention strategies—especially if the most effective practices for such Health Checks were promoted by the multiple agencies. [Licensed providers could be paid for a number of strategies being proposed in this overall plan via these funds: 1) the use of the Strengths and Difficulties Survey, 2) the Triple P protocols, and 3) certain tools or procedures for use in the child's educational environment.

Wyoming Recommendation:
The Department of Health should develop a plan each year for maximizing and leveraging the resources of the Tobacco Settlement and Medicaid Resources for effective prevention and early intervention in concert with other funds, consistent with the Tobacco Use Prevention Blueprint and applicable Medicaid regulations or rules.

Consolidation of Resources

Wyoming, as a whole, might benefit substantially if its grant funds to communities for various prevention and intervention services for substance abuse, juvenile delinquency, school dropouts, and related problems were consolidated and governed by a set of comprehensive, science-driven practices and procedures. Thus, the following funds might be placed into one general prevention fund:

⇒ Safe and Drug Free Schools Block Grant

⇒ Safe and Drug Free Schools Governor's Set-Aside

⇒ Juvenile Accountability Block Grant

⇒ Substance Abuse Centers, SAMHSA Block Grant

⇒ Substance Abuse Centers State Prevention Funds

⇒ National Tobacco Control Program (CDC)

⇒ TANF funds aimed at prevention issues (child aggression predicts low productivity; parental depression or substance abuse predicts poor workforce involvement).

⇒ Tobacco Prevention (Settlement)

⇒ Maternal & Child Health Block Grant

To the extent that the funds could be pooled with new allocations proposed, plus leveraged against the Medicaid funds, Wyoming might have a far more powerful mechanism for funding the science-based but practical strategies recommended in this blueprint.

The authors of this report suggest that the Legislature and Governor undertake the actions necessary to consolidate the above prevention funds into the Vision 2020 Fund, with the following stipulations:

⇒ Prevention funds are allocated based on Wyoming-specific data and data analyses on factors most likely to produce a cost-effective change in the prevalence rate of the interconnected problems of substance abuse, delinquency, school failure, high-risk behaviorally related diseases or disorders, mental illnesses, suicide, and antisocial behavior.

⇒ Competitive applications for prevention funds are governed by a uniform grant application.

⇒ Competitive applications are reviewed following published guidelines.

⇒ Governor's priorities may be set for competitive applications, which include preferences for concerns deemed in the best interest of the state or by prevalence of problems by geography or geo-mapped units.

⇒ A certain percentage is set aside each year for competitive awards initiated from the field that include a qualified experimental design for evaluating the impact of the innovation for Wyoming conditions or circumstances.

⇒ The rules and procedures for competitive and/or block grants shall be promulgated by the Wyoming Youth Development Sub-Cabinet.

Wyoming Recommendation:

The Governor and Legislature should direct the consolidation of certain prevention funds into one coherent fund for the purposes of an integrated, leveraged prevention effort—designed to promote the use of cost-effective, scientifically validated principles and procedures.

Research Review of Prevention and Intervention

Among children and teens, scientific research on prevention and intervention has most studied three drugs: alcohol, tobacco, and marijuana. Cocaine, methamphetamine, opiates, and designer drugs, such as ecstasy, get media coverage and the focus of law enforcement. However, these "harder drugs" are typically less targeted in child and adolescent research, partly because "hard" drugs are seldom initiated without the earlier regular use of tobacco, alcohol, and marijuana. From a state policy planning perspective, *prevention* typically means the use of universal strategies, applied to every child, teenager, or adult.

Interventions are typically used with a much smaller group of children, teens, or adults who have some current behaviors or conditions that elevate the chance that they will develop more serious problems.

United States Research

Substance abuse is not just an urban event; it has permeated rural America. At least two types of profiles have emerged.[15] In published studies, at least two distinct populations of teenagers were identified. The one large group (83%) consists of either abstainers or experimental users. Primary prevention strategies should be addressed to these young people. The other group, multi-problem teens (17%) have a clearly identified lifestyle—certain cultural practices, multiple substance use, frequent sexual activity, and poor grades. These profiles from other areas turn out to mirror Wyoming.

Problems in Early Theory and Science

The study of substance abuse prevention scientifically is relatively new, about 35 years old. Amazingly fine research and practice has developed during that period, such that we presently have very promising constructs and examples of prevention models. That said, prevention research inevitability involves tracking people over time to determine if a prevention effect has happened. The process of data analysis, statistical analyses, and publication add about 3-5 years on top of the longitudinal tracking.

Sometimes these lags are not well understood, as happened when one of the major consultants on this project, Dr. Dennis Embry, was questioned by some high-level law-enforcement people after his large Centers for Disease Control project on youth violence in elementary schools had been running for 3 years. Asked one widely respected but somewhat impatient person, *"How come homicides haven't been reduced in those communities that use your program?"*

The answer was direct but beguilingly simple on the face of it: "Kindergartners don't kill many people, and they still don't when they are in the fourth grade."

In a similar way, Kindergartners don't shoot up drugs, but some of their behaviors do or do not predict substance abuse a decade later.

Advances in Theory and Science

The research on actual attempts to *prevent* substance abuse, as opposed to studying the frequency and characteristics of substance abuse, started just two decades ago. The failures and successes spawned a new generation of research that started to be published in the early and mid-1990s. Additionally, various longitudinal studies, twin studies, and the rapid explosion of neuro-science research in the last 10 years have contributed to a far richer understanding of how effective substance abuse prevention might be undertaken.

Epidemiological Thinking

Epidemiology is a medical word. Its stem comes from epidemic—or how diseases spread rapidly. In many ways, substance abuse has been and is an epidemic—something that spreads rapidly and quickly. That's certainly true in Wyoming and other rural states, where substance abuse rates skyrocketed. The start of the scientific study of the spread of disease began well over 100 years ago.

In 1854, a cholera epidemic was sweeping across Europe. During one outbreak in London, over 500 people died in just ten days. No one knew what caused the epidemic, and there was no cure for the disease. Having a hunch about what the source of the disease might be, Dr. John Snow walked through the City of London to document where each victim had lived. By this method, he discovered that the outbreak was largely restricted to an area within 250 yards of the Broad Street water pump. Snow arranged for the pump to be removed, and within three days, the epidemic ended. Looking for the "center" of the disease can yield to great advances in public health. This has been done in a number of ways in the past 50 years with substance abuse, in several domains. Linkage (also called risk and protective factors) studies developmental and neurological pathways. A bit of information from each of these areas helps frame the Wyoming prevention and intervention strategies.

Linkage Studies. Linkage studies typically look for the "links", which may be environmental (like the pump in London), social (cities rather than towns seemed to have cholera faster, for example), behavioral (say some folks walk to a different pump), or biological—even genetic (like the type of germ or some people may be more vulnerable).

What might be some linkage studies? A basic linkage study for example shows the pattern between smoking and other drugs in young people below, drawn from national analysis. This linkage study suggests that there are some strong relationship between the use of tobacco and other drugs, though the cause is impossible to ascertain from this type of linkage study. Other studies provide the underlying reason why. Figure 24 below shows such a linkage between tobacco use and other problem behaviors.

Other types of linkage studies or models have been conducted or proposed. Some of the linkage models attempt to embrace multiple problems and variables. One of the more well-known is the Risk and Protective Factors model, originally proposed by Richard Catalano and David Hawkins, which will be shown next.

Figure 21: Tobacco Use and Other Substance Misuse

The Co-Occurrence of Smoking and Other Problem Behaviors

The 1992 National Health Interview Survey of Youth Risk Behavior (NHIS-YRBS), National Center for Health Statistics
N=10,645 persons, age 12 to 21 years

	Problem Behavior	Current Smoking (SE)	Never Smoker (SE)
	Drank Alcohol in Past Month	74.4 (1.11)	23.0 (1.02)
	Five or More drinks in row	50.3 (1.22)	9.5 (.69)
	Used Marijuana in Past Month	26.5 (1.02)	1.5 (.025)
	Smokeless Tobacco in Past Month (boys only)	28.1 (1.76)	4.1 (0.52)
	Carried a Weapon	25.6 (1.12)	9.5 (0.59)
	Physical fight in past year	54.7 (1.09)	29.0 (0.86)
	Ever had sexual intercourse	80.0 (0.99)	41.4 (1.40)

Figure 22: Risk and Protective Factors Checklist

Risk Factors	Adolescent Problem Behaviors				
	Substance Abuse	Delinquency	Teenage Pregnancy	School Dropout	Violence
Community					
Availability of Drugs, Tobacco & Alcohol	X				
Availability of Weapons to Harm People		X			X
Community Laws and Norms Favorable Toward Drug Use, Violence, and Crime	X	X			X
Media Portrayals of Violence					X
Transitions and Mobility	X	X		X	
Low Neighborhood Attachment and Community Organization	X	X			X
Extreme Economic Deprivation	X	X	X	X	X
Family					
Family History of the Problem Behavior	X	X	X	X	
Family Management Problems	X	X	X	X	X
Family Conflict	X	X	X	X	X
Favorable Parental Attitudes Toward and Involvement in the Problem Behavior	X	X			X
School					
Early and Persistent Antisocial Behavior	X	X	X	X	X
Academic Failure Beginning in Elementary School	X	X	X	X	X
Lack of Commitment to School	X	X	X	X	
Individual/Peer					
Rebelliousness	X	X		X	
Friends Who Engage in the Problem Behavior	X	X	X	X	X
Favorable Attitudes Toward the Problem Behavior	X	X	X	X	
Early Initiation of the Problem Behavior	X	X	X	X	X
Constitutional Factors	X	X			X

Source: Howell, J. (Ed.). 1995. Guide for implementing the comprehensive strategy for serious, violent, and chronic juvenile offenders. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, U.S.

Wyoming, like many political jurisdictions, uses and recommends the risk and protective "checklist" to assist in the planning of prevention and intervention programs or services, since there is substantial evidence to support the prediction rate of various risk or protective factors. Subsequent to this checklist idea, scientists have made conceptual advances in "weighting" risk or protective factors in terms of which ones might be more important at different times in predicting multi-problem behaviors. Generally these are called multi-variant studies on prediction, and they offer significant advances for state planning.

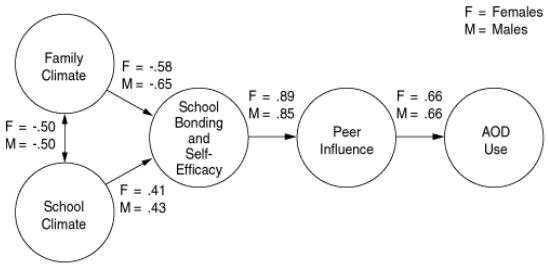
Multi-Variant & Longitudinal Studies

A number of studies have followed the same young people over a period of years. Some of the studies have involved interventions to change their behavior. These studies, because they follow the same children over time, allow for greater precision of understanding of what might be necessary to reduce substance abuse. Several of these studies are very well constructed and highly relevant to issues of substance abuse in Wyoming. One of the noteworthy studies is from Canada.

About 800 six-year-old Canadian boys were followed through age 13 for signs of early onset of substance abuse. Three models were tested to figure out whether individual characteristics and/or peer influences were linked to later substance abuse. Individual characteristics consisted of fighting, hyperactivity, oppositional behaviors, and likeability. Peer influences referred to mutual friends' characteristics (aggressiveness and likeability). Data were collected from teacher ratings, peer ratings, and self-reports. Results were replicated three times, and indicated that individual characteristics—more than friends' deviance—were key to the development of substance abuse. Disruptiveness in kindergarten led to disruptiveness at the end of elementary school, which subsequently led to substance abuse prior to 14 years of age. [Data reported later from Wyoming suggests that this may be a major developmental pathway in the state for substance abuse.] The same group of Canadian researchers documented that early differences in heart rate (which are hypothesized to be related to serotonin differences) from the same sample predicted both the aggression and substance abuse rates over time.[16] Other researchers in multiple cultural contexts have reported similar results to the Canadian research.

Another example involved a large-scale study conducted in the US Midwest. Pent found that school climate interacted strongly with substance abuse outcomes over time, which is shown below.[17]

Figure 24: Family and School Interaction for Adverse Outcomes



Michael Rutter and his colleagues conducted a 10-year follow-up of young people who lived in very high-risk neighborhoods in London. In that study, he likewise discovered that school climate

interacted with family and neighborhood risk factors to protect or harm the developmental outcomes.

Some of the longitudinal studies have started to reveal that the order of how drugs are started or used has a stronger prediction on lifetime problems and severity. For example, an analysis of the National Longitudinal Epidemiologic Survey suggests that early tobacco use is a stronger predictor of illicit drug use than early alcohol use.[18]

The number of multi-variant and longitudinal studies has exploded in the past 20 years. Whole publications are now devoted to their review.

Wyoming Recommendation:
While checklists of risk and protective factors are useful, Wyoming ought to be in forefront of entities moving toward the use of multi-variant analyses to predict substance use and related problems. Such methods will likely increase the cost - effectiveness of Wyoming's specific prevention and intervention strategies.

Developmental Issues

Human beings change over time from conception though adulthood. Developmental theory is the area of science that studies such issues, which are relevant to the prevention and intervention to reduce substance abuse. A brief review follows.

Conception. Human beings are not the same. We carry approximately 30,000 genes.[m] Humans do not randomly choose mates. For example, scientists have established that men who are antisocial have children, more likely than not, with women who have symptoms of major depression or clinical anxiety. And, men or women who are substance abusers almost always choose mates who are substance abusers, too.[19] This phenomenon has a rather odd name used by scientists, called non-random mating. Could this mean that the children of such parents might be born with a genetic predisposition to substance abuse?

Indeed, well controlled twin studies (identical and fraternal twins raised together and apart) show that between 30% to 70% of the variance in risk for substance abuse can be accounted for in genetic predisposition, but this may be more so for men than women.[20] Some scientists have found higher estimates for serious substance abuse, ranging as high as 90%. Apparent genetic susceptibility seems to affect the course of treatment, perhaps requiring longer treatment, different treatments, or different combinations of drugs or doses.[21]

Is it possible that some people in Wyoming could have an elevated familial (genetic) risk for substance abuse? There are no known true genetics estimate studies of substance abuse in Wyoming, but there are in our neighbor, Colorado.[22] A little more than 300 identical twins and fraternal twins have been carefully

[m] The Human Genome Project originally postulated about 80,000 to 100,000 genes. The number turned out to be much smaller. Just recently, new evidence suggests that the 30,000 number may be too low.

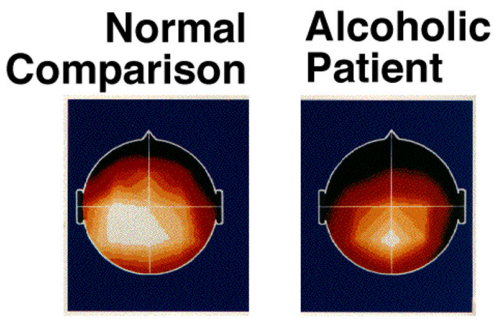
followed in Colorado, whose population base shares much of our frontier history, reliance on ranching, and dependence on mineral extraction.

A recent study from Colorado[23] used standardized psychiatric interviews and personality assessments, psychiatric symptom counts for conduct disorder and attention deficit hyperactivity disorder, along with a measure of substance experimentation and novelty seeking to follow up on the Colorado twins. A common pathway model evaluated the genetic and environmental map of the constructed phenotype, suggesting that the combined trait is highly heritable (a_2 = 0.84), and is not influenced significantly by shared environmental factors (e.g., the social events shared by the twins). The results suggest that a variety of adolescent problem behaviors may share a common underlying genetic risk in Colorado young people.

Our neighbors have also discovered some other important findings about the genetics of Colorado twins.[24] Their twin research has suggested that much of the relationship between antisocial behavior and alcohol dependence is due to common genetic influences. Similar results have been reported for conduct problems (which translate into juvenile delinquency for law enforcement) and hyperactivity. In these earlier Colorado studies, statistical models revealed that the individual heritabilities were substantial: .82 for ADHD, .74 for CD, .61 for ODD, and .77 for executive function (prefrontal cortex) deficits.[n]

The differences in various behaviors, neurotransmitters, and even brain structure implied from the Colorado-twins research are not soft measures or opinion. They can be measured with electronic instruments, such signals from the brain on certain locations, with documented links to substance abuse and misuse,[25] as seen below.

Figure 25: P300 Lead Images from American Scientist[26]



Most readers of this report may have had brief exposure to genetic theory, largely from college or high-school biology. This basic view of genetics focuses on what is called Mendellian mechanism. Unfortunately, many more serious diseases we are dealing with today (e.g., diabetes, many cancers) do not follow Mendellian theory. They follow something far more complex, called polygenic theory. Substance abuse and related problems also quite clearly follow this multiple gene path,[27] which can interact or be "triggered" by environmental events such as trauma or

[n] The issue of prefrontal cortex or executive function is noteworthy, because of the increasing research on its role in addiction and academic achievement. (reference??)

stress. Individuals such as the former director of the National Institute on Alcohol Abuse and Alcoholism, has conducted studies on the polygenic variables associated with substance abuse.[28]

What are the implications of the increasing information on the role of genetics and substance abuse? This has been most troubling in the development of this report to the Legislature. To ignore the growing body of very persuasive, replicated, peer-reviewed data would violate the explicit request of the Legislature. The fact that genetics contribute substantially to substance abuse is established fact among the scientific community, and is being discussed for its implications by the National Institute on Substance Abuse.[29] It would also be unethical to hide information from policy consideration. For example, scientists rather conclusively know that there are strong genetic linkages to various forms of cancer, such as breast or colon cancer. This knowledge has led to widespread screenings for individuals with substantial familial risk, and may ultimately result in thousands of lives being saved in the United States alone.

How could the information about genetics be used for a comprehensive substance abuse plan, inclusive of prevention? As specific genetic vulnerability markers for substance use disorders become identified, application of the tools of genetic epidemiology may be employed to identify specific environmental risk factors that may serve as more accurate and powerful targets for prevention.[30] Also, with the information, there is evidence that drug treatments could be more effective, with potentially fewer negative side effects for both the individual and society.[31] Without such information, prevention and intervention efforts could be poorly targeted and wasteful of Wyoming resources.[o]

Wyoming has a history of confronting difficult issues or new concepts, such as being the first state to embrace a woman's right to vote. Wyoming could well be the first state to apply the explosion of research on genetic vulnerability to its planning for substance abuse prevention and intervention.

Wyoming Recommendation:
Our state ought to be the first state to make use of the exploding science on polygenic factors on probability of substance abuse and other problem behaviors to design more cost-effective, powerful strategies for prevention and early intervention. These new findings on the polygenic probability causes of substance abuse and related behaviors means that social-environmental strategies must be more powerful.

***Before birth and newborns*.** A baby whose mother is struggling to make ends meet, experiences domestic violence, and has few or no friends, may develop

[o] These findings do not in any way negate the value of doing environmental interventions to prevent substance abuse. If there are genetic predispositions to substance abuse, they must have origins as adaptations to human environments. It is most unlikely that such predispositions are "accidents."

differently in the womb than a genetically identical baby whose mother has a comfortable income, a happy marriage, and adequate social support. These differences are evidently the result of different patterns of hormonal secretions and other chemical responses to social stressors, which increase the risk of substance abuse and other problems.[32] These risk factors may be in addition to dangers that an fetus carries by being exposed to mother's own tobacco, alcohol, or drug use during pregnancy—also shown to elevate lifetime risk of substance abuse.[33]

Consider some important issues for public policy:

⇒ Cigarette smoking by pregnant mothers accounts for up to 20 percent of all low-birth weight babies in America.[34]

⇒ Smoking is a contributing factor in 14 percent of all premature deliveries in the United States.[35]

⇒ Rates of drinking and smoking are higher among pregnant white women than among pregnant black and Hispanic women (alcohol: 24, 20, 6 percent, respectively; smoking: 23, 16, 9 percent, respectively),[36] and Wyoming is about 86% Caucasian.

The effects of the early stressors and prenatal drug exposure works directly on the brain apparently and by altering the temperament of the newborn, so that he or she is more irritable, difficult to manage, and less responsive to caregivers. This pattern of behavior may "trigger" the style of coercive parenting or "cold" interactions that interact very negatively with infant's genetic predisposition to produce lifetime patterns of substance abuse.[37]

Wyoming Recommendation:
Our state needs to boost its pioneering early commitment to prevention and early intervention during the first few years of life, using science-based practices that might improve the developmental trajectory of our youngest citizens.

Very young children. Do toddlers evidence behavior patterns that place them at risk for substance abuse and related problems? The answer is yes, and a new book in progress from Biglan and his colleagues, that is being funded by a consortium of federal agencies and foundations, has a nice summary:

> ***Numerous studies consistently show that temperament is largely heritable and, thus, innate tendencies to be shy, aggressive, difficult to soothe, fearful, anxious, extraverted or introverted, and so forth are exhibited in their elemental form very early in life. Even as early as infancy, temperamental traits become apparent (Houck, 1999). As the baby becomes a toddler, the manifestation of these traits becomes more complex and subjected to environmental influences, eventually constituting the individual's personality. Temperamental traits that have been specifically associated with risk for delinquency and drug abuse include impulsivity, negative affect, extraversion, aggressiveness, high***

activity levels, risk taking, proneness to anger, and depression (Friedman et al., 1995; Tarter et al., 1999). There are both biological and environmental contributions to the course and longevity of these traits. However, they do tend to remain somewhat stable throughout the life span in the absence of severe psychosocial or physical trauma. Interestingly, each of these traits has been associated with specific biological and physiological responses to environmental stimuli that appear to provide the foundation for their development. There is some evidence, nevertheless, that even these biological bases may be alterable given appropriate and targeted interventions (Raine et al., in press).

What are some of the specific markers of this developmental stage signaling risk for substance abuse years later? Mildly abnormal fidgety general movements, indicative of high activity levels, have been associated with the development of minor neurological dysfunction, attention-deficit-hyperactivity disorder, and aggressive behavior.[38] Infants demonstrating low levels of emotional regulation and autonomic arousal are more likely to be noncompliant as toddlers.[39] Low cortisol levels, reflective of individual differences in the hypothalamic-pituitary-adrenal axis, have also been associated with persistence and early onset of aggression.[40]

All of these individual characteristics interact with parenting behaviors that increase the risk status of a child. Maternal stress, poverty, maternal smoking, maternal or paternal alcohol and illicit drug use and abuse, and maternal depression all reduce the likelihood that parents will provide effective care-giving and that the child will develop secure attachment relationships. The lack of early attachment predicts conduct disorder, drug abuse, and promiscuity in later life.[41]

Wyoming Recommendation:
Our state will need to deploy cost-effective practices rapidly for the reduction in inattentive, aggressive, and non-compliant behaviors among young children as well as increase the rate of pro-social behaviors by the same children at home and community settings.

Elementary age children. Genetic issues start to manifest themselves significantly during these years. Additionally, environmental variables impact the trajectory of substance abuse, misuse, and use.

Several studies further indicate that low, resting heart rate and other indicators of low autonomic arousability in early childhood are consistently correlated with later childhood antisocial and aggressive behavior,[42] which are predictive of adult or adolescent substance abuse.

Some other problems during elementary school predict substance abuse over time, which are completely unrelated to knowledge of the harmful effects of drugs:

⇒ Parental rejection, frequent critical comments, harsh or inconsistent

punishment, little warmth, and lack of attention to appropriate behavior.[43]

⇒ Rejection by normative peers or hyper-popularity for aggressive actions.[44]

⇒ Academic failure for girls, learning disabilities or placement in special education for boys.[45]

⇒ Chaotic classrooms, where there are high levels of teacher attention to negative behavior and peer aggression.[46]

⇒ Entertainment diets high in TV viewing (especially with aggressive content) and, possibly, computer games.[47]

⇒ Longitudinal studies have shown that liking for cigarette ads among 10 to 12 year olds predicted initiation of smoking and choice of brand smoked, and that ownership of promotional items such as t-shirts, caps, and jackets also predicted the initiation of smoking.[p]

Again the document being prepared by the group of scientists at the Center for Advanced Studies of Behavioral Sciences at Stanford University (Dr. Tony Biglan and colleagues) provides a very complete review.)[48]

Dr. Embry, a key consultant on this plan development, and other scientists, such as the Biglan team, speculate that certain parenting behaviors and related behaviors by peers or teachers may act as accelerants (fuel) on dry tinder (the genetic predisposition) of children at risk for multi-problem behaviors. Some examples include:

⇒ Harsh or punitive parenting behaviors.

⇒ Extremely permissive parenting behaviors.

⇒ Low rates of parent attention to child positive behaviors.

⇒ Low parental warmth.

⇒ Negative, nagging behavior by teacher to target child.

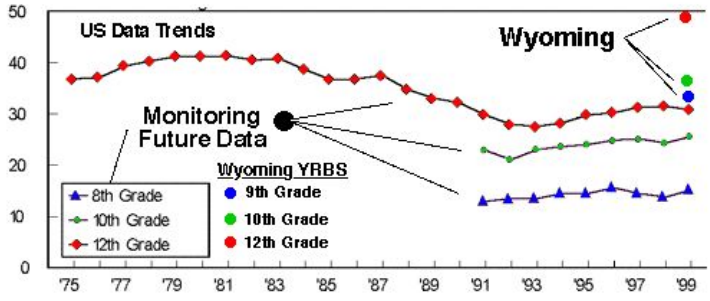
⇒ Low warmth by teacher plus low rate of reinforcement of child behavior.

[p] While scientists have studied this, the tobacco papers discovered in the States Attorney Generals Tobacco Settlement are most instructive, particularly because they come from the tobacco industry.

Wyoming Recommendation:
Our state must expand the rapid reduction in inattentive, aggressive, and disruptive behaviors to elementary years—both at school and at home. Further, our state must reduce the causes of social rejections by peers or adults that precipitate academic failure in the intermediate grades and migration of children of that age to socialize primarily with peers who engage in antisocial acts. Another component that must be rapidly achieved is reduced victimization by peers against peers in the intermediate grades plus greater densities of reinforcement by adults at home and school for pro-social behaviors.

Adolescence. Longitudinal data from three United States cohorts suggests that delinquency, alcohol use, and experimental use of marijuana are indeed fairly common adolescent behaviors. Specifically, by the age of 17, over half of adolescents drink alcohol—though not necessarily all of the time, one quarter have smoked marijuana, almost half have committed street crimes, and eighty percent have engaged in sexual intercourse.[49] There is evidence to suggest that the degree of "experimentation" or problem behavior can vary significantly over cohorts (that is, generations), as evidenced by the data from the "Monitoring the Future" data collection for some 20 years. Figure 30 shows trends for example in binge drinking among high-school students nationally, including information on Wyoming youth.

Figure 26: Binge Teen Alcohol Drinking Across 20 Years



Generally speaking, the vulnerabilities for problems during adolescence have some roots in earlier developmental stages, but some children

may not show their vulnerability until after puberty—possibly because of the changes in the brain induced by the surge of hormones and structural changes, which have only really come to be better understood because of advance measurement technology. Key factors that may affect substance abuse (not just use or experimentation) during the teen years include:

⇒ All of the previous factors discussed.

⇒ Late puberty in boys.[50]

⇒ Early puberty in girls, particularly those who attend co-ed schools.[51]

⇒ Negative and irritable moods (possibly due to hormonal and brain changes),[52] which also seems to be associated with loss in pleasure from everyday activities.[53]

⇒ Youth who drop out of school are many times more likely to be abusing drugs than young people who stay in school, as a group.

⇒ Shift in brain chemistry or structure that create a developmental limited "reward deficiency syndrome," which is now well linked to increased risk for substance abuse, misuse, and use.[54] This would mean functionally that young people would require more reinforcement[q] during their teen years than during their late childhood years.

⇒ Low rates of parental monitoring correlate with adolescent delinquent, disruptive behavior, and substance abuse or misuse plus "hanging out" with peers who may reinforce each other's deviant, risk-taking acts.[55]

⇒ Acrimonious conflict between parents and the teen typically result in poor supervision and serious aggression, often accompanied by significant substance abuse.[56]

These lists can be misleading, just as the widely used risk and protective factors lists can be. For example, one flaw of family studies that link parental monitoring and discipline to adolescent outcomes is the assumption that parenting and outcome effects are *caused* by social or environmental events. That notion was seriously challenged by a recent elegant study, which fits the research on the heavy role of genetics in the problems of concern here. Reiss and colleagues found that much of parent-child interaction problems could be explained from genetic factors (sometimes called familial factors, in the literature).[57] The study team headed up by Dr. Tony Biglan comment on the meaning of this:

> ***Before reacting to the implications of that conclusion for prevention and intervention, consider the following information about what the term "genetic influences" might mean in***

[q] Reinforcement is not "stuff" such as cars, toys, etc.—something that Western youth have in abundance. Rather, reinforcement is a term with meaning anchored both in psychology and biology. For something to be "felt" as reinforcing, the child or adult must engage in behavior that produces the sense of pleasure (which is related to the dopamine neuro-transmitter). Thus, what adults describe as "risky" behaviors can be highly reinforcing or rewarding to youth, especially when they have few opportunities to engage in actions otherwise that produce reward.

this context. It is true that these genetic influences may simply be a passive genotype-environment correlation—in other words, the genes for antisocial behavior increase antisocial acts in both the mother (in the form of harsh discipline) and the adolescent (in the form of aggression). But it is also possible that the child's genetic make-up may evoke parental behaviors, which in turn influence the child's behavior (e.g., heritable temperament (irritability) provoking particular negative reactions (hostility) by mothers, which in turn makes the child more antisocial). Still another possibility is that genes may influence the child to seek out certain situations or activities in the environment (e.g., risky situations) that in turn influence both their level of aggression and their parent's disciplinary reactions. This is an example of gene activation. Each of these types of genetic influences, therefore, indicates that they are still alterable, but suggest a somewhat different tack for prevention and intervention efforts. For example, a gene-environment correlation might indicate that some (and likely many) parents of antisocial adolescents will have difficulty in applying new parenting strategies—their own temperament being to their detriment. And gene evocation influences suggest that other individuals in the environment, in addition to the parents, may require professional assistance in dealing with this particularly difficult adolescent. Thus, none of these potential genetic influences should be interpreted to mean that the youth's behavior is unchangeable.

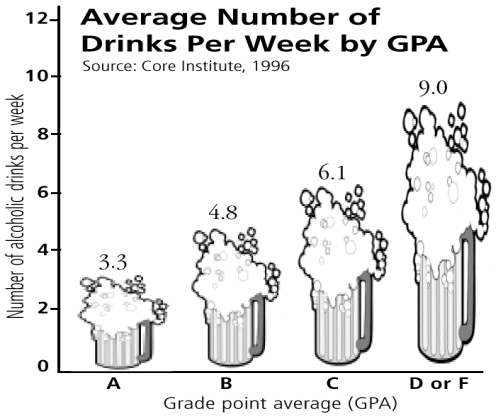
Wyoming Recommendation:

The current status of scientific knowledge has a number of implications for our state and for our adolescents in preventing substance abuse. Our state needs to rapidly: 1) promote parental competencies for raising adolescents (which can be direct or indirect); 2) increase rates at school and community levels of reinforcement of pro-social or socially meaningful behaviors among our youth of all backgrounds; 3) increased perceived connections and "warmth" between youth and non-family adults; 4) improve implicit and explicit monitoring of behavior of youth after school and evenings; 5) mitigate the adverse impact of puberty on mood and behavior by reducing perceived threat from adults and social rejection by peers; and 6) reduce perceived access to substances that can be abused or misused.

College Students or Young Adults. Over the past decade or so, greater concern and research has evolved on alcohol, tobacco, and drug use among college students. Historically, a sort of "college kids will be college kids" notion existed, even among researchers involved in studying substance abuse. Considerable research and demonstration projects were stimulated a few years ago, and provide some insights that might be utilized in Wyoming. Academic administrators and

faculty have little doubt that alcohol and other drug use has a damaging effect on academic performance. One national study[58] showed that, at four-year institutions, college students with an "A" average consume 3.3 drinks per week, whereas students with a "D" or "F" average consume 9.0 drinks per week. At two-year institutions, "A" students consume 2.6 drinks per week, and "D" or "F" students consume 5.7 drinks per week. The same study showed that sizable percentages of college students also report having done poorly on a test or project or having missed class because of their alcohol or other drug use in the previous twelve months. (See the figure below.)

Figure 27: Drinking and College Grades



Higher Education Center for Alcohol and Other Drug Prevention[59] is one of the entities now devoted to the diffusion of research on college students, and the Center reports that a variety of interventions can meaningfully reduce abuse, misuse, and use rates. The intervention research underscore that binge drinking and other problems is not necessarily a “rite of passage” but something that can be altered with positive consequences for the young people, their schools, and the communities.

Wyoming Recommendation:
Our institutions of higher learning will need to implement a variety of research-based strategies to reduce substance misuse and abuse among our college age youth, which may include: 1) restrictions on sponsorships for campus events; 2) screening protocols, 3) brief motivational interventions; and 4) infusion of information in multiple settings.

Economic & Neighborhood Issues

The Biglan study group, cited previously, shows that there are economic and neighborhood effects that increase substance use and related problems. They put forward a case that poverty interacts with other causes, which are shown in a few examples used in their publication:

> ***Specifically, poverty predicts poor supervision and inconsistent discipline by parents, which in turn increase the risk for delinquent outcomes (Sampson & Laub, 1994). Neighborhood risk factors are also associated with the stress and mental health (e.g., depression and social isolation) of parents, which in turn, has a deleterious impact on the child (McLoyd, 1990).***
>
> ***Impulsivity may also have an important moderating effect on the relationship between neighborhood poverty and criminal behavior. In a recent study of two samples of adolescents, neither poverty nor***

impulsivity on their own predicted increased youth problem behaviors. The combined presence of these individual and neighborhood risk factors, however, resulted in increased risk for juvenile offending (Lynam et al., 2000).

These facts observed by Biglan and others suggest that economic or neighborhood contexts might be a very good place for interventions (not primary prevention) to reduce substance abuse and negative outcomes. For example, neighborhoods in Wyoming with high-concentrations of people on parole or probation would be good settings for community-based interventions that reduce social isolation, depression, and other factors that enter into the dynamic of adult substance abuse as well as into parent-child influences affecting substance use in children.

There are other strategies that might directly impact the economic issues. The University of Kansas Workgroup has been testing various ways to mobilize communities to improve their own economic indicators using something called the Community Toolbox. There are promising results from the Toolbox on community level indicators, such as economic development.

Wyoming Recommendation:

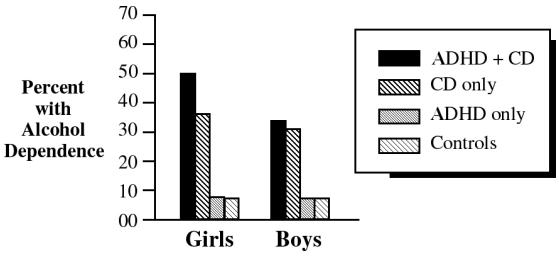
Certain prevention and intervention strategies need to be focused by geo-mapping to leverage results. Additional, data and training systems like the Community Toolbox need to be adopted as part of a comprehensive strategy to change community-level indicators related to substance abuse

Evolutionary, neurological, and genetic models It is now clear in the science of substance abuse, misuse, and use that evolutionary, neurological, and genetic mechanisms are at work, especially when the broader linkages are observed between aggression, violence, criminal activity, early pregnancy, and substance use.[60] Since the 1990s, there has been an explosion of sponsored research on these topics, which has been made possible by the advances in machines that enable us to "see" receptors, genes, the molecular structure of brain chemistry, and the operation of the living brain. These types of research are highly technical, but can be translated into applications for policy.

One of the most prolific and original scientists in this arena has been Dr. David Comings,[61] who is the director of the Department of Medical Genetics at the City of Hope National Medical Center, in Duarte, CA. Dr. Comings provided extensive support on the scientific advances in these domains for the development advanced theory and practice for a comprehensive approach to substance abuse prevention, intervention, and treatment, as required by the legislature. In a special technical background report, Dr. Comings observes that:

> ***The primary purpose of the Wyoming HB 83 is to identify cost -effective methods of reducing substance abuse and antisocial behavioral disorders in the State. The following observations are relevant to this:***
>
> - ***The best predictor of adult behavior is early childhood behavior… This observation that the presence of childhood conduct disorder is the best predictor of adult antisocial behavior, alcoholism, tobacco dependence, drug addiction, and many other problem behaviors, has been replicated many times.***
>
> - ***Conduct disorder is behavior that violates the rights of others [at school, at home, and in the community]…such as:***
>
> ***a) aggression to people and animals, including threatening or intimidating others, starting fights, using a weapon to cause harm to others, being physically cruel to people or animals, stealing from people, or forcing others into sexual activity,***
>
> ***b) destruction of property including fire setting or deliberately destroying property,***
>
> ***c) deceitfulness or theft…***
>
> - ***Children with ADHD have a bad outcome [e.g., substance abuse] only if they also have conduct disorder, which can be seen from the Minnesota Twin study.***

Figure 28: From the Disney et al. study of Minnesota Twins.[62]

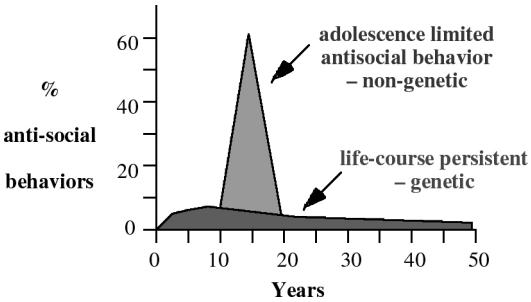


- ***Conduct disorder is strongly genetic…[but can be altered by powerful interventions, which may include medications].***

- ***About half of the children with CD become antisocial adults. All of the studies reported [in the technical document] show that only about half of the children with conduct disorders become antisocial adults. It would be very helpful to be able to distinguish the children likely to have a poor outcome from those with a good outcome [and provide more potent interventions.]***

- ***Adolescence-limited and life-course-persistent antisocial behavior are different. Twin studies have shown that genetic factors play less of a role in the antisocial behavior of adolescents than in adults [which is good news for Wyoming].***

Figure 29: Life course persistent and adolescence limited form of antisocial behavior. From Moffitt *Psychological Review* 100:674, 1993



- ***Behavioral disorders are polygenic. There is no such thing as a gene for bad behavior, for conduct disorder, for alcoholism, for aggression, or for criminal behavior. Behavioral disorders are polygenic, due to the additive effect of many different genes, each contributing to only a small percent of the picture (variance), and interacting with the environment.[85-87] In contrast to disorders like Huntington's disease, hemophilia, and cystic fibrosis, which are due to a single abnormal (mutant) gene, polygenic disorders are due to the additive effect of many genes, consisting of hypo- or hyper-functional variants. Any single gene is not sufficient to cause problems. It is necessary to have a given individual inherit a number of these gene variants, especially when they involve a common pathway, in order to cause problems. We call these*** **polygenes.**[85-88] ***While this makes the identification of the sets of genes involved much more difficult than for single gene disorders, scientists have developed methods that allow the identification of these genes. This technique involves testing to***

determine if the frequency of the genotypes of single nucleotide polymorphisms (SNPs) at candidate genes are different in subjects with conduct disorder, substance abuse, or other behaviors, compared to controls that do not have these behavioral disorders.

Dr. Comings suggests that Wyoming, because of its small size and willingness to be a leader, be the first state in the Union to apply this knowledge to improve the outcomes of people with substance abuse or related behavioral problems. For example, it is now known that certain medications work better with people who have different genes, and that the interaction between what the genes do (typically express proteins, for example) and the medications could mean that Wyoming citizen or youth could relapse, get worse, or get much better. These interactions are not trivial in a policy context. For example, some of the medication can have the serious side effect of inducing bi-polar disorder or even homicidal actions. Wyoming was recently the site of a nationally significant lawsuit involving just such an issue, wherein a Gillette man murdered family members two-days after starting one of the new anti-depressant medications. If the medication had been prescribed under the auspices of state-sponsored care, the plaintiff's attorneys might have had a major claim against the state—especially given the Olmstead Decision. Thus, Dr. Coming's suggestions bear special consideration in the development of a comprehensive plan for Wyoming.[r]

Wyoming Recommendation:

Our more vulnerable Wyoming young people typically have extensive histories of trial and error prescription medications to regulate behaviors predicting multi-problem behavior. Such trial and error for vulnerable children and youth is probably wasteful in state resources and potentially quite harmful to the safety of the child and society. From a successful intervention perspective, we urge that Wyoming adopt various tests (even those deemed "experimental" by Medicaid) to assist in accurate diagnosis and treatment of very high-risk children and youth, particularly children in the care of the state whose lifetime costs of care may easily exceed hundreds of thousands of dollars. New scientific tests may include polygenes, scans and other instrumentation coupled with advanced decision trees.

[r] The technical report by Dr. Comings will be made available as a separate appendix, available on the web.

Current Theory Synopsis

At the Stanford Center for Advanced Studies of Behavioral Sciences, a group of about 20 scientists and scientist practitioners, under the leadership of Dr. Tony Biglan, assembled during the academic year 2000-2001 to create a consensus document on current theory and science of children and youth with multi-problems, which includes substance abuse. (It is unwise to present a model that "just" predicts substance abuse, because of the documented inter-links between problems.) That document will be published as a book. The results were first revealed at the Society for Prevention Research, in Washington, DC, and subsequently at the 2nd Prevention Conference by the National Institute on Drug Abuse, also in Washington, DC. The table below provides a brief summary of the predictors of young people with multi-problems.

Wyoming Recommendation:

Our state needs to adopt a science-driven model of multi-problem prevention and intervention, rather than "content" or "subject matter" model of prevention (e.g., tobacco prevention, marijuana prevention). In addition, our state must pay particular attention to early intervention and prevention among children on the trajectory of multi-problem behaviors—not simply the categories of time-delimited adolescent experimentation among the large group of teenagers and young adults who actually have little or no use.

Figure 30: Multi-Variant Developmental Predictors of Multi-Problem Youth

	Prenatal and Perinatal	Infancy and Early Childhood	Middle Childhood	Puberty and Adolescence	Adult Outcomes
INDIVIDUAL	▪ Genetic Predisposition	▪ Genetic expression of risk traits ▪ Negative affect, impulsivity, and over/under arousability	▪ Genetic expression of risk traits ▪ Negative affect, impulsivity, and over/under arousability ▪ Executive cognitive deficits	▪ Genetic expression of risk traits ▪ Negative affect, impulsivity, and over/under arousability ▪ Early (girls) or late (boys) puberty	**Outcomes of Substance Abuse, Mental Illnesses, Criminal Behavior, School Failure, Teen Pregnancy, Motor Vehicle Injuries, Domestic Violence, Sexually Transmitted Diseases, & Poor Work Performance**
FAMILY	▪ Prenatal and perinatal complications including maternal smoking, alcohol and drug use	▪ Poor mother-child interaction ▪ Parenting: o Poor monitoring o Parent-child conflict o Harsh and inconsistent discipline ▪ High-media viewing	▪ Poor monitoring by parents ▪ Parent-child conflict ▪ Harsh and inconsistent discipline ▪ High-media viewing	▪ Poor monitoring by parents ▪ Parent-child conflict ▪ Harsh and inconsistent discipline	
PEERS	▪	▪ Peer-to-peer aggression	▪ Poor peer relations/rejection	▪ Association with deviant peers	
SCHOOL	▪	▪ Disruptiveness	▪ Academic difficulties	▪ Poor transition to middle school and high school	
NEIGHBOR-HOOD & COMMUNITY	▪ Environmental stress ▪ Exposure to heavy metals	▪ Environmental and psychosocial stress ▪ Exposure to heavy metals such as lead.	▪ Environmental and psychosocial stress ▪ Availability of weapons/ substances	▪ Environmental and psychosocial stress ▪ Availability of weapons/substances	
ECONOMIC	▪ Poverty ▪ (Inadequate nutrition)	▪ Poverty ▪ (stimulus deprivations)	▪ Poverty ▪ (Neighborhood disorganization)	▪ Poverty ▪ (Neighborhood disorganization)	
Typical Outcomes	▪	▪ Aggression	▪ Aggression ▪ Tobacco Use ▪ Alcohol Use	▪ Aggression & Violence ▪ Tobacco Use ▪ Alcohol Use ▪ Other Drug Use ▪ Risky Sexual Behavior	

What Doesn't Work

The belief that "anything is better than nothing" to prevent substance abuse is not supported scientifically. Substantial evidence shows that some well-meaning prevention or intervention strategies actually *decrease* public safety.

Put All the "Bad" Kids Together

Communities, schools, and many professionals often want to remove "the bad kids" and put them in a program together. Emerging evidence suggests that bringing a group of at-risk youth together in a bad-child-only group creates a negative contagion effect, articulated by one of the Wyoming Think Tank consultants, Dr. Denise Gottfredsen.[63] Dishion and Andrews randomly assigned 119 at-risk families with 11- to 14-year-olds to one of four intervention conditions: parent-focus-only, teen-focus-only, parent-and-teen focus, and self-directed change.[64] Results showed positive longitudinal trends in substance use in the parent-focus-only group, but suggestive evidence of negative effects in the teen-focus-only condition. Dishion and his colleagues were able to show later that in the teen-only group that youth subtly reinforced each other for deviant behavior, increasing later delinquency while following some well-documented laws of behavioral psychology.[65]

These and other results call into question putting high-risk youth into groups where insufficiently trained staff cannot control and improve *group norms or influence.* Other studies strongly endorse the idea that youth need exposure to positive adult role models—parents, teachers, and group leaders—who can provide opportunities for youth to learn behavior skill, social competencies, emotional regulation, and higher levels of moral thinking. Among children and youth with higher levels of risk (predisposition) toward substance abuse and multi-problem behavior, there are some general principles for strategies that can backfire or fail to work.

Wyoming Recommendation:

Our state should be very careful about funding or supporting programs or strategies that aggregate high-risk children or youth together. This caution includes correctional or "diversion" programs for Wyoming youth. If such programs are funded, they must come with: 1) a strong scientific pedigree showing positive results with low negative side effects; and/or 2) a data monitoring system sufficient to detect adverse consequences to the children, youth, or society.

School-Based Drug Curriculum

A 1996 review summarized one of the major dilemmas educational programs in schools have about substance abuse:[66] Evaluations of school curricular drug control efforts show they are only modestly successful, because they are based on an inaccurate theory of drug taking. Social control theory is suggested as a better model to explain drug taking and drug resistance. Building strong bonds to school acts to decrease the likelihood of interaction with delinquent peers and

thereby decreases delinquency and drug use. Yet schools are sites of stratification and competition, and strong bonds may be related to one's place in the school hierarchy. If schools are unable to produce sufficient positions in the hierarchy, those with low levels of academic success or commitment may turn to the drug subculture to find status and rewards.

Wyoming Recommendation:
No state funds should be expended on prevention programs that simply teach information about drugs, inclusive of the extensive pamphlets, road shows, seminars, videos, and other materials or services. Such expenditures achieve no effect *and may even be harmful.*

Zero Tolerance

An editorial sponsored by the US Council for Children with Behavioral Disorders stated that many adults are lulled into believing that zero tolerance serves the causes of safety and social justice, but safety and justice are both poorly served. Tolerance is not truly zero (only those caught are punished); educators' discretion is removed in matching the seriousness of the offense to the punishment; and the need for reinforcement of alternative behavior is ignored. Zero tolerance is often implemented clumsily, vindictively, and with horrendous results that undermine social justice.[67]

Another scientist after reviewing the available evidence concludes:[68]

Despite a dramatic increase in the use of zero tolerance procedures and policies, there is little evidence that these procedures have increased school safety or improved student behavior.

No federal or Wyoming mandate of suspension or expulsion for drug-related offenses exists, yet the application of zero tolerance to drugs or alcohol has become quite common nationally and statewide, from discussion with Wyoming educators and students.[69] Some districts have started to expel students who have or are caught using drugs, alcohol, or tobacco.[70] *Does it work?* Most recently, a study conducted by the Education Policy Center at Indiana University concluded that zero-tolerance policies in schools are less than likely to improve student behavior regarding alcohol or other drugs.[71] After all, these students now have less supervision than ever.

Public safety concerns of Wyoming communities are other reasons to question the validity and utility of expelling students with substance abuse issues, reflected by testimony in another state by a packed room of parents.[72] Said one parent, ***"To me, expulsion is getting rid of the problem for the school but not for the community."***

Wyoming Recommendation:
The Departments of Health, Education, and Family Services need to collaborate to promote strategies to reduce the behavioral interactions that predict suspensions and expulsions as well as provide grants, incentives, and effective strategies to reduce substance use by high-risk youth and aid their re-entry into educational processes. *Zero tolerance policies applied to substance use may be increasing substance abuse in society and teens, rather than decreasing it.*

Drug Free Zones

Although less than 1% of the drug-dealing cases involved sales to minors, almost 80% occurred within school zones according to national research. A study released by Join Together, a project of Boston University School of Public Health, found that the 1989 Massachusetts School Zone Anti-Drug law failed to drive drug dealers away from Massachusetts's schools. The Join Together study reviewed the role of the law, which gives a mandatory two-year sentence for selling drugs within 1000 feet of a school property, in 443 drug dealing cases in the Massachusetts communities of Fall River, New Bedford, and Springfield.[73] The study employed aerial photography and geo-mapping.

Based on testimony from young people convicted for drug-related offenses in Wyoming or sent to treatment from Wyoming, there is little reason to believe these findings would not be replicated in our state. Additionally, this policy does not address or resolve drugs received from family members

Special Education Issues

Are special education students more likely to have difficulties with substance use, misuse, and abuse? The answer is clearly yes, which is why some of the universal strategies do not work appropriately for many of the more high-risk youth.[74] First, many universal strategies exclude special education youth. Second, some special education youth bear a higher genetic or social load factor for substance abuse. Ignoring the needs of special education students in prevention efforts or intervention approaches is likely to have adverse consequences.

Blame Games

The notion of just saying, "Oh, it's those people who ____" is often socially appealing as a quick fix. In the treatment section of this report, it has been made clear that evidence does not support blaming the addict as an effective strategy to reduce substance abuse or reduce harm to the public. "All doors must lead to treatment" in the case of current addicts. In a similar vein, it is clear that effective prevention and intervention in Wyoming must adopt the same stance—"All doors in Wyoming lead to powerful prevention and effective intervention" to reduce substance abuse, substance misuse, and use.

We are a resource state. Our most precious resource is our children, who are declining in number about 2,000 per year, as the population grows older and older.

When something threatens the purity of our resources, we are quick to act in Wyoming.

Alcohol, tobacco, and drugs are affecting our children more than most states. The purity of our rarest of resources is being compromised.

As we have used our collective knowledge to protect our natural resources in Wyoming, we can use our political will and knowledge to protect our kids—for their future and ours.

—Dr. Dennis Embry on Wyoming Public Television's "No Rite of Passage," a special program hosted by Governor Jim Geringer and First Lady Sherri Geringer.

Promising Possibilities for Changing the Odds

An extensive literature now exists on changing the odds of substance abuse through prevention and intervention. It is not possible in this report to review and summarize the entirety of that literature. This report highlights some promising practices that could be or are being applied in Wyoming in a cost-effective way. These promising possibilities could substantially change the odds in Wyoming if used, maintained, expanded, or strengthened.

Early Nursing Visits

Wyoming was the first state in the Union to adopt the Olds Model for early home visitors, according to the people responsible for supervising the replication of the Olds Model.[s] The Olds Model has extensive research showing its positive impact on reducing multi-problem behavior, including substance abuse.[75] The Model is referenced in such documents as various Surgeon Generals' Reports.

Since Wyoming was the first state to use the model outside of research, much has been learned over time about effective training and programming to support the effort. This is to be expected. Interviews in the field and meetings with key supervisory staff suggests that the training and support needs to be boosted considerably to enhance the skills of our

[s] David Racine, President
Replication and Program Strategies
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Philadelphia, PA 19103

pioneering home visitors, in part because of the knowledge gained from replication research and our field experiences.

Some specific focus of the enhanced support and training needs to be more about the substance abuse interventions and treatment of our Wyoming mothers, given the data in our state showing that our mothers use about 3 times the national rates.

In their extensive review, the Biglan Group at the Center for Advanced Studies of Behavioral Sciences makes this comment about the Olds model, which has relevance for Wyoming:

> ***Olds' nurse visitation both before and after the birth of the child can have significant benefit in preventing diverse problems in adolescence including delinquency, high risk sexual behavior, smoking, alcohol use, and illicit drug use. However, these benefits were found only for the families in which the mother was unmarried and from a family of low socioeconomic status. In addition, the providers of this program were nurses who, themselves had children and who displayed considerable life experience and wisdom, according to the program developers [Olds, 1988 #993]. Their professional training and experience may have been critical to the success of the program.***
>
> ***Olds and Kitzman's (1993) review of nurse visitation studies supports this contention. They evaluated 31 home visiting programs that had been evaluated in randomized controlled trials, and found variable effects, with some programs producing positive outcomes and others finding no effects. Their review also indicated that programs that employed para-professionals did not achieve as good outcomes as those in which professionals provided the services. Therefore, simply providing nurse visitation services without attending to the content of those services is not likely to be sufficient to replicate Olds et al.'s findings. Unfortunately, Olds et al. do not provide data on treatment components, treatment process, or treatment integrity. As a result, it is impossible to know the extent to which nurses followed the treatment protocol as described. Nor can relationships between the types of services the nurses provided and outcomes be examined.***

Wyoming's commitment to early visitation and first adoption of the research-based program is noteworthy, and our state's commitment needs to be bolstered by attention to the findings of Biglan's Group and the insights of the Olds replication team.

Wyoming Recommendation:
Extensive staff development needs to be undertaken to support and expand the skill of nurses engaged in the Olds Home Visiting Program in Wyoming, and such training needs to be tested in terms of effectiveness.

Hospital-Based Neonatal Assessments by Primary Caregiver

A rather simple but promising practice for prevention and intervention involves having mothers of newborns give a special assessment to their own babies, typically using the "Mothers Own Brazelton Neonatal Assessment (MBAS)." Coaching the mother to do this seems to increase the ability of the parent to understand their infant, bettering reciprocal interactions. The net effect of using the this type of intervention is reduced early child abuse, fewer health problems, and other measures of developmental markers that fit into the developmental pathways model of substance abuse depicted earlier in this report.[76] Mother's own depression improves, too, which is an important issue because of the epidemiological links of depression with substance abuse among adult women—especially those who live in high-risk circumstances. This kind of "mother's own" neonatal assessments have begun in a small way by the Wyoming Health Department, and merit expansion to a universal prevention strategy for all post-partum moms in Wyoming in the first few days after birth, because of the cost-effective nature of the strategy and the number of mothers who are using drugs during their pregnancy that tend to alter care-giving patterns or increase depression.

Wyoming Recommendation:
The Department of Health should undertake a public-private partnership to assure that every mother engages in a mother's own neonatal assessment to increase maternal-child reciprocity linked to protective development. This cost effective intervention needs to be undertaken with due speed, because of the rates of prenatal smoking and associated depression.

Development Guidance and Records

Some countries (e.g., New Zealand, Australia, Japan) have instituted a universal program of health records to support families and children in positive developmental and health outcomes. All of these countries have lower health and adverse developmental outcomes than we do in Wyoming, according to various reports available from the World Health Organization. Effective developmental guidance and records have long been known to be a powerful way to open doors for effective prevention and intervention, which is why various organizations like the American Academic of Pediatrics support what is called "anticipatory guidance" interventions. Recently, the Federal Medicaid regulations have established Early Periodic Screening, Diagnosis, and Treatment programs (EPSDT), which will pay state-approved Medicaid providers for conducting such services.

Universal Developmental Records for all children have the following characteristics:

⇒ Every child and family has access.

⇒ The records provide a way for the parent or guardian to communicate in a consistent way about developmental progress of the child.

⇒ The record details ways for parents or caregivers to respond better to common developmental problems (health, disease, or behavior).

⇒ The record flags when to seek intervention.

Japan, New Zealand, and Australia have used paper and bound versions of the Developmental Record Concept. Thus, every parent gets a special book, and every health care provider gets back-up and linked reference books to provide the best developmental guidance.

The World Wide Web provides the concepts pioneered elsewhere with greater chance of being timely and powerful, especially given how fragmented our society has become. Every Wyoming parent could be given a Developmental Record Book along with a special access card (only they have the number, and no data are stored with the name) to a user-friendly database for developmental guidance and record keeping.

Figure 31: Example of Parent's Card for Child

Early screening, universal record keeping (so that it can be shared easily as a child moves or has other circumstantial changes), and the provision of appropriate prevention or intervention strategies during infancy, early childhood, and even adolescence can have profound positive effects on reducing the onset, severity, or progression of developmental disorders related to substance abuse and other problems that threaten public safety. Elements of this idea have started in the Wyoming Department of Health and could be expanded.

One such project involves work from the Oregon Research Institute called First Steps for Success, which has very strong scientific results.[77] Wyoming has taken national leadership in this effort by having advocacy organizations involved in the implementation, training, and support of the tools and procedures for early screening and intervention with a recently funded national demonstration project in collaboration with UPLIFT in Cheyenne (Wyoming's Federation of Families for Children's Mental Health). The current project involves children four years and older, excluding those who are younger.

Wyoming Recommendation:

The Department of Health, in partnership with other agencies and the private sector, will develop a Developmental Record Book and Records system available to all Wyoming families and health providers, which will enable families to receive anticipatory guidance and link to more powerful advice when a child has higher levels of health or behavioral difficulties. The System would have extensive safeguards to assure that the records are in the control of parents or caregivers.

Other School-based approaches Earlier sections of this document suggested that many school-based efforts fail to produce the prevention or intervention effect needed in a comprehensive plan for the state of Wyoming. Some science-based practices are reviewed here that may work well in the Wyoming context.

First Steps for Success (for Kindergartners).

This program has just been started in Wyoming, as described above. First Steps is a collaborative home-school intervention for preventing antisocial behavior (a major predictor of substance use in later life) for at-risk kindergarten children at the point of school entry.

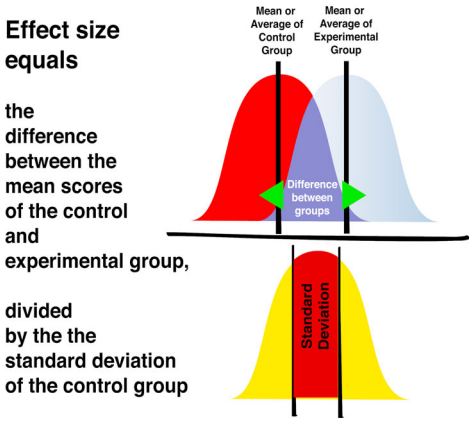
The intervention has to be carefully coordinated and involves the three social agents who have the greatest influence on the developing child; that is, parents and caregivers, teachers, and peers or classmates. The program has robust effects, does not require highly degreed professionals to implement, is cost effective, and seems to have long-term effects in controlled studies—saving money in placement costs for special education services to boot.[78] A kit for a kindergarten teacher is only a few hundred dollars, and the approach, if expanded, could well benefit Wyoming.

Wyoming Recommendation:

The Departments of Health, Education, Family Services, Corrections, and Workforce Development shall collaborate on the expansion of First Steps to Success intervention for children to be universally available to all appropriate kindergarten classrooms or kindergarteners.

Social Influences and Life Skills Training in Middle School. Extensive research exists on school-based programs like Project Alert, Toward No Tobacco, the Lifeskills Program by Dr. Gil Botvin, and others. These meet many definitions of best practices. Their effect sizes tend to hover around .14 to .2,[t] which is not large but can have practical benefits for reducing tobacco, alcohol, and other drug prevalence rates by adolescents. Extensive reviews of the effects of these programs can be found at government-sponsored web sites. These programs are to be much preferred over knowledge-based programs, scare tactics, self-esteem models, and other ineffective strategies.

[t] An effect size is a standard means of expressing differences across studies, showing differences between experimental and control groups in terms of standard deviation. An effect size of +1.00 indicates that the experimental group outperformed the control group by one full standard deviation. To give a sense of scale, this would be equivalent to an increase of 100 points on the SAT scale, two stanines, 21 NCEs (normal curve equivalent ranks) or 15 points of IQ--enough to move a student from the 20th percentile (the normal level of performance for children in poverty) to above the 50th percentile (in range with mainstream America). In general, an effect size of +.25 or more is considered to be socially or clinically significant. Effect size scores of .5 or more are very desirable.



Social Influences and Life Skills Training in Middle School. Extensive research exists on school-based programs like Project Alert, Toward No Tobacco, the Lifeskills Program by Dr. Gil Botvin, and others. These meet many definitions of best practices. Their effect sizes tend to hover around .14 to .2,[v] which is not large but can have practical benefits for reducing tobacco, alcohol, and other drug prevalence rates by adolescents. Extensive reviews of the effects of these programs can be found at government sponsored web sites. These programs are to be much preferred over knowledge-based programs, scare tactics, self-esteem models, and other ineffective strategies.

Life Skills Training (LST) produces significantly less heavy drinking reported by LST than by control students 6 months after the intervention. In an even more impressive follow-up, the researchers assessed a large, mostly middle class, white sample and found that treatment affected reports of cigarette smoking, getting drunk, and polydrug use 6 years after the intervention, suggesting that LST may prevent some of the serious problems that characterize multi-problem youth. Some intriguing results emerge from Dr. Gil Botvin's work, which should be held in mind in designing Wyoming strategies:

⇒ Only peer-led, not teacher-led, LST produced better results among experimental than control participants.

⇒ Follow-up data indicated that the experimental group continued to do

[v]

better than controls only if they received booster sessions from peers.

These findings from the LST research suggests that Wyoming's movement toward a Youth Development Model at a sub-cabinet and cabinet level, as directed by the Governor, ought to focus on peer-led (adolescent) substance abuse programming, with empirical results. This could be very effective in addressing the concerns that teachers have of feeling considerable overwhelm from the increasing demands of academic accountability. The kids, if well trained, do a better job than the adults.

Wyoming Recommendation:
The Wyoming Youth Development Sub-Cabinet will undertake support and expansion of research-validated practices and programs that use youth effectively in reducing substance abuse.

Developmental Approach and Social Emotional Competencies Some approaches have taken a more protective factor slant, developing the social and emotional competencies of young people as a school-wide effort. Several of those types of approaches do show some protective value, including reduced substance abuse over time.[79] One such approach, the Child Development Project, does not teach anything overtly about drug, alcohol, or tobacco. This suggests that there are other pathways, perhaps more powerful to substance abuse than knowledge of substances or their harm.

What might the mechanisms be? One of the hypotheses, based on consultations with national experts and the review of the literature, is that providing certain types of environments addresses the underlying neurobiological, genetic, social, cognitive, and emotional "drivers" of substance abuse, misuse, and use. Such school and community environments would assure:

⇒ Peers and adults extensively reinforce children's pro-social and academic behaviors.

⇒ Social skills are modeled, reinforced, expected, and "set up" by various rituals, routines, or instructional methods.

⇒ Children, particularly higher risk populations, do not receive perceived harsh, negative, or inconsistent "punishments."

⇒ Children are reinforced for inhibition of negative behavior (e.g., "thank you for not…").

⇒ Environmental arrangements (which can be social) reduce opportunities to engage in negative behavior, bullying, being victimized, or being rejected by adults or normative peers.

⇒ Many opportunities exist for children to have meaningful roles and imitate others who do.

⇒ Social warmth and reduced threat from adults exist.

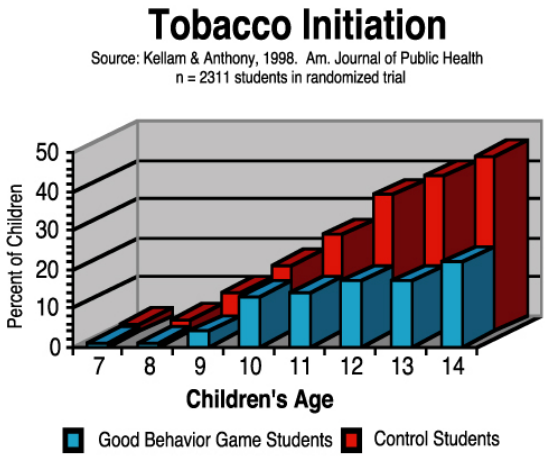
⇒ Response cost (a technical term from behavioral psychology) is quick, consistent, and not too punitive.

There is evidence to suggest that these principles can be powerfully infused in a

school or community, with reductions in risk of substance abuse.

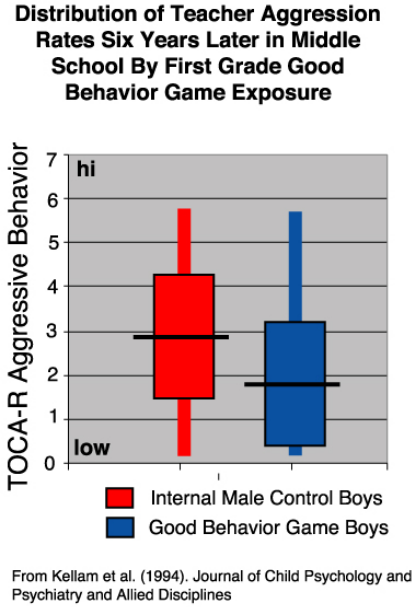
Kellam and his colleagues published a report evaluating the impact of using the Good Behavior Game in elementary schools on substance abuse a decade later. This Game has become a gold standard for early prevention of substance abuse. It rewards inhibition of negative behavior through a response cost procedure, while increasing time in engaged learning. The impact of the Game on substance use was exceptional a decade later. For example, the rate of tobacco use in middle school was cut from 25% to 50% overall just from something done in first and second grades.[80] The figure below shows the impact of the Game on several thousand students.

Figure 32: Effects of the Good Behavior Game



The benefits of the Game are not limited to tobacco, alcohol, or drug use. Clinical levels of aggression (the type related to conduct disorders and juvenile crime) were reduced to "normal" levels during elementary school, and then fell below that as a "sleeper" effect in middle school—an exceptional result for something so simple.

Figure 33: Good Behavior Game Effects on Aggression



From Kellam et al. (1994). Journal of Child Psychology and Psychiatry and Allied Disciplines

Wyoming is the first State in the Union to fund the replication of the Good Behavior Game, attempting to customize it for use in Wyoming conditions in the context of the 15,000 Hours Initiative being funded by the Governor's Advisory Board on Substance Abuse. The expansion of the Good Behavior Game, so that every teacher could use it, might provide substantial benefits to the state, given the fact that the Biglan study group reports that the Good Behavior Game is unique in that it does not require that a whole school use it—only the individual teacher to achieve effects.[w]

[w] The report by the Biglan team is quite extensive, and a review of the Game is also under revision for publication by Dr. Embry.

Wyoming Recommendation:
The Department of Health and Education, in collaboration with other interested parties (e.g., Wyoming Education Association) will undertake a rapid, state-wide project to diffuse the tools and procedures necessary for every teacher in elementary grades to make use of the Good Behavior Game and related strategies on a voluntary basis.

In February of 2000, the Governor's Advisory Board hosted a Wyoming Think Tank on Vision 2020. Some 15 national experts were invited to work with about 40 Wyoming leaders for applying good science in the Wyoming context. Several national scholars presented ideas that might be applied from the research.[x] Dr. Denise Gottfredsen talked about how schools could develop their organizational capacity, through action-science, rewards for student behavior, and other strategies. Dr. Gottfredsen summarized her commissioned report to the Congress on school-based prevention, which showed that these principles could reduce substance abuse among students.[81] Dr. Gottfredsen notes in her report:

> ***Programs aimed at setting norms or expectations for behavior, either by establishing and enforcing rules[y] or by communicating and reinforcing norms in other ways, have been demonstrated in several studies of reasonable methodological rigor to reduce alcohol and marijuana use and to reduce delinquency. Note, however, that schools where rules were manipulated also used school teams to plan and implement the programs, so it is not possible to separate the specific effects of school rules and discipline strategies from the more general effects of encouraging teams of school personnel to solve their schools' problems.***

Some of these ideas have been incorporated in this document, such as in the work of Dr. Embry for the State of Wyoming. Dr. Kris Bosworth, another national expert, explained an extension of Dr. Gottfredson's work in the broader context of resiliency emerging the idea of Protective Schools—with a focus on enhancing the capacity of the schools to sustain and support innovation. Dr. Bosworth drew on the work of Sir Michael Rutter, who was able to show that simple structures in schools could significantly reduce the problems associated with substance abuse (e.g., juvenile delinquency). For example, frequent posting of student work on the walls increased achievement and reduced measures of delinquency—for high school youth living in high-risk neighborhoods. Dr. Tony Biglan talked about how youth, in and out of school, could be mobilized to reduce tobacco use through very simple procedures, some of which were adopted and used by Wyoming to reduce its sales of tobacco to minors from 55% to 8.96% in one year—setting a record for change in America. Some of the other recommendations made by Dr. Biglan

[x] Various papers by participants will be posted on several web-sites.

[y] Dr. Gottfredson is not recommending a zero tolerance, a harsh or punitive campaign here, which some have interpreted in error from her research.

have not yet been acted upon, but are included in this the context of the overall report for HB 83.

Dr. Daniel Flannery spoke about work with Dr. Dennis Embry in altering school climate in a large-scale randomized study,[82] showing that social competencies and higher-purpose norm promotion protects against multi-problem behaviors, and can be easily implemented by schools. Dr. Flannery also talked about the work in teaching child development and special policing strategies to law-enforcement that can reduce substance abuse and other problem behaviors in children or youth, as well as about something called the Young Ladies/Young Gentlemen's Club that is protective for higher risk youth. Dr. Flannery explained that the school lunchtime club, which can be run by volunteers, has strong effects on reducing problem behaviors.[83]

Previously, this section discussed the work of Dr. David Hawkins and "Rico" Catalano on the risk and protective factors "checklist." They also have done extensive research on social development and the prevention of substance abuse.[84] The Seattle Social Development Program (SSDP) provides teacher training, social skills and problem-solving training for children, and parent training during elementary school in the interest of preventing drug use. The approach provides parent training, teacher support for behavior management, refusal skills, and problem solving for young people. The approach spans Grades 1-5 in a coherent way.

Teachers in grade 1 classrooms deliver a problem-solving curriculum to children to think through alternatives to problem situations. Professional staff present voluntary, parent-training classes offered each year. In grades 1 and 2, a 7-session parent training program is taught to parents to pinpoint positive and negative child behavior and to provide appropriate consequences for each using modeling, role plays, feedback, and homework assignments. In grades 2 and 3, staff teaches a 4-session program designed to help parents use good ways of helping their children in reading and arithmetic. Finally, in grades 5 and 6, staff provide a 5-session program designed specifically to reduce the likelihood that the child will initiate drug use by establishing a family policy on drugs and alcohol, helping parents to teach their children skills for resisting peer influence to use drugs or alcohol, working on skills to reduce family conflict, and creating new roles for children in the family as they mature.

The Biglan Group reviewed the results of the Hawkins and Catalano approach, which offers some useful insights for prevention policy:

> ***Hawkins and colleagues evaluated the effects of their intervention when the children were in grade 2 [Hawkins, 1991 #143] and at the beginning of grade 5 [Hawkins, 1992 #141], when they also examined effects for a low-income (highest-risk) sub-sample [O' Donnell, 1995 #440]. Of greatest interest here is Hawkins et al.'s [, 1999 #994] follow-up when the children were 18 years of age, when they assessed lifetime crime,***

substance use, and sexual activity data. Analyses revealed no significant differences between those who received the intervention only in grades 5 and 6 and the controls on substance use, delinquency, or sexual behavior. In contrast, the full intervention produced significantly fewer reports of lifetime violence, sexual intercourse, number of sexual partners, and (for working and middle class youth only) pregnancy. Measures of drug, alcohol, and cigarette use were unaffected by the intervention.

The combined research on the various methods is extensive. The full body of research is very promising and also elucidates some issues for policy on prevention and intervention about funding and timing issues.

⇒ Inhibition of aggressive, disruptive behavior in the primary grades appears to have a much stronger long-term pay off than more problem-solving or academic approaches in reducing lifetime substance abuse.

⇒ Carefully planned reinforcement strategies for pro-social behaviors have positive protective benefits across almost every grade level.

⇒ Certain types of parent training strategies in the models (focus on family drug policy, resisting peer pressure) may be ineffective, though have surface logic (but represent weak variables).

⇒ Strategies that increase social competencies (specialized life skills), particularly among older pre-teens or adolescents, do have protective value in terms of reducing substance abuse.

⇒ Setting norms or expectations for behavior, either by establishing and enforcing rules or by communicating and reinforcing norms in other ways, can reduce substance abuse. Appealing to a sense of higher purpose in the norm setting may enhance the prevention effects.

The Developmental Approach or Social-Emotional Competencies Model show positive results and seemingly fit the unique conditions of Wyoming, and support the results of the Community Readiness project undertaken by the Division of Substance Abuse in collaboration with the Tri-Ethnic Center with respect to the Methamphetamine Initiative. Additionally, the developmental and social-emotional competencies model fit with the focus of the Governor's Youth Development Sub-Cabinet Committee work along with some of the grass-roots efforts toward asset building.

Wyoming Recommendation:
The Youth Development Sub-Cabinet, in collaboration with other interested parties (e.g., Wyoming Education Association) will undertake a rapid, state-wide project to diffuse the tools and procedures that schools may use to improve their overall school climate, with positive effects on reducing the problems of juvenile delinquency, truancy, substance abuse, and aggression.

Instructional Methods Intriguing evidence shows that actual methods of instruction and classroom organization buffer against substance abuse and problem behaviors.[85] There are several hypotheses why, which are not incompatible but may all be true:

1) Good instruction improves prefrontal functions in children, and poor prefrontal function has been consistently linked to elevated risk of substance abuse and related problems;

2) Good instruction reduces the risk of academic failure (e.g., placement in special services, dropping out, truancy, absenteeism, which in turn minimizes "hanging out" with deviant peers who are engaged in problem behavior; and

3) Good instruction reduces disruptive, aggressive, and inattentive behaviors both in high-risk and low -risk students—thereby minimizing individual and collective risk.

Several characteristics seem to be true about instructional methods used by individual teachers that reduce problem behaviors related to substance abuse:

⇒ Downtime and transitions are decreased dramatically.

⇒ Group reinforcements happen frequently for individual efforts.

⇒ Pace is quick and feedback frequent.

⇒ Environmental interventions (technically called antecedents) are used to reduce problem behaviors before they even happen, instead of focusing on punishment or interventions after problems.

Table 4: Kounin's List of Teaching Competencies

1. "With-it-ness." The ability to accurately spot deviant behavior, almost before it starts.

2. "Overlappingness." The ability to spot and deal with deviant behavior while going right on with the lesson.

3. Smoothness. Absence of behaviors that interrupt the flow of activities.

4. Momentum. Absence of behaviors that slow down lesson pacing.

5. Group alerting. Techniques used by teachers to keep non-involved students attending and forewarned of forthcoming events.

6. Accountability. Techniques used by teachers to keep students accountable for their performance.

7. Challenge arousal. Techniques used by teachers to keep students involved and enthusiastic.

8. Variety. The degree to which various aspects of lessons differed.

Kounin, 1971

These and related findings are as much as 30 years old, yet are surprisingly unknown among prevention researchers,

who have focused on the content of prevention (e.g. tobacco specific, alcohol specific, marijuana specific), without attention to the fact that the very nature of instruction might prevent serious lifetime problems in our youth. Some early investigators of teacher behaviors have quantified these types of instructional interactions that seem to reduce multi-problem behavior in the classroom. One of the most widely cited is by Kounin shown below.[86]:

The implications that basic instructional methods could prevent substance abuse are actually staggering for policy.

1) Individual teachers could change the course of multi-problem behavior without having to implement some "substance abuse curriculum";

2) These skills have been shown to reduce placement in special education (a predictor of serious substance abuse), which could save thousands of dollars per child per year; and

3) These skills can be taught to individual teachers so that they can become change agents.

All of these possibilities have very attractive benefits for Wyoming:

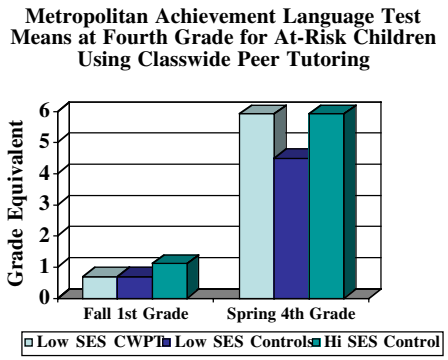
⇒ Reduction in state expenditures in special education expenses.

⇒ If just 100 students per year avoided needing special education as a result of some teachers learning these procedures, the state would save about $1,200,000 for each cohort of those 100 students— assuming it cost an extra $2,000 per student per year who needed six years of special services.[z] Over a decade, the sum of costs averted in special education, assuming no change in costs and a ceiling benefit of six years averted, the sum of about 1,000 students will have averted special education, saving the taxpayers at least $7,800,000. These are very conservative numbers for several reasons:

⇒ Some of the actual experiments with the methods have shown a reduced need for placement by as much as 30%; and the methods are more powerful with reducing the service needs for children with learning disabilities and/or emotional/behavioral disorders—which represents over 50% of all State special education.[87]

⇒ Aversion of placement in juvenile services.

⇒ Evidence suggests that these methods of instruction by individual teachers



[z] Unlike many states that give lip service to special education, Wyoming actually pays 100% of special education costs, which are reimbursed to the district. Despite declining enrollments, Wyoming's expenditures for special education are significantly increasing.

can reduce the migration from behavior problems to full blown delinquency. For example, one long-term study suggested that randomly placing an elementary school child who was high risk for substance abuse (e.g., aggressive, disruptive, poor, etc.) for one year in a poorly run classroom versus a well run classroom more than doubled the risk of serious antisocial behavior in middle school.[88] What might be the impact financially on the state for costs averted if just 100 students per year did not migrate from oppositional defiant disorders to conduct disorders with antisocial behaviors and arrests as a result of more skillful teaching of individual teachers? Assuming that each of 100 students "saved" per year represented a lifetime cost of $50,000 each, for the state budget ($5,000,000 of lifetime state costs per year averted). Over a decade, the costs averted could amass to $50,000,000.

- Improvements in academic proficiency.
- The same individual teacher strategies that reduce special education for diagnostic categories related to lifetime substance abuse also dramatically improve measures of standardized achievement in long-term studies.[89] The effects on improvements in academic achievement can be remarkable. Greenwood and colleagues have shown that the procedures used by teachers take about 20-30 minutes day, save much time from grading, do not require new textbook purchases, can bring many low-performing students up the level of middle-class comparison students —with lasting effects, and reduce the need for special services.[90] The graph below presents standardized achievement data from one such experiment. The materials required, per teacher, cost about $125.
- Greenwood, 1991

Wyoming, as other states, would substantially benefit if the practices that improve the odds for reduction in problem behaviors were rapidly diffused, so that any and every teacher could quickly adopt simple practices, without having the adoption of a "program" which requires all sorts of local control considerations. Since many beneficial strategies can be adopted by individual teachers (the smallest unit of local control, the classroom), the prevention purposes of HB 83 can be met in some powerful, cost effective ways.

Wyoming Recommendation:

The Youth Development Sub-Cabinet, in collaboration with other interested parties (e.g., Wyoming Education Association) will undertake a rapid, state-wide project to diffuse simple tools and strategies individual classroom teachers may use improve their classroom, with positive effects on achievement and on reducing the problems of juvenile delinquency, truancy, substance abuse, and aggression.

Infusion Model. Recently, a few investigators have started researching an idea of infusing things like the Life Skills Training (LST—e.g., Botvin's work) into every classroom and school activities to prevent substance abuse among young people. By infusion, the teachers take the

ideas and "sprinkle" them across daily activities. For example, the music teacher in middle-school might have the choral class work up a "What do we do with the drunken driver?" song, the biology class might study the harm caused to human functions, or physical education might use many games to teach refusal skills or anger reduction strategies. While such an idea is often recommended and seems possibly valuable, it has never been scientifically tested until recently.

The National Institute on Substance Abuse has awarded a grant to study an infusion model of the Botvin Life Skills Training program against the standard version (already discussed), because of the very extensive research supporting its efficacy. Thus, the study is starting from a positive foundation. Early analyses to determine the effects of the treatments suggest there were no treatment effects for smoking among either high- or low-risk students, although treatment did significantly affect drinking among high-risk adolescents, but not among low-risk students. Results indicated that the Infused LST model was more costly to implement in the first year due to a larger number of teachers who were trained and who implemented the program. The cost-effectiveness differences favoring Standardized LST may be lessened, however, over time, as the infused approach becomes institutionalized and less costly to maintain. The infusion research has just begun and is limited in follow-up.

These results are of interest in several ways to Wyoming. First, Wyoming is apparently among the earliest of states to adopt Health Education Standards. An infusion model would fit these standards quite well, and it could be built as a sort of "resource" for every teacher in the state. An infusion model has intuitive appeal to teachers. Second, as mentioned earlier, the long-term effectiveness of the Life Skills Training (LST) works best if delivered by youth peers. This makes sense from a developmental theory perspective. A combined infusion model with a youth development model (which was also linked to community and media strategies) could be a powerful prevention strategy for Wyoming.

Recently, the Department of Health worked collaboratively with the Department of Education to match various risk and protective measures being used in the data collection systems against the Wyoming Health Standards, which will permit the impact of the standards on actual outcomes.

Wyoming Recommendation:

The Department of Education, in collaboration with other interested parties (e.g., Wyoming Education Association) will undertake a statewide effort to enable Wyoming teachers in every district to share, create, and adapt infusion-based strategies aligned with the Wyoming Health Standards, which would be available on the Internet.

Early Literacy. Some jurisdictions have tried early literacy, mentoring, and after-school clubs to reduce problem behavior in children and youth. Emerging research suggests that these strategies, *if*

properly constructed, can have a positive, prevention impact.

At the 2001 Society for Prevention Research (SPR) Meeting in Washington, DC, data were presented that a simple, community-based effort to involve volunteers (with minimal training) to read with elementary students produced measurable gains in achievement and school success, except for children with serious phonemic segmentation difficulties. Most of the volunteers received only a few hours of orientation. The effort was tested in a nearby western state, and could be easily used in Wyoming—perhaps enhanced by other research showing that specially constructed texts or emergent literacy protocols might yet improve the effects.

Literacy appears to change the structure of the brain,[91] and such changes may buffer against developing substance abuse and related disorders among highly at-risk individuals based on data from the Youth Risk Behavior Survey (YRBS).[92]

Contests such as number of books read or pages read, especially when tied with content quizzes and prizes, seem to have some lasting positive effects. For example, private-sector initiatives like BOOK IT by Pizza Hut appear to have long-term positive effects on reading.

Early literacy can be promoted via special storybook design and free distribution. Such models have been shown to improve parent-child behavior, improve parent-child behavior, and even improve school-related behaviors.[93]

Wyoming Recommendation:

Under the sponsorship of the Governor's Office and First Lady, Wyoming would undertake a statewide effort, with a public-private partnership, to have free, specially designed storybooks available to every Wyoming young child each month—which are designed to promote early literacy, social-emotional competencies, and character as well as positive family-child relationships.

After-School Clubs. Fairly solid evidence exists that systematic, well planned after school programs (such as a photography club, a performing music club) confer protective advantage for reducing multi-problem behavior for youth in controlled studies.[94] Community partners, not just schools in Wyoming, can organize such clubs. Such things as 4-H or Future Farmers of America may also have protective value.

Formalized Mentoring. Organized mentoring programs such as Big Brothers/Big Sisters are now well documented to reduce multi-problem behavior inclusive of substance abuse.[95] Such high quality mentoring programs cost about $1,000 per volunteer-youth match. Youth who participate are about 46% less likely to abuse drugs and 27% less likely to abuse alcohol.

Study after study has demonstrated the effectiveness of mentoring programs in keeping kids away from drugs and out of other trouble. Mentoring is defined as "structured, one-to-one relationship that focuses on the needs of the mentored

participant and fosters caring and supportive relationships through providing focused attention, interaction, and genuine attachment."[96]

The problem is that many mentoring relationships are too short. One study found that when the mentoring relationship lasts less than 3 months, harm is actually done to the child. Self-esteem dropped. Substance abuse increased.[97] The study concluded that mentoring must be done right, well funded, and provide adequate training and support for the volunteer mentors. "The truth is that mentoring, if it is to help children, costs money. Most groups need the government to aid these programs properly." Just as good mentors must make a long-term commitment. so it is also true of the state government.

This is an area of responsibility in which the faith community and private sector should be asked to assist. We encourage the state to offer matching grants to faith-based and other private sector organizations who are willing to make significant, long-term commitments to mentoring and other after school programs.

Wyoming Recommendation:

The Youth Development Sub-Cabinet will undertake a comprehensive process to promote high-quality mentoring. First, the agencies would use leveraged funds to promote the recruitment of long-term mentors for organizations such as Big Brothers and Big Sisters. Second, the Division of Criminal Investigation will develop a expedited system of clearing adults for long-term mentoring. Third, the combined state prevention-funding group (as recommended) would provide matching grants for long-term mentoring. Fourth, the state is the largest single employer in Wyoming. The Legislature and the Governor could implement policies encouraging and promoting the involvement of state employees in long-term mentoring, collaborating with the Department of Family Services to reach higher risk youth.

Reducing TV Viewing. Watching TV elevates risk for substance abuse and other criminal acts, particularly among children who show higher levels of aggression during childhood.[98] The impact of TV viewing can elevate many levels of risk: a decline in social competence, lower parent supervision, increase of hostile attributions, and possibly the elevation of the hypothalamus-pituitary-adrenal axis (increased stress hormones that may affect other neurotransmitters and even receptor site expression). A variety of experiments have shown that reducing children's diet of TV viewing has a positive effect on variables such as aggression toward peers and parents (a major childhood risk factor), and such reductions can be achieved by advice packages or school-community promotions.[99] Wyoming could promote the prescription of reduced TV viewing, using research-based interventions as a part of well-child clinics, because of the relationships of TV viewing and various developmental outcomes (obesity, for example). The same prescription might include some of the protocols embedded inside such programs as FAST (Families and Schools Together) to increase board games, puzzles, and all manner of activities that have been found inside of interventions to reduce the risk of substance abuse.[100]

Wyoming Recommendation:

The Department of Health will undertake a statewide campaign to reduce children's viewing of TV, using research findings on that subject while measuring the results of the campaign.

Developmental Transition and Summer Camps. The emergence of multi-problems predicting substance abuse is often preceded by failure of children to make some important developmental transitions such as moving from elementary to middle school, from 8th to 9th grade, for example. This idea was endorsed often in testimony. Some evidence suggests that a transition program might reduce these problems, and testimonials from youth are compelling. The author has witnesses the impact of such events like the "Champs Camp," run by people such as Michelle Karns, in which children who are fearful of the transition seem far more competent after the event.

Wyoming Recommendation:
The Wyoming Youth Sub-Cabinet ought to undertake an experimental test to determine the value of transition "camps."

Multi-Problem Youth

Some youth have much higher risk of engaging in serious substance abuse and antisocial behavior.[101] They are typically marked by more serious lifetime problems. For example, they may have had prenatal exposure to drugs, alcohol, and tobacco—predisposing them the more impulsive behaviors. They may have witnessed serious human violence, which tends to change the chemistry of the brain—resulting in much higher probability of engaging in early substance abuse. They often have serious problems in school. The famous study by Jessor and Jessor (1977) was the first to fully identify the phenomenon. Such youth often account for very large proportions of arrests and other acts of deviance in a community.

Wyoming has felt the impact of two such youth. The two boys who killed Mathew Sheppard are classic case studies of multi-problem youth. Henderson saw a murder-suicide of his parents, for example. McKinney had the marks of fetal alcohol effects. Both became heavily involved in methamphetamines. These two young men show how profoundly such cases can affect a whole community, state, or country. Can such multi-problem youth be helped, even in later adolescence, through powerful intervention strategies? The answer is clearly, yes.

Hill Walker and colleagues have profoundly demonstrated that such children can have their behaviors affected over a long period of time with simple but effective interventions used in school settings during the elementary years.

FIRST STEPS TO SUCCESS is a preschool or kindergarten program with well-controlled follow up research.[102] Multi-problem youth typically look like the kindergarteners before completing First Step—disruptive, impulsive, and non-compliant. Following First Step, most kindergartners are far more behaved and resilient.

CLASS, PASS, RECESS and PEERS are likewise very powerful procedures that have been shown to turn around highly deviant children in elementary school settings.[103] Typically, the interventions can be implemented over a couple of months with the assistance of a "coach" who helps transfer the control of the effort to the classroom teacher. The strategies are far more effective than standard counseling or mental-health interventions, yet they are rarely used because they are not well known.

PROJECT LIFT addresses parent-child management and children's skills for interacting with peers as risk factors for later problem behavior. The approach happens in elementary school. PROJECT LIFT also includes interventions designed to provide positive consequences for appropriate peer interactions on the playground (using a permutation of the Good Behavior Game), which helps children generalize the skills they learn in social skills training to real-life situations.

LIFT also teaches parents skills for improving their communication with their children.

LIFT has three-year follow-up data on fifth graders. Children who had been involved in the program had less association with deviant peers, lower likelihood of a first arrest, and less initiation of alcohol and marijuana use than did fifth graders not receiving the program.[104] Importantly, these effects were found regardless of the level of problem behavior initially exhibited by the children, implying that children most at risk to develop multiple behavior problems benefited as much as children with fewer risk factors. Fifth graders in control schools were 1.8 times more likely to be using alcohol, 1.5 times more likely to have tried marijuana, 2.4 times more likely to have been arrested than fifth graders who received LIFT.

The *YOUNG LADIES/ YOUNG GENTLEMEN CLUBS* (YLYG) targets youth in grades 1-6 who are identified by teachers and principals as at-risk for school failure and dropping out and who engage in problem behavior in the classroom. Students attend a group session, which can be led by volunteers from the community, several times per week throughout the year. The group is run by an adult who also serves as a mentor to the students and as a liaison between the student's family and the school (i.e., by conducting home visits). The group focuses on developing problem-solving and social skills, as well as on character education and discipline. Students learn how to respect and care for themselves, each other, and adults. Music therapy has proven to be a valuable factor in the program's success. YLYG, developed by the Partnership for a Safer Cleveland, has been in existence since the mid-1980s and has served as a model for similar programs in other school districts throughout the country.

YLYG has undergone several (albeit limited) evaluations.[105] In the most recent one-year longitudinal evaluation, children and teachers reported significant improvements in child social competence, and group leaders reported significant gains in child pro-social behavior accompanied by decreases in aggressive behavior. Analysis of grade card data found statistically significant improvements in positive classroom behaviors, self-control, and general attachment to school. Parents also reported program benefits. Why is this strategy reported here? One reasons is because it is a low-cost, low-tech strategy that could be widely implemented in Wyoming, and it has some reasonable scientific validity.

RECONNECTING YOUTH is a five-month, semester-long intervention program for secondary schools that integrates small-group work, life skills training models, and a peer-group support model. It includes 90 daily class lessons, typically 55 minutes per class, that teachers or youth leaders can use sequentially, selectively, or infused into other curricula. To enter the program, students must have fewer than the average number of credits earned for their grade level, have a high rate of absenteeism, and show a significant drop in grades. A youth may also enter the program if he or she has a record of dropping out or has been

referred as a significant dropout risk. In published studies, the program produced a 60% decline in hard drug use, 20% increase in average GPAs and attendance, and significant decreases in aggressive and suicidal behaviors.[106] Reconnecting Youth is presently being used in Laramie, and appears to have applicability to Wyoming conditions. The evaluator for the Wyoming-based effort is the Department of Psychology at the University of Wyoming, and has started to report some positive results.

Wyoming Recommendation:
The Department of Health, the Department of Family Services and the Department of Education will develop and promote the infrastructure for communities to use a series of practical, cost-effective school and community-based prevention strategies. Schools and communities will be free to seek other sources of funding for other strategies.

Clinical-Practice Interventions.

Not all children respond to prevention strategies. Some need higher doses of services, particularly if they are more seriously antisocial, depressed, anxious, or even users of mood-altering substances. The lack of response to the universal prevention strategy may strongly indicate the need for more intensive strategies. Several kinds of clinical interventions exist, such as solution focused and intensive protocols to prevent the migration to substance abuse and other multiple problems.

Solution Focused Protocols typically emerge from behavior analysis:

⇒ Behavior analysis protocols (e.g., Functional Assessments, effective behavioral support) are powerful research-based protocols that can help diagnose and treat disturbing behaviors, often exhibited by children who grow up to have serious, multiple problems.

⇒ Kazdin Model for Clinic Practice embraces many individual tools and procedures that can be used in the classroom or home settings to reduce problem behaviors related to risk and to increase protective behaviors. Each strategy has been tested in multiple contexts to show results. Teachers and staff can be taught the procedures in a modular way to build organizational and personal capacity.

Surprisingly, therapists, counselors, or teachers almost never know most of the highly effective, proven strategies. Some young people need very intensive interventions. Several well-researched candidates are mentioned here:

Functional Family Therapy or Multi-Systemic Therapy are both highly researched intensive protocols.

MULTI-SYSTEMIC THERAPY (MST) is an intensive family- and community-based treatment for youth exhibiting serious clinical problems including violence, substance abuse, and severe emotional disturbance (SED). MST targets the known correlates of antisocial behavior (i.e., individual, family, peer,

school, community), and it is highly operationalized.

MST therapists work in the youth's natural world (e.g., home, school, community); treat youth and their families for 4-6 months; target children at risk of out-of-home placement; provide services to meet the individual needs of each family members; and provide services that are culturally competent (i.e., based on the family's values, beliefs, culture). In addition, MST therapists carry low caseloads (2-6 families) and are available 24 hours per day, seven days a week and provide a comprehensive array of services to meet the multiple needs of each family.

MST has been evaluated in eight randomized control groups, involving more than 850 families.[107] These clinical trials have targeted violent and chronic juvenile offenders (three trials), substance abusing or dependent juvenile offenders (one trial), inner-city delinquents (one trial), juvenile sexual offenders (one trial), youths presenting in a psychiatric emergency (one trial), and maltreating families (one trial). One study of 118 substance-abusing and substance-dependent juvenile offenders (60% were poly-substance abusers), found that 72% of the young people also had one or more psychiatric diagnoses. In addition, substance-abusing and -dependent juveniles averaged 2.9 previous arrests, and 33% had at least one out-of-home placement. MST has consistently produced significant changes in ultimate outcomes: decreased adolescent drug use, decreased long-term rates of re-arrest (25%-70%), decreased self-reported criminal offending, and decreased days in out-of-home placements (47% to 65%). As reported by the Biglan study group, there are independent cost-benefit analyses of MST, indicating that $13.45 in savings or benefits accrued for every dollar spent on MST.

MST could be implemented in the denser counties of Wyoming, and there would have to be changes in Medicaid or contracting services to use this powerful protocol in our state.

FUNCTIONAL FAMILY THERAPY is a family treatment for delinquent teens that focuses principally on family communication, rules, and consequences as risk factors for delinquent behavior. The Biglan group has summarized the approach: "Trained therapists deliver the intervention weekly. Initially therapists meet with parents and the teen and assess the teen's difficulties and family members' responses. They then formulate a conceptualization of difficulties by looking particularly at patterns of interactions and hypothesizing whether each involved family member ultimately gets closeness from others, distance from the family, or some balance of these from his or her interactions with others. During this stage of treatment the therapist also works to reframe the problems in non-blaming ways to engage the family, reduce negativity and blaming, and decrease resistance to participating in family treatment. Then the therapist moves into developing here-and-now plans with the family to achieve the functions served by problem interactions and the teen's problem behavior in more adaptive ways, using strategies that may involve altering consequences for the problem(s),

negotiating alternative ways of structuring family life, and/or communicating in better ways with other family members."

FFT has a several good evaluations, thought not quite as many as MST. Recently, there was a randomized trial that compared FFT -- alone or in combination with individual cognitive behavior therapy – with a group intervention and with cognitive behavior therapy alone. Teens were referred for marijuana abuse. Results on marijuana use indicated that FFT and the combined intervention produced significant declines at 4 months after treatment began, but only the combined intervention maintained these changes at 7 months. Both FFT treatments, however, produced declines in the percentage of teens that changed from "heavy" to "minimal" use at both 4 and 7-month follow-ups. The treatment groups did not differ in their effects on parent reports of aggressive and disruptive behavior or on reports of family conflict; all groups declined significantly over time. The Biglan Group reports that FFT has similar cost saving as MST, but FFT does not have as strong of impact on serious behaviors as MST.

Dr. Robert Schwebel created the Seven Challenges approach as an "in-school treatment" program for substance abuse. It is one of the few research- based protocols for substance abuse treatment in a school setting. This program has had a randomized-control group study, which has not yet been published. Both NIDA and CSAP have expressed strong desire to replicate this approach, because of the dearth of any treatment programs in school.

Wyoming Recommendation:

The Departments of Health, Education, and Family Services shall undertake to develop an integrated delivery of research-based, solution-focused and intensive protocols for children and adolescents—designed to reduce the incidence of multi-problem behaviors inclusive of substance abuse.

Multi-Dimensional Treatment Foster Family Care is designed for adolescents who have shown a pattern of repeated juvenile offending. It targets various family and peer risk factors associated with the youth problem behaviors that are the focus of this book, including parental monitoring, providing consistent consequences for behavior, and reducing associations with deviant peers.[108] The intervention involves placing adolescents in the home of a foster parent who has been extensively trained in behavior management skills and who is continuously supported by intervention staff. Foster parents establish an individualized plan designed to reinforce desired self-management, academic, and social behaviors, and to limit the teen's contacts with deviant peers. Key features of the program include daily monitoring of the adolescent's behavior with consistent consequences for even minor rule infractions. Once the adolescent's behavior was under control, he or she was gradually returned to his or her home when possible. The biological parents received the same type of intensive behavior management training and support from project staff that was provided to foster parents.

The approach has been tested in several high-quality evaluations, inclusive of randomized control-group studies with long-term results.[109] Overall youth placed in the foster-care program were incarcerated on 60% fewer days than boys in the alternative interventions. Moreover, they spent twice as much time living with their own parents or other relatives, after the program was completed. Analysis of juvenile court records showed that boys in foster family care had fewer misdemeanor and felony arrests. Moreover, they had fewer self-reported index crimes, felony assaults, and general delinquency. Eddy and Chamberlain (2000) provided evidence that the specific changes in the quality of adult care of the adolescent and the interdiction of associations with deviant peers were the effective ingredients leading to observed reductions in antisocial behavior.

According to the Biglan Group, unpublished analyses of effects on substance use indicated that after one year in the program, young people who received foster family care reported lower levels of "major" drug use and, after two years, less marijuana use. An independent analysis of the cost-benefit of this program was compared with the usual community placement. The special foster care program could provide $22.58 in benefits and savings for each dollar spent on it.

Wyoming Recommendation:

The multi-dimensional foster family care model needs to be adopted in Wyoming to help reduce our difficulties handling very high-risk young people, and it is wholly consistent with the recommended Accountabilities Act. The state regulations on Medicaid need to be amended to allow in-state psychologists, physicians, and others to receive payment for psychiatric and psychological services—which would greatly facilitate the implementation of such protocols as Multi-dimensional foster care, Multi-systemic therapy, or functional family therapy.

Standards for IEP, 504 and Child Study Teams

Many of the multi-problem youth who migrated to serious substance abuse first came to the attention of schools in the form of 504 Accommodation Plans, Child Study teams, or Individual Educational Plans (IEPs). It is evident from testimony, site visits, and examination of case reports that these events often lack substantial, effective procedures or grounding in any theory. For example, attention deficient hyperactivity disorder and oppositional defiant disorder are extremely common reasons for convening such meetings. Very often, there is no use of reliable screening tools, no consultation of appropriate tools and frequent recommendations that can and do make children worse. These problems are not the "fault" of the participants; they are a "systems level" fault.

Each meeting needs to have access to:

⇒ Reliable tools to help participants to make some decisions.

⇒ Quick access to proven, research-based tools that can act as "first aid" to reduce the problems.

⇒ Guidelines for further action.

There are several reasons to develop such standards: 1) The state pays 100% of special education services, 2) poorly-constructed interventions can result in a quick and potentially dangerous *worsening* of symptoms, and 3) effective screening and strategies can dramatically improve the developmental pathways of the child.

Wyoming Recommendation:
The Department of Health, Education, and Family Services shall develop, promote, and distribute guidelines and simple research-based practices to support effective planning meetings regarding special education services.

Regional Child, Adolescent, and Adult Science-Based Practice Promotion Team

The chief author of this section has the opportunity to travel all around the country advising centers and entities on effective practices to reduce the problems of serious cases. In Wyoming, we don't have the infrastructure like most rural areas for learning or finding out about effective practices, especially for cases involving children and youth.

High- quality strategies, based in solid research, can literally make the difference between life and death. The treatment section of this proposal talks about a regional team based on the experience of Canada, our northern neighbor, who shares some of the issues of isolation and limited resources we have. We strongly recommend that regional teams be developed to provide the most effective prevention, intervention, and treatment strategies for child, adolescents, and adults in our state. The teams, once set up, could be funded in part from Medicaid. The teams need to recruit very skilled clinicians (MDs, Ph.D.s and other degrees), trainers, and community development specialists.

Wyoming Recommendation:
The Department of Health shall charter, develop, and regulate regional teams who support, train, advise public and private providers with the best level of clinical support, training, feedback on outcomes, and consultation as well as assist schools and communities implement effective prevention and intervention efforts to reduce substance abuse and related problems.

Medication Interventions

Medications can work to reduce the symptoms of problem behavior among very high-risk youth. Most laypersons believe prescription medications to be well studied for their effects. In many cases, studies on the use of medication are not as robust as some of the behavior interventions, but there is clear evidence that medications can be beneficial.[110] This document will not fully review the types of medications for prevention and intervention. That sort of document ought to be a separate report, which could be applied to various contracts or fees-for-service.

A couple of issues bear review, however. In the preparation of this report, we found **no** convincing evidence that the use of the stimulant medication methylphenidate *caused* substance abuse among children.[111] We did find evidence that such stimulant medications can be and, most certainly are, used by some for illegal purposes.[112]

Can we predict potential for abuse or possibility that individuals might migrate into abuse of the drug? Yes, thanks to advances of genetic technology. Brain dopamine D2 receptor levels, which show significant variability among people (polymorphs), predict reinforcing or unpleasant responses to psycho stimulants in humans.[113] Preliminary evidence suggests that D2 receptor levels predict response to psycho stimulants in humans and that low D2 receptors may contribute to psycho stimulant abuse by favoring pleasant response.

In everyday clinical practice, the prescription of mediations to treat problems related to substance abuse is often the result of marketing efforts, directly or indirectly, or experimentation until "something works." Most readers of this document are familiar with the various prime time TV spots for prescription drugs. There are several reasons for the state to be worried about the prescription of medications to treat behavioral disorders:

Emerging science shows that specific variations of genes interact with the effects of medications, perhaps making a drug dangerous, ineffective, or highly effective. This genetic variation almost certainly accounts for the "hit or miss" experience of prescribing or taking medications.[114] Certain genes regulate enzymes (e.g., P450 enzymes) affecting how medications interact (one drug makes you have serious side effects in the presence in another) and diffuse in the body. Whole web sites are now devoted to these interactions for psychiatrists and others (for example, http://www.mhc.com/Cytochromes/).[115]

⇒ One recent study summarizes some of the research on the powerful drugs used to treat the serious behavior problems:[116] It says:

> ***Anti-psychotic drugs are extensively metabolized by the cytochrome P450 (CYP) enzyme. Dispositions of a number of anti-psychotic drugs have been shown to co-segregate with polymorphism of CYP2D6. Metabolic drug-drug interactions have frequently been observed when anti-psychotics are co-administered with***

other drugs. Many anti-psychotic drugs are converted to active metabolites, which can contribute to the therapeutic or side effects of the parent drug. Information concerning the individual CYP isoenzymes involved in the metabolism of anti-psychotic drugs is important for the safe clinical use of this group of drugs

Ineffective medications can create serious danger for the patient or society, if the patient has homicidal or suicidal thoughts or behaviors. A patient may inflict harm to self or others, because the medication did not work. This problem is much larger than lay people might think, and has been documented that some children respond poorly to drugs like Ritalin based on their genetic makeup.117 Prescribing drugs that do not work can be an expensive trial and error.

Side effects may trigger suicidal or homicidal thoughts, actions, or mania. Some explanations are necessary for a casual reader. Many people, who are at risk for substance abuse, have or might evidence bipolar disorder in time. Other folks may carry a gene, but it has not fully expressed itself. Quite frequently, such folks present to a counselor or general practitioner as feeling depressed. A course of anti-depressants may be started, and the person becomes violent, hostile, criminal, or manic not long afterwards.aa The occurrence of mania during antidepressant treatment is a key issue in the clinical management. Could certain genes predict how people would respond to medications? The answer is yes.

The serotonin transporter (5-HTT) is the selective site of action of most pro-serotonergic compounds used to treat bipolar depression. The 5-HTT gene (SLC6A4) has 2 known polymorphisms. Recent research suggests that 5HTTLPR polymorphism may be an important predictor of abnormal response to medication in people with bipolar disorder.118

The issue of adverse side effects to medications like antidepressants is particularly important in a comprehensive plan for substance abuse treatment, prevention, and intervention. Substantial numbers of individuals who are diagnosed with bipolar disorder initially show only drug or alcohol abuse, sometimes years before the onset of bipolar disorder.119 Antidepressant medications are frequently proscribed for individuals with substance abuse or antisocial behavior, and this could “trigger” serious side effects for vulnerable individuals.

If the state has individuals (adults or minors) under its care (e.g., Medicaid, foster care, juvenile corrections, prison, etc.), these side effects present a risk for the state under standard torts actions or the Olmstead Ruling, should the state be involved in the selection, prescription, or dispensing of medications with psychotropic effects or side effects, which might induce danger behavior or even ineffective results. For this reason and elements of good clinical care, Wyoming ought to consider being the first state to use Buccal smears (swab inside the cheek) to assess gene and drug/treatment interactions as a part of its broad leadership. A separate document will be issued showing how this might happen in combination with the University of Wyoming and others.

[aa] Something of this nature actually happened in Wyoming capturing the national headlines after a man was prescribed a common antidepressant and killed several people, resulting in a very large lawsuit.

Wyoming Recommendations:

The state needs to adopt an advanced scientific approach to the use of prescription medications, considering the state spends –over $66 million on prescription medications. Psychotropic mediations account for a larger percentage of such funds, and little is known by the general prescribing population about the issues associated with the prescriptions—except what is provided by the drug companies. Therefore, it is recommended that the state undertake the development of special programs for measuring the effectiveness of different drugs for high-risk youth and adults.

Parenting Strategies

Throughout the process of preparing the HB 83 report, individual after individual voiced a belief that "we need something to improve parenting skills" in Wyoming as a way of reducing our substance abuse problems. It turns out that there are ways to improve parenting skills, and some of them result in reduced substance use. Improving parenting skills in the state would take a serious commitment to applying some very fine science and practice on a large scale.

STRENGTHENING FAMILIES PROGRAM. Nearby, in Iowa, one of the best research and demonstration projects has been underway, showing how to improve parental competences and reduce substance abuse.[120] Kumpfer and colleagues developed Strengthening Families Program. It is designed to improve specific aspects of family functioning associated with adolescent problem behavior. Parents learn skills for making their expectations clear, using appropriate discipline practices, managing emotions, and communicating with their children. Videotapes illustrating the use of key skills are used to model parenting skills. Youth are taught skills that complement the skills parents are learning and are also taught skills for dealing with peer pressure and stress. In family sessions, parents and youth practice conflict resolution and communication skills and engage in activities designed to increase family cohesiveness. The program is provided in seven, weekly group sessions. In the first six sessions, parents and youth participate in separate one-hour skill-building sessions, which are followed by an hour long family session in which parents and young people practice the skills with each other. The seventh session consists of the one-hour family session alone.

A well-known national researcher conducted a randomized controlled trial in which 33 schools in small (8,5000 or fewer people) rural Iowa communities that were randomly assigned to receive the Strengthening Families Program, Preparing for the Drug Free Years, or no intervention. When students were in 10th grade, the researchers obtained follow-up data from 67.9% of the original sample. Adolescents whose families received the Iowa Strengthening Families Program reported significantly less aggressive and destructive behavior in tenth grade than did the adolescents who had not been in the program. For example, 7.9% of young people in the control condition reported

breaking into a building, while only 2% of the IFSP young people did so.

The researchers also examined the effects of Iowa Strengthening Families Project on substance use one and two years following the program. Effects of the program on substance use were not significant at one-year follow-up. However, by two-year follow-up they were. Whereas 30% of adolescents in the control condition initiated use of tobacco, alcohol, or other drugs between the year-one follow-up and the year-two follow-up, only 15% of the adolescents in the IFSP condition did so. The researchers also reported that scores on the Alcohol Initiation Index were significantly lower for IFSP adolescents than control adolescents at both one and two year post-treatment assessments. Moreover, the proportion of young people who initiated alcohol use was lower for the IFSP condition at both time points. Of particular interest is the number of young people who reported having been drunk. Among control youngsters, 19.1% reported having *ever* been drunk at two-year follow-up, while only 9.8% of the IFSP young people did so.

Thus, it is possible to run a parenting intervention in rural areas like Wyoming and achieve reductions in substance use and related multi-problems. Is it worth the money to do this type of effort? The Biglan Group has summarized the cost-effectiveness data specifically on the Iowa Strengthening Families Project.

> ***They [researchers] concluded that the accumulated lifetime costs of preventing a single case of alcohol use disorder were $121,878 (discounting future avoided costs by 3 percent per year). The resulting benefit-cost ratio was $9.78 per $1 invested. The net benefit per participating family was $6,039. This analysis does not include benefits associated with the effect the program has in lowering aggressive behavior.***

There are a few concerns, however, with the Iowa model. It appears that the more serious problem families may not have been reached—but the results were still helpful. Other models, also tested in a rural context, may offer a broader possibility of effectiveness using similar principles of parenting.

The TRIPLE P POSITIVE PARENTING PROGRAM is a multi-level system of parenting and family support strategies aimed to prevent behavioral, emotional, and developmental problems in children by enhancing the knowledge, skills, and confidence of parents. Triple P was developed and tested extensively by Dr. Matthew Sanders and colleagues at the University of Queensland in Australia, and is now being disseminated around the world.[121] Dr. Ron Prinz, who is an American professional with 25 years experience in prevention and treatment of childhood conduct and substance abuse problems, has recently launched the dissemination of Triple P in the United States.

Triple P is a system of behavioral family interventions based on social learning principles and developmental research on parenting and children. This approach to prevention and treatment of

childhood and adolescent disruptive behavior problems has the strongest empirical support of any family-based preventive intervention with children, particularly for those at risk for conduct problems and substance abuse.[122] Triple P aims to enhance family protective factors and reduce risk factors associated with severe behavioral and emotional problems in childhood and adolescence. Specifically the programs aim to: enhance the knowledge, skills, confidence, self-sufficiency, and resourcefulness of parents; promote nurturing, safe, engaging, non-violent, and low conflict environments for children; and promote children's social, emotional, language, intellectual, and behavioral competencies through positive parenting practices.

The interventions used in Triple P have been subjected to a series of controlled evaluations over the course of more than 20 years. Several studies have established the effectiveness of Triple P in reducing or preventing children's disruptive behavior problems in a variety of populations and settings.[123] The evidence supports Triple P's approach, which is based on a broad, public health perspective on parenting and family interventions, which is clearly more cost effective than depending solely on deep-end clinical treatment of delinquency and substance abuse.[124] Consistent with a cost effective public health approach, Triple P aims to provide for any given family the minimally sufficient intervention needed to solve the issue at hand, and no more.

The system of Triple P is particularly attractive for states like Wyoming with major geographical constraints. Australia, where Triple P originated, has some of the same problems as Wyoming with respect to how the population is spread over large areas. Flexible delivery modalities are important to overcome this challenge. Triple P has several formats including telephone and self-directed versions. Practitioners delivering Triple P can make good use of Wyoming's excellent Internet capabilities to reach families in remote locations. Triple P also matches philosophical tenets such as individualism and self-sufficiency predominant in the Wyoming population. Core principles of Triple P include the promotion of self-sufficiency, empowerment, and personal agency in parents, as well as an emphasis on parent-directed goal setting.

Triple P has five levels on a tiered continuum of increasing strength designed to reach the entire population of parents.

Universal Triple P (Level 1)
Level 1 is a media-based parenting information campaign for all parents interested in information about parenting and promoting their children's development. The approach simultaneously promotes positive parenting strategies to all parents and publicizes the availability of Triple P programs throughout the state.

Primary Care Triple P (Levels 2 & 3)
Levels 2 and 3 are brief consultations with parents usually in primary care settings or other similar access points (e.g., daycare centers, schools, community centers). These levels are for parents who have specific concerns about their children's behavior or development. Level 2 involves one or two 20-minute

consultations (face-to-face or by telephone), while Level 3 involves four 20-minute consultations. Primary Care Triple P is supported by an extensive collection of parent-friendly Tip Sheets focusing on positive solutions to specific behavioral and developmental problems commonly experienced by children.

Standard Triple P (Level 4)
Level 4 is broadly focused training in parenting skills. This level is for parents wanting more intensive training in positive parenting skills and typically benefits parents of children with moderate to severe behavior problems. Level 4 has delivery formats including individual, group, and self-directed (with or without telephone assistance) variants. The telephone-assisted self-directed format is particularly useful in rural areas where families and practitioners are separated by long distances. In the individual format, parents participate in a 10-session program, while the group format involves four, weekly group sessions followed by four, weekly individual telephone follow-ups with each family.

Enhanced Triple P (Level 5)
Level 5 is typically delivered by trained professionals working directly with a family.

Families can enter the system at any level and move up or down in intensity depending upon their needs and preferences. Most families never get to or need Level 5. Many can be positively impacted with either the Level 1 media information or with a little bit more programming via Levels 2/3 — which may make Triple P the most cost effective parenting interventions.

The main Triple P programs focus on parents with children 2-12 years of age, but Triple P has now extended programming to parents of teens. Additionally, there are Triple P programs for special populations, such as Stepping Stones for parents of developmentally disabled children and Pathways for parents at risk of maltreating their children.

Another attractive feature of Triple P is that it is delivered by a wide variety of practitioners and professionals. Nurses, pediatricians, family and general physicians, daycare supervisors, and school counselors, as well as more traditional mental health providers can implement Primary Care Triple P and family services practitioners. Psychologists, social workers, marriage and family therapists, counselors, and school professionals typically implement standard Triple P. Psychologists, social workers, marriage and family therapists, and psychiatrists deliver enhanced Triple P.

To be effectively implemented as a preventive approach, the whole Triple P system needs to be operating in tandem. Primary Care Triple P, which would be put in place first, involves training for the largest contingent of practitioners and other professionals. Standard Triple P is next and provides programming for parents who access Primary Care Triple P but need more (most parents don't). Enhanced Triple P, needed by the fewest families once the other levels are in place, would be established in traditional

treatment settings. Finally, other variants of Triple P (Teen Triple P, Stepping Stones for parents of developmentally disabled children, and Pathways for parents at risk for maltreatment) would be implemented.

The National Institute on Drug Abuse suggests that Triple P model represents an advance, and it grew out of the conditions of few people and a large land area. An important facet of Triple P is population-based promotion via media and related activities. Triple P has already developed media materials and strategies, which can be adapted and integrated with other social marketing plans recommended in HB 83 for a comprehensive Wyoming plan.

Wyoming Recommendation:
The Departments of Health, Education, and Family Services should adopt the Triple P model as a system's level strategy for a cost-effective way to improve parent child behaviors in the causal chain of problem behaviors—including substance abuse.

Telephone Support

Most clinical research and support research is conducted in larger urban areas, where major universities abound. In many instances, the types of support interventions from such locations are not feasible in the rural context of the West. The authors looked for several cases of telephone-based interventions that might affect the course of disorders or risk factors related to substance abuse. We fortunately found some delightful ones. One was called, "Grandma Please."[125] It was an after-school help line, which uses elderly volunteers as telephone-assisted self-help.[126] While the intervention was not a huge intervention per se, we felt the nature of it would be useful in reducing risk factors for younger children and even pre-teens who lacked supervision.

Wyoming Recommendation:
We urge a replication and evaluation of, "Grandma Please."

Figure 37: Grandma Please

Community campaigns, coalitions and readiness

Throughout the process of HB 83, we would hear from both professionals and citizens, "What can we do as a community? We know that government cannot do this alone." This is the pioneer spirit of Wyoming of a group of people coming together in common purpose, and the spirit of "we'd rather do it ourselves" in the West.

At one level, the movement toward "science- based practices" seems prickly toward community-based initiatives. "Science-based practices" sounds an awful lot like Big Brother, who has never been too popular in our part of the world. On

the other hand, we are used to the idea of county extension agents and others giving us the best scope on "what works." We'd much rather place our bets on something with a greater likelihood of success.

Community coalitions are tricky in a place like Wyoming. The same folks pretty much get asked to serve on the coalition for this and that. We just don't have enough folks to fill all the jobs that have to be done. Thus, we face a serious question: "Should we put our time into something if it doesn't' pay off?" That's a valid question, because we've all had the experience of doing things with limited results.

It's timely in Wyoming to examine scientific literature on community campaigns, coalitions, and readiness. First, as a state, we participated in a major study on community readiness—the Tri-Ethnic Center Community Readiness study on efforts to tackle the methamphetamine problems. Second, the outcome of this report could well involve mobilizing communities into action around substance abuse treatment, intervention, prevention, and control

Can community campaigns work? The answer is yes, if well constructed, based on good theory, and yoked to sensible activities. The next few pages will detail some community efforts that have worked well in controlled research. Some information will also be covered about unsuccessful versions, so we can avoid drilling some dry holes.

Getting Parental Involvement. Some studies such as the successful Project Northland show that it is possible to engage families and even high-risk youth in a community-wide parenting intervention, involving the distribution of specially constructed booklets and homework.[127] Ary and colleagues have shown that specially constructed pamphlets can guide conversations between mothers and daughters.[128] A number of investigators have shown that specially constructed booklets or storybooks, sometimes coupled with community campaigns, possibly including videos, can alter parent-child interactions related to the development of protective factors and reduction of risk factors. As a prevention scientist, I have personally participated in community and even national trials where as much as 50% of the families participated in the prevention activities, which were solidly based on prior experiments showing the activity had benefit. The community promotion model has applicability to Wyoming, provided some key lessons are observed:

⇒ Families (both child and adults) are depicted as heroes in doing something for themselves and for the greater good. Typically, both youth and adults have active roles in the effort, not just passive roles.

⇒ The activities are concrete and produce some kind of clear benefit. Awareness only activities are not terribly effective, nor are over-focused on the problem.

⇒ The community members involved in the campaign have clear roles and actions to undertake, but they are not required to move mountains or reinvent the wheel.

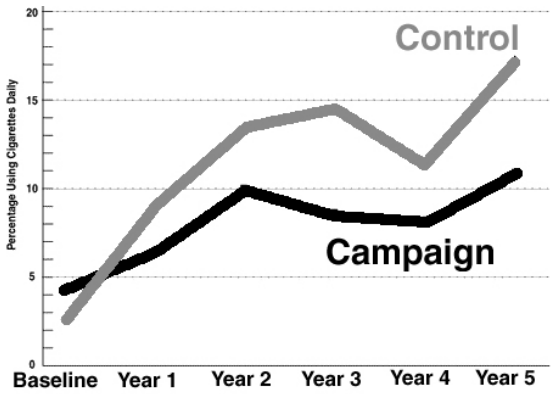
⇒ Activities and actions link and overlap across different venues—home, school, clubs, businesses, etc. This creates a synergy and sense of common action. It is also just plain good marketing.

⇒ Community members are not expected to "come up with all the solutions."

⇒ Media involvement is integral to the overall effort, not an add-on. Often the media involvement is focused on attending an event or participating

Mary Ann Pentz gave an invited address for the National Institute on Drug Abuse, concluding:[129] A review of multiple studies suggests that a community prevention program can vary in the use of mass media, parent programs, community education and organization, and

Figure 38: Midwestern Prevention Program effects on unadjusted cross-sectional prevalence rates of daily cigarette use in Kansas City as an example



local policy change. Results suggest that community-plus-school programs may yield greater effects on the more serious levels of drug use (e.g., on daily smoking compared with monthly smoking), effects on parents as well as youth, and perhaps more durable effects than are currently obtainable from most school programs alone. Overall, the magnitude of effects on smoking and substance use appears slightly greater for school-plus-community versus school programs alone (6- to 8-percent net reductions).

Some of the most extensive community-based efforts have focused on alcohol use. We think these Community Prevention Trials have considerable application for Wyoming, especially because they address issues of perceived access.[130]

Community Prevention Trial was an effort undertaken by the Prevention Research Center, in Berkeley, California, to reduce alcohol-involved accidental injuries and death through a five-year comprehensive program of community awareness and alcohol policy activities in three communities.

The project implemented and evaluated five community-based components. The project used an environmental policy approach to prevention and implemented five mutually reinforcing components:

(1) community mobilization to develop communication organization and support,

(2) responsible beverage service to establish standards for servers and owners/managers of on-premise alcohol outlets to reduce their risk of having intoxicated and/or underage customers in bars and restaurants,

(3) a drinking and driving component to increase local drunk driving

enforcement efficiency and to increase the actual and perceived risk that drinking drivers would be detected,

(4) an underage drinking component to reduce retail availability of alcohol to minors, and

(5) an alcohol access component to use local zoning powers and other municipal controls of outlet numbers and density to reduce availability of alcohol.

Why Focus on Alcohol in Communities?

Car crashes are the leading cause of death for young people under 25, and underage drinkers are involved in alcohol-related crashes in a higher proportion than their proportion of the driving population. Nearly 70% of young adult (aged 20-24) deaths in traffic crashes involve alcohol.

Holder et al. (in press). Evaluation Design For A Community Prevention Trial: An Environmental Approach To Reduce Alcohol-Involved Trauma

1. COMMUNITY MOBILIZATION embraced community knowledge, values, and mobilization. It involved working with existing community coalitions and task forces to prepare for implementation of specific alcohol problem prevention; to develop public awareness focusing on alcohol-involved trauma and the relationship of drinking impairment, increased risk of death or injury; and to increase awareness of the individual component activities. Local news media and public information activities were used to support the overall goals of the project as well as those of individual components. Project organizers worked with existing community coalitions to implement specific alcohol problem prevention activities and to develop a public awareness and concern about alcohol-involved trauma and the increased risk of death or injury associated with drinking. Public communication via media advocacy supported the overall goals of the project as well as those of individual components

2. RESPONSIBLE BEVERAGE SERVICE assisted alcohol beverage servers and retailers in developing and implementing beverage service policies to reduce the likelihood of customers becoming intoxicated or driving when intoxicated, and to eliminate service to underage customers.

3. UNDERAGE DRINKING included community programs focusing on reducing sales and access to alcohol by minors, training off-premise alcohol retailers to prevent sale of alcoholic beverages to minors, and increased efforts to enforce underage sales laws.

4. RISK OF DRINKING AND DRIVING increased the actual and perceived risk of apprehension while driving under the influence of alcohol. This component also increased DWI efficiency through training enforcement officers in new techniques for identifying DWI drivers, and the use of passive alcohol sensors to increase the probability of detection. This component also provides an environment which empowers significant others and retail establishments to intervene in order to prevent drunk driving.

5. ACCESS TO ALCOHOL involves the use of local zoning powers and other municipal control of outlet density to reduce the availability of alcohol, which is related to alcohol-involved trauma.

What are the results of the Community Prevention Trials model? The positive results being reported are useful for the Wyoming context.[131]

There was a significant reduction in alcohol sales to minors. The table below, shows the overall effects of Community Trials on the percentage of off-premise outlets selling alcohol to apparent underage buyers. Overall, off-premise outlets in experimental communities were half as likely to sell alcohol to minors as in the comparison sites. This was the joint result of special training of clerks and managers to conduct age identification checks, the development of effective off-premise outlet policies, and, especially, the threat of enforcement of lawsuits against sales to minors. A reduction in sales to minors is an important finding, because of role of perceived access in the Wyoming specific model of predicting youth substance abuse.

Table 5: Percentage of Premises Selling Alcohol to Minors

Experimental vs. Comparison Communities			
	All Communities		
	Comparison	Experimental (Enforcement with no training)	Experimental (Training only)
Pre (1995)	47%	53%	45%
Post (1996)	35%	19%	16%

As a result of community training in techniques for working with local news media, there was a statistically significant increase in coverage of alcohol issues in local newspapers and on local TV in the experimental communities over their matched comparison communities. An analysis found that there was a statistically significant effect on local newspaper coverage of alcohol issues in the experimental but not in the comparison communities and this could be attributed to the media advocacy activities of the project. This is an important finding for Wyoming, because it suggests that community norms can be affected by a community coalition.

Demonstration communities increased adoption of responsible alcohol serving policies over the comparison communities. This can be seen in the table above. This is particularly important in the Wyoming context, where bars are a mainstay of small community life, and they may be able to affect alcohol use by pregnant women.[bb] Pre- and post-test results of

[bb] Most people think programs for reducing alcohol use by pregnant women need to focus only on the women. This is appears not true based on focus groups. Women are often afraid of the impact of not drinking on relationships

reports by bar and restaurant managers found that the experimental communities showed greater evidence of policy adoption than the comparison communities. There were limited but promising results in reducing alcohol service to heavy-drinking patrons, which may become more potent subsequent evaluations.

Early findings show that the project reduced alcohol-involved traffic crashes. A statistically significant reduction in such crashes was found overall, comparing experimental communities with their matched comparison communities. The introduction of special and highly visible drink and drive enforcement—with new equipment and special training—produced the significant reduction. The table above shows the results. These results bear heart-wrenching value for Wyoming, because of our high rates of traffic crashes involving alcohol. In a number of state meetings we heard plainly painful stories from families who lost loved ones to such crashes, and they begged for action in our state. The Community Prevention Trials data show that we can give a gift of life.

What is the cost-effectiveness of the Community Prevention Trials? The answer to that question is first tempered by the fact that scientists have only recently studied the cost-effectiveness issues of prevention in general. We reproduce here the comments of Dr. Harold Holder, the originator of the community trials project. He wraps all of the costs into his estimates:

As an example of the potential cost effectiveness of such a policy-based community trial, the following illustration is provided. Approximately $90,000 U.S. each year was the cost of local prevention staff in each of the three experimental communities [which had about 100,000 people each]. A replication project would need three to four years in one local community at a cost of between $270,000 to $360,000 U.S. in total. In the Community Trials Project, the local community staff cost over four years was a total of $1,080,000 U.S. ($360,000 U.S. times three experimental communities). This included the staff cost for local implementation of all components. At this time, the distal effects of only the drinking and driving component are known, because of its early implementation. Across all communities over the first four years of the project, the net reduction in alcohol-involved traffic crashes was 78 crashes (Vows* et al.*, 1997).

If one uses an average cost of $39,905 U.S. per crash (an estimate based upon medical, legal, and insurance costs as well as lost wages during rehabilitation but not lost productive years due to early death), then the savings from just these 78 fewer alcohol-involved traffic crashes in the three experimental communities relative to their matched comparison communities was $3,112,590 U.S. ($39,905 U.S. per crash times 78 crashes).

---

with men. The work by Holder and others suggests that the community context might be affected.

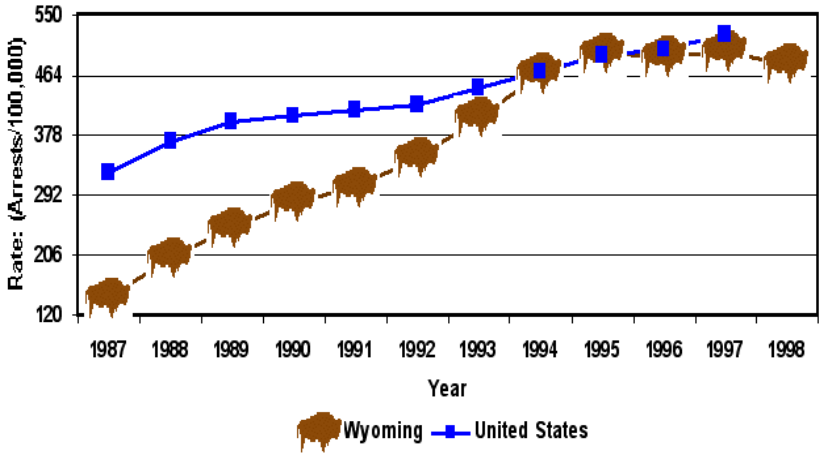
It should be carefully noted that this is a simplistic cost effectiveness analysis…

If we subtract the cost of the intervention across all three communities (noting that this implementation cost includes the costs of the other prevention components whose effects are not yet accounted for), then we get a net total savings of $2,032,590 U.S. Thus, every U.S. dollar invested in this Community Trials Project returns $2.88 U.S. in savings, just from reduced traffic crashes alone. Again, this is a very simple example of cost effectiveness analysis. A more complete analysis would require more complex adjustments and calculations.

Since the 1998 paper discussed above, Dr. Holder and his colleagues have produced more results. Specifically, the trial presented clear evidence that environmental changes can reduce alcohol-involved traffic crashes and other acute trauma. There was a 13% decline in amounts consumed per drinking occasion, a 58% decline in driving when having had too much to drink, and a 64% decline in driving when over the legal limit in the intervention communities relative to the comparison communities. These changes produced a 10% reduction in nighttime injury crashes and a 6% reduction in crashes in which the driver had been drinking. Across the three intervention communities, the savings from the interventions were 56 nighttime injuries and 67 driving after drinking crashes per 100,000 adult population per year. A 43% reduction in assaults directly observed in emergency departments (EDs) between two matched sites, and a 2% reduction in all ED assault cases observed using hospital discharge records between all matched sites, were obtained (a reduction of 68 assault cases per 100,000 adult population per year between the two matched sites).

Are these results relevant to Wyoming? Absolutely. What is particularly useful is the additional finding about reductions in assaults, which have been rapidly rising in Wyoming and which are highly related to the prediction of long-term substance abuse and arrests involving incarceration. The figure below shows the rise in assaults in Wyoming over time, which has risen substantially. We did not used to be a state where people intentionally sought to hurt one another, compared to the rest of the country.

Figure 39: All Assaults in Wyoming Compared to the US



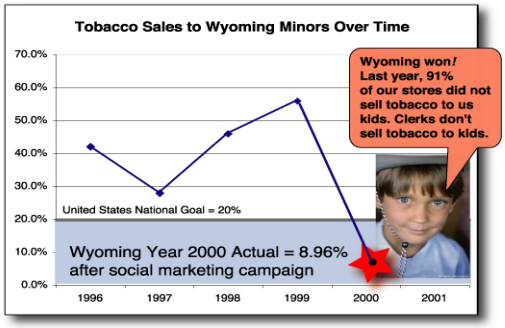
Wyoming is the prime state to apply the spectacular results of the Community Prevention Trials. The First Lady, Mrs. Geringer, has taken a strong lead on underage drinking with the First Ladies' Initiative, and will be a keynote speaker at that national meeting of the Governors' Spouses event.

Wyoming Recommendation:
The Department of Health shall develop and implement a work plan to integrate the successful models of community campaigns and mobilizations for tobacco, alcohol, and other drugs for a field test in Wyoming using appropriate scientific controls.

Campaigns to Reduce Availability

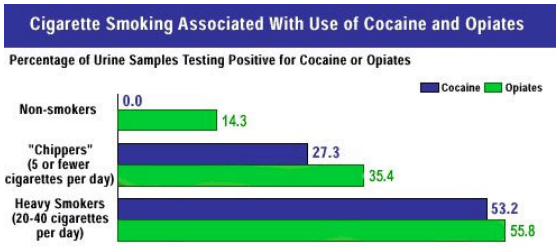
Historically, Wyoming has had high rates of sales to minors of tobacco. This issue accounts for our own pattern of substance abuse, based on the analysis of Wyoming specific data. In 2000, Wyoming became the first state to apply the Reward and Reminder campaign to reducing tobacco sales to minors. The results were spectacular, as shown in figure below. Wyoming recorded the largest single drop in tobacco sales to minors ever reported by a state.

Figure 40: Tobacco Sales to Minors in Wyoming



Wyoming must continue and support its national leadership in applying the best science to reducing access to tobacco by minors. Why is this important to our state? Emerging research is showing that early tobacco use somehow "wires" or "primes" the brain for terrible drugs like cocaine and meth, which are epidemic among our young people, compared to other states. The figure below is from the National Institute on Drug Abuse, showing the links between tobacco and cocaine.

Figure 41: Tobacco use and cocaine use



Wyoming Recommendation:
The Department of Health shall expand and continue the Reward and Reminder campaign for tobacco under the auspices of the Tobacco Use Prevention Blueprint and test the application of the same strategies for alcohol.

Alternative Education

Various studies and testimony by citizens suggest that students in alternative education bear a substantially elevated risk for substance abuse. Paradoxically, most such sites do not provide services to help such students cease or reduce their use of addictive substances. For example, one recent study indicated that 90.7% of the adolescents in alternative school met the criteria of drug abusers, or chemically

dependent or had a deferred diagnosis due to defensiveness.[132] About 1/3 of the alternative sample of alternative students may be poly-drug users.[133] It will be necessary for Wyoming to construct and evaluate an alternative education model that reduces multi-problem behavior inclusive of substance abuse, since there is very little solid science on effective practice.[134] A good place to begin with a model for Wyoming is to use the work of Dr. Denise Gottfredsen, who has written on the subject and actually conducted relevant research.[135] She has also participated in the Wyoming Think Tank. Our interviews during the process of HB 83 make it clear that this population ought to be a high priority group, though they are relatively small in numbers. Some evidence suggests that young people in alternative settings in rural areas are different from their normative peers in the need for high sensation seeking, which would clearly argue against attempting a "get tough" approach.[136]

Wyoming Recommendation:
The Departments of Health, Education, and Family Services shall collaborate on testing an intervention designed at alternative school youth to reduce their involvement in multi-problem behaviors. The effort shall use acceptable standards of experimental or quasi-experimental designs.

Pregnant Mothers

It has been well established that reducing the use of alcohol, tobacco, and drugs has profound, positive consequence for children and society. Wyoming's extremely high rate of use of ATOD by women during pregnancy begs for urgent intervention.

The prospects of building residential treatment for so many Wyoming women

who are using alcohol, tobacco, and drugs during pregnancy is daunting in the long-term, let alone the short term. There is likely to be a sense that we cannot do much about the problem. In the preparation of this report, the authors reviewed the scientific progress on the issue of pregnant mothers' use of substances and the idea of harm reduction as an urgent public safety and health model. We found evidence to support the idea of some low-intensive, high-value harm-reduction strategies in the scientific literature that could be applied immediately.

Brief Doctor's Office Interventions. A recent article reported 48-month follow-

up data from a sub-analysis of a trial for early alcohol treatment (Project TrEAT) focused on women of childbearing age.[137] Project TrEAT was conducted in the offices of 64 primary care, community-based physicians from 10 Wisconsin counties. Of 5979 female patients ages 18 to 40, who were screened for problem drinking, 205 were randomized into an experimental group (n = 103) or control group (n = 102). The intervention consisted of two 15 min., physician-delivered counseling visits that included advice, education, and contracting by using a scripted workbook. A total of 174 subjects (85%) completed the 48-month follow-up procedures. At baseline, no significant differences were found between the experimental and control groups for alcohol use, age, socioeconomic status, smoking, depression or anxiety, conduct disorder, lifetime drug use, or health care utilization. The experimental intervention however produced a significant treatment effect in reducing both 7-day alcohol use and binge drinking episodes over the 48 month follow-up period. Women in the experimental group who became pregnant during the follow-up period had the most dramatic decreases in alcohol use. A logistic regression model based on a 20% or greater reduction in drinking found an odds ratio of 1.93 in the sample exposed to physician intervention. This trial provides the first direct evidence that brief intervention is associated with sustained reductions in alcohol consumption by women of childbearing age. The results have enormous implications for the Wyoming health care system.

Outpatient Treatment. Neonatal outcome is significantly improved for infants born to substance abusers who receive outpatient, substance abuse treatment concurrent with prenatal care compared with infants born to substance abusers who enter treatment postpartum.[138]

The small number of outcome studies suggests that success (as measured by abstinence) is associated with retention. Retention is facilitated by the provision of support services, such as childcare, parenting classes, and vocational training. There is no clear empirical basis for concluding that one type of treatment (for example, residential treatment) is more effective than another for helping pregnant mothers who are abusing substances.[139]

Wyoming Recommendation:
The Department of Health should rapidly undertake a series of trials to test different models' efforts to reduce substance abuse during pregnancy, which would take a harm-reduction orientation.

Adult Role Modeling Intervention to reduce Alcohol Use by Teens

Wyoming, like many states, has specific issues of adults acting in adverse ways, modeling or directly supporting substance use by teens. One of the pernicious ways adults harm teens is by giving teens tobacco, alcohol, or drugs. Many adults do not see anything wrong or against Wyoming norms in giving teens tobacco or alcohol. Indeed, we heard testimony from both teens and adults in communities that some adults see no harm,

possibly even benefits, by giving teens alcohol or tobacco—often under the misguided view that this teaches "responsible" use. We can find no data to support this idea, and we find compelling arguments against the idea:

⇒ Emerging research from the National Institute on Drug Abuse shows that the child or adolescent brain is more vulnerable to both tobacco and alcohol, which was not scientifically known before.

⇒ Perceived accessibility is an extremely powerful predictor in Wyoming of substance abuse by teens (not just youthful testing the limits). Much of that perceived access to alcohol and tobacco, based on testimony from Wyoming youth and young adults.

Wyoming Recommendation:
The Department of Health, acting in collaboration with other public-private partners, needs to undertake a public campaign to change the behavior of young adults and adults providing substances to kids.

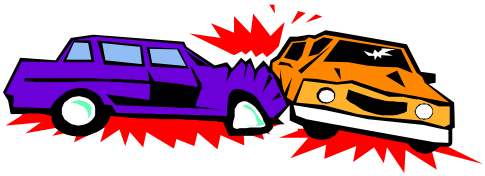
⇒ Some long-term follow-up intervention studies have been conducted showing it is possible to reduce youth access to tobacco, alcohol, and other drugs through interventions aimed at adults as role models in the community —parents, young adults, etc.[140] This strategy is a necessary component of our Wyoming prevention. Part of our social marketing campaign promotes two key concepts:

- "In Wyoming, we don't sell tobacco or alcohol to our kids."
- "In Wyoming, we don't give tobacco or alcohol to our kids."

Both adults and youth were adamant in their testimony. This type of effort to curb adults providing tobacco and alcohol cannot be a simple flyer, but must be deeply embedded in virtually every public event in Wyoming such as Frontier Days, University of Wyoming athletic events, rodeos, county fairs, and much more. Additionally, many witnesses brought up points that are well documented in the scientific literature:

⇒ Drive-up windows for liquor and tobacco are essentially freeway entrance ramps for youth access involving young adults and others who purchase for minors. There are no recorded homicides, vehicular fatalities, serious crimes against persons or property or other threats to public health and safety as a result of requiring that adults exit their cars in order to purchase alcohol and tobacco. There are Wyoming cases of youth who did all of these things as a result of purchases of illegal products from drive-up windows. As a part of a comprehensive strategy to reduce the serious public safety and health repercussions of alcohol, tobacco, and other drugs in Wyoming, the simple act of closing the drive-up liquor windows will help.[141] Data from the experience in New Mexico suggests that such action will assist the public safety of Wyoming.

⇒ Reducing the blood level alcohol of adults to .08 has now been pretty convincingly shown to reduce adult traffic fatalities and possibly alcohol use disorders.[142] The impact of the .08 BAC can be seen below. Related to .08 BAC is the presumption of a ZERO BAC (functionally cannot be measured reliably below .02 presently) among underage drivers. We suggest that special interventions be designed, tested, and refined for drivers who are below age 21 to participate in a mandatory protocol if apprehended while driving or riding in a car (with a underage driver who is using) with any measurable level of blood alcohol. This recommendation is based on the fact that a recent review of the effectiveness of low blood alcohol concentration laws on younger drivers shows that a focus on zero BAC in minors versus .04 to .06% BAC in



minors results in an average reduction of 17% fewer fatalities versus 7% fatality reduction.[143] This process could well enhance the key predictor variable of causing other youth to put positive peer pressure on each other NOT to use, which has been found to be a key predictor in Wyoming adolescents as a protective factor against substance abuse (not just youthful experimentation).

Lowering the legal per se blood alcohol limits has strong benefits if the following conditions are met, based on internationally studies:[144]

⇒ Strong and continued public education campaign.

⇒ Focus on general deterrence with vigorous enforcement.

Screening in Multiple Contexts

The harm from substance abuse can be reduced via standardized screening processes. Medical services, emergency rooms, physician's office, dental offices, and other community settings can occasion interventions for children, teens, and adults.

David Lewis, Professor of Medicine and Community Health, Brown University, insists alcohol screening must become routine, in all medical settings:

> ***Routinely means that everybody should be screened for alcohol and other substance problems. In fact, I would say that it's a vital sign, just like the other vital signs that are taken…Making screenings part of the vitals signs normalizes it. We'll take your blood pressure, we're going to check your blood sugar, and we're going to ask you how much alcohol you use. It's a health effect. It's not a moral issue; you're not a bad person. We're concerned about your health and people who use medication, people we have to treat with antibiotics or painkillers, we need to be concerned with their alcohol or drug use for health reasons. It's nice to re-conceptualize***

drinking** [or other drug use]◇ **as a medical vital sign issue.

Dr. Lewis is also Project Director, Physician Leadership on National Drug Policy. He says physicians must become leaders and advocates in this public health crisis:

> "We need more routine screening and intervention. We need a major expansion of the treatment system. There is absolutely no question in my mind that one of the hallmarks of quality of care is going to be clinical preventive services and that's going to include routine screening and intervention for alcohol, tobacco, and other drug problems in all primary care settings."

A recent publication in the American Family Physician summarizes some key reasons to support alcohol and other drug screening as standard[145] in Wyoming.

> ***Preventive efforts on the part of family physicians are important because: (1) alcohol-related problems are prevalent in patients who visit family practices; (2) heavy alcohol use contributes to many serious health and social problems; and (3) physicians can successfully influence drinking behaviors. In the United States, the one-year prevalence of alcohol-use disorders, including alcohol abuse and alcohol dependence, is about 7.4 percent in the adult population. In patients who visit family practices, the prevalence is higher. One study of 17 primary care practices found a 16.5 percent prevalence of "problem drinkers, and another study found a 19.9 percent prevalence of alcohol-use disorders among male patients.***

We recommend that the Department of Health, Department of Family Services, and Workforce Development promulgate policies and procedures for screening of drugs, alcohol, and tobacco. Further, we recommend that the Department of Health issue guidelines for the reimbursement to licensed health or mental health professionals for screening services under Medicaid, coupled with guidelines and support for brief interventions and others delivered in doctor's or by doctor's offices or affiliates for early intervention and cessation efforts.

Screening for substance use or abuse is not just an adult issue. It is clearly a child and adolescent issue. In consistent testimony, it was clear that young people were using drugs, alcohol, and tobacco without any adult recognition or intervention well before their use exploded into life-derailing events. The entire process of HB 83 is to build up the structure for both treatment and intervention services. The earlier young people, who have difficulties with use of tobacco, alcohol, and other drugs, get some cessation or early intervention services, the better their prognosis and that of the public's safety and health.

Therefore, it is recommended that the Legislature instruct the Department of Health, the Department of Education, and the Department of Family Services to develop and promulgate screening

◇ Added to clarify intent from other comments.

procedures with defensible scientific validity and prescriptive utility for alcohol, tobacco, and other drug risks, prevention, intervention, and treatment for children and youth in the following contexts:

⇒ Medicaid payments for well-child visits and consultation on child behavior problems.

⇒ 504 and Individualized Education Plans (IEPs) under the auspices of the IDEA legislation.

⇒ Referrals for counseling or psychiatric services within school settings.

⇒ Child protective situations.

⇒ Situations in which medical professionals suspect that a mother may have been using alcohol, tobacco, and/or other drugs during pregnancy.

Wyoming Recommendation:
The various departments of the state need to adopt standardized practices of screening for substance abuse and/or the problems that predict substance abuse, and couple such screening with brief, motivational interventions when possible.

Adult Mental Health Issues

Various mental illnesses elevate risk of substance abuse in adults and children under the care of such adults. By preventing the mental illness or reducing its severity or early intervention, there are reasons to believe substance abuse, misuse, and use can be reduced. Generally speaking, most people believe such mental health interventions or prevention strategies necessarily involve the use of a licensed professional. That is not necessarily the case, and a variety of findings have positive implications for Wyoming in the context of the HB 83 mandate.

Low-Cost Depression Interventions

Depression among mothers of minor children elevates the risk three times that the children will develop lifetime substance abuse or conduct disorders.[146] The symptoms of depression can be relieved by reading and applying lessons from special constructed books (bibliotherapeutic books), which have been well tested in some randomized control group studies. The effect sizes of bibliotherapy interventions are as high as +.5, with no difference between therapist-administered treatments.[147] One meta-analysis review reports bibliotherapy to be as beneficial as group or individual therapy.[148] One study compared different books for older adults,[149] *Feeling Good—The New Mood Therapy*, which is based on a cognitive model, with the book *Control Your Depression*, which is based on a behavioral model.[150] Positive clinical results held true for both books over two years, compared to a control group. The positive impact of the general adult population also held up over a three-year study.[151] The books tested have been well grounded in theory, and represent a very inexpensive way to reduce the prevalence rates of depression symptoms—about $100 per case including a professional and the purchase price of a book. While these books might not work for everyone, widespread use of them in Wyoming could

save the state money and provide an open door to treatment without the use of pharmaceuticals or intensive interventions if used by physicals, workforce development agencies, and other community settings.

Low cost interventions exist for other disorders related to migration to substance abuse or serious health consequences:[152]

⇒ Reduction of Anxiety Disorders using self-help or minimal help strategies from scientific research.

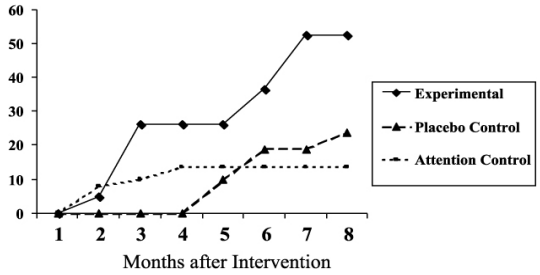
⇒ Cessation of Smoking using self-help coupled with minimal help or nicotine replacement therapy.

⇒ Motivational Interventions to change behavior using simple strategies tested in doctor's offices.

⇒ A simple strategy for use in primary care offices or mental-health settings can radically improve pain management, depression, alcohol consumption, and re-employment by writing 3-4 times on emotional topics for approximately 20-30 minutes, based on well-replicated research.[153] The Figure below shows the impact of the protocol on re-employment, for example, in a controlled study:

Figure 42: Effect of Emotional Writing on Re-Employment

from Spera, Buhrfeind, & Pennebaker (1994)



Wyoming Recommendation:

We recommend that the Department of Health undertake the promotion of these low-cost interventions as a part of the comprehensive strategy for substance abuse reduction. These strategies will require some issues of policy and regulations, as well as direct funding of the simple procedures themselves (e.g., buying volume copies of the materials, payment of one-day shipping to identified clients, etc.).

Is Prevention Just an Issue of Money?

Some have alleged that *"we just need to* spend more money on prevention, and that EVERY dollar spent on prevention returns $7.00 in results." As an old song lyric says, "It ain't necessarily so."[cc]

Consider the example from the Centers for Substance Abuse Prevention (CSAP), which has pumped some $9 million dollars in prevention money into 27 states using a particular model of giving out 85% of the funds to local communities. According to officials at CSAP, these grants have typically not produced significant

[cc] This figure has become a near mantra in prevention documents, funding appeals and testimony before governmental entities. The data derive from some very specific science-based programs with long-term follow up, not from prevention expenditures or programs of any nature. It is the equivalent of saying every dollar spent on an auto mechanic saves you seven dollars in the future. As most adults know from personal experience with cars, some mechanics are not so good and some cars should be sold off or junked.

reductions substance use, misuse, or abuse in the recipient states.

DARE is another example, having received over a billion dollars in federal funding, not counting funds from state governments, drug seizure, and local funds. Multiple, carefully controlled studies have typically revealed very weak or no effects on prevention. One meta-analysis conducted by the highly-regarded Research Triangle Institute, for example, reports:[154] The DARE effect size for drug use behavior ranged from .00 to .11 across the 8 studies; the weighted mean for drug use across studies was .06. For all outcomes considered, the DARE effect size means were substantially smaller than those of programs emphasizing social and general competencies and using interactive teaching strategies. DARE's short-term effectiveness for reducing or preventing drug use behavior is small and is less than for interactive prevention programs.

Why might these and some other examples of high-infusion of dollars fail to prevent substance abuse in any cost-effective way? There are many reasons, a few of which follow:

⇒ The theory of substance abuse may have been dead wrong (e.g., "low self-esteem causes drug use.") or weak will (e.g. perceived health consequences).

⇒ Implementation and follow through may have been mostly lip service (now well documented in some studies).

⇒ The organizational design for training, support, and other logistics may have been inappropriate.

⇒ The wrong kids got the wrong intervention (e.g., a prevention program aimed at stopping kids from even trying drugs is singularly ineffective if not hazardous for kids who are already using tobacco, alcohol, or other drugs; they need cessation approaches and reduced access).

The development of a Wyoming specific plan to reduce substance abuse must make use of these cautions.

Other Adult Prevention or Intervention Issues

Wyoming has many opportunities to use prevention and intervention thinking as doors for treatment with adults, protecting the current and future generations. This part of the plan reviews some recommendations for adults.

Prescription Drug Abuse

In the course of the HB 83 study, the authors learned more about the emergence of abuse of prescription drugs. We heard testimony of how some middle age women had died from the combined effects of alcohol and prescription drugs. We also learned about the emergence of serious fraud to obtain drugs like Oxycontin, which are premier, high- quality drugs to abuse. This particular drug is fast becoming a scourge in America—particularly rural America. The future of pharmaceutics promises that we will likely see more and more drugs that have the potential to be abused in unusual ways.

Lacking a computerized registry, the Wyoming Pharmacy Board was able to provide limited data on use of controlled substances in our state. It is clear from the data in 16 of the state's largest pharmacies that there is prescription fraud happening, and the data only tapped the proverbial tip of the iceberg. Prescription fraud is something that cuts across many levels of society. Well-to-do executives and health professionals to welfare recipients obtain multiple prescriptions under different names, go doctor shopping, create fake prescriptions, pretend to be a doctor's office, and more. The only practical way to stop these behaviors that have real life-threatening impact is for a computerized registry, which can look for patterns. Wyoming does not have such a system, and must simply depend on the memory or hunches of people in our communities. For a relatively modest amount of money, Wyoming can implement a state of the art computer system for monitoring controlled substances. It is strongly recommended that we do so at the earliest time.

Wyoming Recommendation:
The Legislature should urgently direct and appropriate the funds for the Pharmacy Board to implement state-of-the-art computerized and related protocols for the management of scheduled drugs and reduction of prescription fraud.

In addition to this particular effort, Wyoming is unique in having the capacity to implement a warning system inside of its Medicaid system. Wyoming is significantly upgrading its computer system for Medicaid management, and has the decision software that would allow analyzing patient Medicaid records to look for patterns that would predict danger of prescription substance abuse or misuse or possible adverse interactions. Interviews with pharmaceutical company representatives have suggested that an analysis of the Medicaid records could reveal patients with difficulties or high risk and, perhaps, practices that may be engaged in inappropriate prescriptions of controlled substances.

Wyoming Recommendation:
It is recommendedthat additional staffing resources be allocated to bring on board a thorough implementation of the Medicaid software analyses of potential prescription drug abuse or interactions that can result in serious adverse consequences by drug interactions.

Cessation

Tobacco cessation can dramatically improve the public's health, reduce harm to vulnerable individuals such as infants and children, and save millions of dollars as a result of harm reduction.[dd] The general public often believes that cessation is the same process for all individuals. Such a view is not supported by extensive medical research. There are emerging protocol differences for cessation strategies, which may or may not include medications. The Centers for Disease Control database contains evidence for differentiated protocols that include:

- Adult males
- Adult females
- Pregnant women
- Mothers with children under age 9
- Adolescent males
- Adolescent females
- Poly-substance abuse use individuals
- Youth with mental-health disorders (e.g., attention-deficit hyperactivity disorder)[155]
- Adults with mental-health disorders
- Individuals with chronic tobacco-related diseases
- Homeless individuals
- Chewing tobacco

These differentiated strategies require careful planning, support, and training for both health professionals and community leaders. They may even be delivered by non-traditional sources, such as church groups, with positive effects.[156] Physicians in rural areas vary their advice to quit smoking, depending on presenting characteristics of the tobacco user; they need interventions to improve their success in getting patients to quit.[157] A growing body of evidence suggests that computer-assisted, customized cessation programs are quite effective.[158] Such strategies are well suited for the conditions of Wyoming since such services can be delivered via the Internet. Whatever protocols are used, it is vital that data be kept on their effects so that protocols can be improved and fine-tuned over time.

Wyoming Recommendation:
Consistent with the Tobacco Use Prevention Blueprint adopted into law by the State Legislature, we recommend that the Legislature instruct the Department of Health to undertake a comprehensive tobacco cessation program, using both Tobacco Settlement funds and general funds. This authorization would include of free medical adjunctive supplies such as nicotine patches, nasal spray, or other such systems as deemed medically useful. by the Director.

[dd] See the Wyoming Tobacco Use Prevention Blueprint for fuller treatment of the cost and public health issues, Wyoming Department of Health, Substance Abuse Division

Driving Under the Influence

Driving drunk or under the influence is not a defensible personal liberty. The consequences to the public safety and health, not to mention the pain of loss to innocent victims, exact a heavy toll in the United States and Wyoming.

Wyoming Recommendation

We recommend that judges, prosecutors, and others as appropriate use or require new systems of assuring compliance with the DUI law as certified by the Director of Health. Devices may include:

- Patches for detecting drug use
- Ignition interlock devices

Other systems with scientific validity. If necessary the DUI laws may need to be amended so that judges and prosecutors may introduce data from such systems as violation of the appropriate laws.

Some Specific Legislative or Policy Issues

In the course of preparing this report, a number policy or legislative details emerged that merit mentioning to improve prevention and intervention of substance abuse. These are action issues:

⇒ The state of Wyoming has made a rather significant political commitment to youth development. The idea is rather simple: When young people are treated and seen as community assets, their rates of problem behavior goes down, and their rates of success in multiple domains increase. It would be useful as symbol and substance for the state to appoint youth representatives to many committees or activities of state government. It is fundamentally a no-cost strategy, but a high-powered signal that we value our young people.

⇒ A host of details, regulations and policies may represent barriers to effective prevention in Wyoming. These rules and policies need to be examined:

- FERPA (Family Educational Records and Papers Act) technically bare many of the interventions and strategies that are actually proven to reduce the types of issues that are very problematic—school failure, antisocial behavior, and substance abuse. For example, in good quality research, the square footage of student work on the walls is associated with reduced risk of problem behavior in the schools.

Teachers in Wyoming have been told that it is illegal to put up student work, and this has made the front page of the Cheyenne newspaper. In a similar vein, public recognition of improved student academics or behavior would be a violation of the law, yet such recognition is absolutely a key for avoiding the problems that people don't want in their children's records.

Several interventions recommended in this plan (e.g., the Good Behavior Game and Class-wide Peer Tutoring) are technically illegal under FERPA—yet these very interventions are hailed as "best practices" by any number of federal and private sources. There several courses of action to remedy this problem:

a) for the Wyoming Department of Education to issue some clarifying regulations, which is permitted by the federal government; or
b) our Congressional delegation to introduce amendments to these laws to remedy these issues;
c) join the legal action before the US Supreme Court; and
d) all of the above.

- Many schools and educational organizations tell adults NEVER to touch children, for fear of charges of sexual abuse. This rule is probably harming Wyoming children rather than helping them. An introductory course in Psychology quickly talks about the role of touch in the developmental process, showing the poor, unfortunate monkeys raised by Harry Harlow on a wire mommy monkey, or orphans, or neonates in intensive care. The lesson from the research is always that primates and humans need touch to survive and develop. Indeed, randomized controlled studies have shown that therapeutic massage reduces rage, acting out, and deviant behavior in hospitalized adolescents. Touch changes the neurochemistry of the brain—most particularly, serotonin.[159] Abnormally low levels of serotonin dispose people to depression, aggression, and antisocial behavior. Touch tends to increase serotonin, elevating mood. Contingent touch by teachers improves behavior of children, particularly reducing[160] aggression. One of the "best practices" for multi-problem youth in terms for reducing substance abuse teaches warm, positive touch *in school*.[161] Self-massage reduces craving and smoking, by stimulating the serotongenic circuitry.[162] Presently large numbers of our students and staff at school are manipulating their levels of serotonin in other ways: 1) anti-depressant drugs, 2) tobacco smoke, and 3) illegal drugs like ecstasy. As scientists and therapists, we find it exceedingly odd not to do what humans are hard-wired to do (touch)—especially when the absence of serotonin increases sexually charged behavior.

Thus, it is time for the body politic to consider some remedy for a situation that is fostering precisely what people don't want, and increasing the very problems people are seeking to avoid. It would seem possible to craft some kind of legislation that stated quite simply that normal touch in the course of teaching is not evidence of sexual assault, and the procedures to define

more precisely what sexual advances might be in a school setting. This change might bring more joy back to teachers and students alike.

- School hours for community based programs need to be addressed. During testimony, we heard several times how community entities were blocked from providing obviously beneficial activities — (e.g., clubs, support groups, activities) —that are likely to reduce substance abuse. School buildings have been built with public funds, and it seems possible for the Legislature to craft legislation to enable citizens and groups to use our state buildings for prevention and intervention services.
- Some research exists suggesting school diet might affect behavior and neurology related to substance abuse and antisocial behavior. This is not the simple "sugar" theory. There are a few, serious studies that suggest that changes in the school lunch program in a very large number of schools (800 in one study) improve behavior, academics, and mood of the children.[163] One study shows a reduction in delinquent behavior.[164] Until very recently, scientists had little in the way to understand why the effect might occur. Recent advances of neurochemistry makes of the potential effects explainable. Attempts to replicate this work would seem desirable, but many schools and their employees charged with the lunch program cite a knot of rules and regulations that stop replication. The simplicity of the intervention and the emerging science of what alteration in diet might effect antisocial behavior and achievement (variables in the prediction of substance abuse) suggest that Wyoming would lose nothing by testing the idea experimentally, and it may take some regulatory or minor legislative action to enable the experiment.
- On several occasions, we heard testimony from teachers or administrators who feared lawsuits or job loss for referring a child to some kind of drug intervention or even reporting the matter to the police. At the same time, we heard many stories from the kids who were seriously abusing drugs, "no body ever said anything—and I had needle marks in my arms, and I was carrying around booze in a water bottle." It seems appropriate to amend the laws so that teachers cannot be fired for reporting suspected substance abuse or sued for reporting suspected use of substances by a minor the Department of Family Services or law enforcement.

Note: two other sections contain elements related to prevention and early intervention in this report. One section describes social marketing, and the other describes the data systems.

State Incentive Grant for 11-17 Year Olds

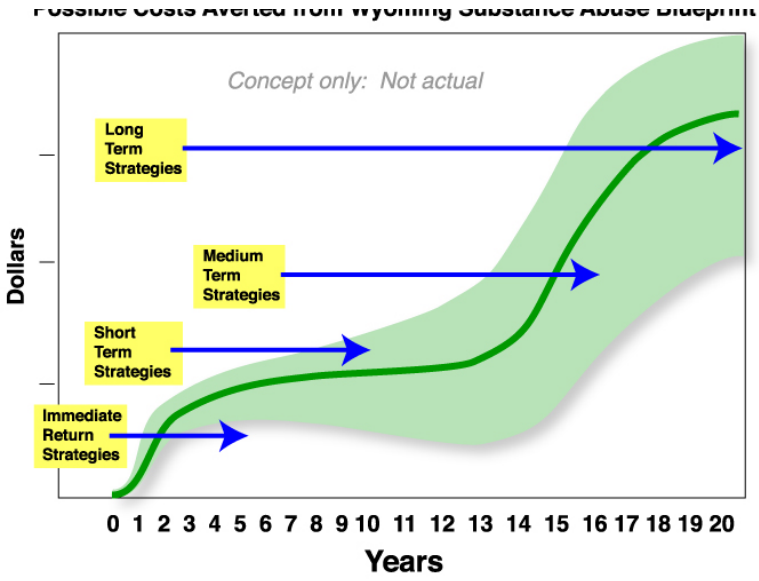
Just before the completion of this report, the Wyoming Substance Abuse Division received word that Wyoming has been selected to receive a $9,000,000 (over three years) federal substance abuse prevention state incentive grant. This grant was written in ways to mesh with the HB 83 Blueprint, and it will greatly help with some of the prevention startup costs. The state incentive grant will only cover strategies for 11-17 year old youth.

The State Incentive Grant will assist in the evaluation of elements of the prevention plan as well as provide funds for regional or community level interventions. The authors of this report caution readers that the grant is a one-time gift, and should not be thought of as providing operational funds. Rather the grant is extremely useful because so much is being planned at once in Wyoming, and it helps spread out the start up expenses.

Wyoming Wins: Costs Averted

In the actual implementation of the prevention, intervention, and control (access) strategies proposed in this blueprint, some effects will be quick—especially if the timing of which strategies are chosen wisely. These "wins" will help avert costs, which then help sustain the expenses that the state will have to bear for more expensive treatment interventions. Conceptually, the powerful strategies can avert costs and problems associated with substance abuse and related multi-problems. The figure below shows conceptual map of averting costs. A separate paper will be prepared before the 2002 Legislative Session about possible costs averted.

Figure 43: Possible Costs Averted From Wyoming's Blueprint



Treatment…for the treatment system.

The Wyoming Legislature will support reforms that establish high standards for treatment, that require the use of research based, state of the art prevention, early intervention and treatment methods, that evaluate outcomes, and produce results.

"What I learned…convinced me that in coerced treatment rests the elusive secret to effective rehab. That secret, however, lies not only in coercing addicts into programs, but in coercing the programs to do rehab right!"[165]

Lessons learned from New York subway cars

This plan asks the citizens of Wyoming to invest millions of dollars in a comprehensive plan to deliver substance abuse prevention, early intervention, and treatment services. This plan also asks that the legislature *not* appropriate a nickel unless they first implement the reforms necessary to assure themselves and others that the system in which they are investing the people's money will make a difference.

Those who work in this field will tell you that addictions therapy must be structured to hold the substance abuser accountable. Accountability is the by-word for this plan. We believe, however, that before policymakers can expect addicts to be held accountable, the treatment system itself must be accountable. A structure must be created that delivers state of the art, research-based treatment that meets client rather than program or practitioner needs. Treatment plans must include case management services that wrap addictions treatment around an effort to meet other significant client needs such as mental health care, housing, employment, education, and others. The services must provide sufficient continuing care to reasonably assure that all of the money and efforts expended in primary care is not wasted.

To use Malcolm Gladwell's metaphor of the New York subway cars from the book The Tipping Point, we must make the commitment not just to reclaim lives but also to make certain those lives stay reclaimed. Gladwell's book is about how social change takes place, what it takes to create a movement that results in positive social change. He discusses the New York subway system, recounting the days of the 70's and early 80's when New York was gripped by crime and the subway system a symbol of the deterioration of the city. The

subway cars were filthy, graffiti-riddled and crime-infested. A newly hired, innovative director, David Gunn, decided the way to clean up the system was to focus not on the crime but on the graffiti. Critics thought "worrying about graffiti at a time when the entire system was close to collapse seems as pointless as scrubbing the decks of the *Titanic as it headed for the icebergs."*[166]

But his approach worked. As the cars were cleaned up and restored, good customers returned, paying fares and occupying reclaimed subway cars formerly filled by criminals and trouble makers. The key, though, was not simply restoring the cars.

> ***"Gunn made it a rule that there would be no retreat, that once a car was 'reclaimed' it should never be allowed to be vandalized again."***[167]

That is the commitment policymakers are asked to make to Wyoming families. **Once reclaimed, we will do what it takes, commit the necessary human and financial resources, to make certain lives remain 'reclaimed.'** It is not just a human issue with moral implications. It is an issue of the responsible use of taxpayer dollars…that also has moral implications. There was a time when we agreed that whether or not treatment worked depended almost entirely on the addict. We know more now. We know better now. An explosion in scientific study over the last decade has produced significant results in the form of research-based practices that greatly improve the chances of successful treatment even when the addict does not initially want it. *Substance abuse treatment and prevention programs are far too expensive to continue to use approaches that have traditionally failed.*

None of this should be read as criticism of Wyoming treatment providers. Those who have undertaken this comprehensive study have universally concluded providers are doing remarkable work with the tools and the resources they have. However, those tools and resources have been far too limited to expect the highest level of results.

Findings

After conducting this inquiry, the Substance Abuse Division has made the following findings:

⇒ Wyoming addictions treatment, early intervention and prevention services have been historically under-funded.

⇒ Under-funding results in only token services available in small counties and an inability to deliver integrated services in every county on a collaborative basis, resulting in an inability of the system to provide a continuum of care necessary for effective treatment.

⇒ Under-funding prevents the provision of the ongoing education and training necessary to keep those working in the system up to date on state of the art programs.

⇒ Under-funding creates barriers to recruiting and retaining not only sufficient numbers of staff but also the best and the brightest professionals that are needed to assure the continuing success of programs.

⇒ Under-funding produces a burden on providers who attempt to meet the growing demand for treatment.

⇒ There are significant gaps in services such as a near absence of intensive outpatient programs; residential care capacity is inadequate both in terms of the numbers of beds and the length of stay allowed; case management is inconsistent when available; transition programs are sporadic; drug testing is ineffective; waiting lists prevent people from getting into treatment at the most critical time: when they are ready and motivated.

⇒ Under-funding, however, is not the only problem. Simply putting more money in the system will not fix it and will not, of itself, result in more effective programs. Reforms are necessary to hold the system accountable to taxpayers for the investment they make. Other problems include:

⇒ There is no agreement on priority populations for dedication of resources.

⇒ There is a lack of agreement on the nature of addiction, leading to inconsistent approaches that often fail to use good science.

⇒ There are no research or science-based standards for treatment or the delivery of services.

⇒ Legislators who fund programs and judges and others who refer to them do not require programs to demonstrate effectiveness.

⇒ There is little monitoring of programs and virtually no effective outcome studies. In short, programs are not required to demonstrate that what they are doing actually works!

Exploding Myths about Drug Abuse

By Alan I. Leshner, Ph.D.

Director, National Institute on Drug Abuse

Myth: Drug addiction is voluntary behavior.

A person starts out as an occasional drug user, and that is a voluntary decision. But as times passes, something happens, and that person goes from being a *voluntary* drug user to being a *compulsive* drug user. Why? Because over time, continued use of addictive drugs changes your brain — at times in dramatic, toxic ways, at others in more subtle ways, but virtually always in ways that result in compulsive and even uncontrollable drug use.

Myth: More than anything else, drug addiction is a character flaw.

Drug addiction is a *brain disease*. Every type of drug of abuse has its own individual mechanism for changing how the brain functions. But regardless of which drug a person is addicted to, many of the effects it has on the brain are similar: they range from changes in the molecules and cells that make up the brain, to mood changes, to changes in memory processes and in such motor skills as walking and talking. And these changes have a huge influence on all aspects of a person's behavior. The drug becomes the single most powerful motivator in a drug abuser's existence. He or she will do almost *anything* for the drug. This comes about because drug use has changed the individual's brain and its functioning in critical ways.

Myth: You have to want drug treatment for it to be effective.

Virtually no one *wants* drug treatment. Two of the primary reasons people seek drug treatment are because the court ordered them to do so, or because loved ones urged them to seek treatment. Many scientific studies have shown convincingly that those who enter drug treatment programs in which they face "high pressure" to confront and attempt to surmount their addiction do comparatively better in treatment, *regardless* of the reason they sought treatment in the first place.

Myth: Treatment for drug addiction should be a one-shot deal.

Like many other illnesses, drug addiction typically is a chronic disorder. To be sure, some people can quit drug use "cold turkey," or they can quit after receiving treatment just one time at a rehabilitation facility. But most of those who abuse drugs require longer-term treatment and, in many instances, repeated treatments.

Myth: We should strive to find a "magic bullet" to treat all forms of drug abuse.

There is no "one size fits all" form of drug treatment, much less a magic bullet that suddenly will cure addiction. Different people have different drug abuse-related problems. And they respond very differently to similar forms of treatment, even when they're abusing the same drug. As a result, drug addicts need an array of treatments and services tailored to address their unique needs.

The current treatment system

To understand the recommended reforms, the reader need first become familiar with the existing system. Currently there is no unified structure. There are public and private programs providing substance abuse services, some of which were designed for that purpose and some of which were not, but of necessity have been brought into the mix. Wyoming is fortunate to have developed a community-based delivery system that has a statewide presence. It is important to note this system provides a substantial foundation from which the state can readily move toward a fully comprehensive system.

For the most part, addiction treatment services are delivered in Wyoming through the community mental health and substance abuse centers. The centers provide 16 prevention programs that operate in all 23 counties. This year they received $378,773 in state funds and $215,941 in federal dollars. Treatment is provided in 17 outpatient programs, four adult residential centers, and one adolescent residential center. Outpatient treatment programs received a total of $1,765,936 in state funds and $112,624 in federal monies while the residential programs were allotted $1,591,850 by the state and another $715,680 from Washington.

Residential capacity is severely limited. The four adult centers offer 48 beds. Two of these centers are 28-day programs (Cheyenne and Casper) while the other two, at Sheridan and Rock Springs, are long-term care facilities. The sole adolescent residential program is at Casper and has only 8 beds. Additionally there are 3 transitional programs. There is one at Cheyenne, another in Sheridan, and a third on the Wind River Reservation. Only two detoxification centers operate in the state, one at Cheyenne and the other in Riverton.

Funding for the state's substance abuse services has been historically poor. While the national average for combined treatment and prevention services is more than $11 per person, Wyoming expenditures are just $5.81.[168] It is, of course, important to note that these are not the only dollars the state spends on the problem of substance abuse. This problem requires considerable expenditures for child welfare and family assistance, health care, special education, prisons, jails and other corrections, and law enforcements efforts. A recent study of the impact of substance abuse on the state's budget concludes that while we spend just $5.81 per capita on treatment and prevention, Wyoming taxpayers cough up a whopping $240.06 per person for all of the other related costs![169]

Table 1 is a county-by-county analysis of current state and federal funding of both prevention and treatment dollars. Per capita expenditures for treatment range from a high of $4.54 in Laramie County to a low of $1.98 in Platte County. The average is just $3.58. Several counties receive so little, they are unable to afford even a single trained substance abuse therapist, much less the development of meaningful treatment program.

Table 6:County by County Analysis of Funding for Prevention/Treatment

SUMMARY BY COUNTY	Census 2000 Population	Current Federal and State Prevention	Current Prevention Per Capita	Current Federal and State Outpatient	Current Outpatient Per Capita	Current Federal and State Residential
Albany	32,014	$58,082	$1.81	$136,185	$4.25	
Big Horn	11,461	$14,674	$1.28	$43,049	$3.76	
Campbell	33,698	$36,294	$1.08	$101,656	$3.02	
Carbon	15,639	$28,455	$1.82	$64,622	$4.13	
Converse	12,052	$18,817	$1.56	$54,255	$4.50	
Crook	5,887	$7,449	$1.27	$21,291	$3.62	
Goshen	12,538	$11,915	$0.95	$27,935	$2.23	
Fremont	35,804	$48,207	$1.35	$111,227	$3.11	$200,750
Hot Springs	4,882	$6,921	$1.42	$20,000	$4.10	
Johnson	7,075	$8,595	$1.21	$24,566	$3.47	
Laramie	81,607	$71,485	$0.88	$370,704	$4.54	$551,150
Lincoln	14,573	$14,517	$1.00	$49,009	$3.36	
Natrona	66,533	$95,448	$1.43	$223,927	$3.37	$654,080
Niobrara	2,407	$3,854	$1.60	$11,113	$4.62	
Park	25,786	$24,601	$0.95	$76,148	$2.95	
Platte	8,807	$7,446	$0.85	$17,460	$1.98	
Sheridan	26,560	$33,235	$1.25	$94,991	$3.58	$551,150
Sweetwater	37,613	$50,130	$1.33	$136,283	$3.62	$350,400
Sublette	5,920	$5,116	$0.86	$20,000	$3.38	
Teton	18,251	$12,241	$0.67	$39,533	$2.17	
Uinta	19,742	$17,760	$0.90	$61,462	$3.11	
Washakie	8,289	$11,450	$1.38	$37,591	$4.54	
Weston	6,644	$8,022	$1.21	$22,929	$3.45	
	493,782	**$594,714**	**$1.20**	**$1,765,936**	**$3.58**	**$2,307,530**
Current Funding						
	State Prevention		$378,773	Total State	$3,623,935	
	Federal Prevention		$215,941	Total Federal	$1,044,245	
	State Outpatient		$1,653,312		$4,668,180	
	Federal Outpatient		$112,624			
	State Residential		$1,591,850			
	Federal Residential		$715,680			
		Total	$4,668,180			

Wyoming service providers have done well with what little they have been given. With insufficient funding, they have developed a statewide delivery system. In the latest fiscal year, their programs have served nearly 7500 people. For many of these people, no other services are available because of their low income. One-third has an annual income of $10,000 or less and the income of 55% is below $20,000. The mental health and substance abuse centers deserve to be applauded for doing so much with so little.

What they are able to do is supplemented by services from a variety of private sector providers, community corrections facilities, and facilities such as Cathedral Home in Laramie and St. Joseph's in Torrington. While all of these providers struggle to help those in need, inadequate funding, nevertheless, begets an inadequate system. The result is a disconnected, multi-layered system of service delivery. There are no unifying standards. *One of the primary goals of this plan is to create a unified system.*

Despite these commendable efforts there are many more people who need treatment for whom the current system fails to provide an open door. It is estimated that there are currently more than 30,000 Wyoming men and women in need of treatment for addictions to alcohol and other drugs.[170]

The waiting lists are long. Lengthy waiting lists pose a huge, unacceptable barrier to effective treatment. For the most part, addicts do not plan for treatment. Events take over. A spouse demands they get treatment or get out. An employer lays down an ultimatum. A health crisis gets their attention. Whatever the primary motivation, there may arrive a moment in time when motivation is so high the addict shows up at the treatment facility. If he or she is told, "We can help you…in a month or two," it is likely the motivation will be long faded away before his or her name surfaces to the top of the waiting list.

Nearly everyone involved in the system recognizes it is not meeting the need. There are considerable gaps in treatment and prevention efforts precluding many from receiving the treatment they need to successfully remain in recovery. A recent report from the U.S. Department of Health and Human Services summarized what the Department found to be the characteristics of an inadequate treatment system. The key problematic characteristics are:

⇒ Treatment planning that is program-based rather than client-centered;

⇒ Inconsistent use and application of available tools to match client needs to a treatment plan;

⇒ Insufficient financial resources.[171]

Each of these inadequacies is present in Wyoming's service delivery system. Funding limitations severely restrict the ability of the system to provide adequate residential and intensive outpatient programs. While all centers offer outpatient care, only a handful provides *intensive* outpatient care, which should be the mainstay of an effective delivery system.[172] A comprehensive system of care would begin by evaluating the needs of the client and have the ability to refer them to treatment that would meet those needs. Inadequately funded systems operate differently. They do not evaluate the necessary level of services because that would be a costly, academic exercise. Clients are generally placed in whatever program may exist because that is all there is, not necessarily because of a high level of confidence the program will meet the client's needs. The chart below a general picture of the programs in state-funded, substance abuse centers. One can readily see the gaps.

Wyoming's system is program-oriented rather than client-based. Not only are there few intensive outpatient programs, there are fewer women's programs - despite clear research showing that women, particularly women with children, require considerably different addiction treatment services than do men. There are no culturally specific programs outside the Wind River Reservation.

There are no system-wide treatment standards or means of determining priorities. There are no agreed-upon quality control or program evaluation systems. Data collection is inconsistent, rendering the data confusing and unhelpful in many instances. If Wyoming is serious about meeting the challenge of substance abuse*, we must commit ourselves to investing in the creation of a comprehensive treatment system.*

Describing a comprehensive system

The term "addiction" cannot be relied on to describe the impact of substance abuse on all abusers. The impact varies. Its impact depends on the person, his or her personal characteristics, environment, genetic makeup, and other factors including, of course, the addict's drug of choice. It follows logically that a comprehensive system must take those variables into account. For example, treating a male heroin addict or alcoholic who is being released from prison poses significantly different challenges from the treatment program required for a young mother who is addicted to methamphetamine or an elderly patient addicted to pain killers.

Failing to recognize and meet the varied needs dooms any program to limited success, at best. Treatment, however, can be successfully accomplished in a variety of settings. "Variety" is the operative word. The treatment modality may vary from person to person, as will the length of time required. But, policymakers can be assured that when treatment is done well in the context of a comprehensive system, the likelihood of success increases significantly. Then the investment we make will produce the intended result.

"The best treatment programs provide a combination of therapies and other services to meet the needs of the individual patient."[173]

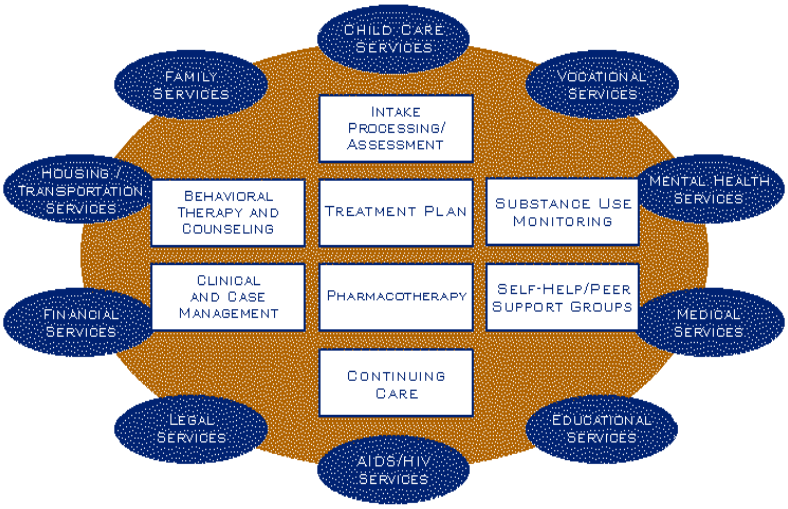
The National Institute on Drug Abuse, one of the nation's leading sources for reliable science-based addiction research, concludes that the components of a comprehensive drug abuse treatment system include a client- specific treatment plan developed after intake processing and assessments and supported closely by behavior therapy and counseling, substance abuse monitoring, self help and peer support groups, pharmacotherapy, continuing care, and clinical case management.

Figure 45 Directory of Substance Abuse Services

Provider	Addiction Severity Index (ASI)	Urinalysis Testing	Detox	Outpatient	Intensive Outpatient	Residential Youth	Youth Beds	Wait List?	Wait List Management	Residential Adult	Adult Beds	Wait List?	Wait List Management	Halfway House	Hospital Inpatient	CARF Certified	JC Ce
1) Big Horn County Counseling				X													
2) Campbell County Memorial Hospital			X	X	X										x		
3) Carbon County Counseling Center				X													
4) Central WY Counseling Center	X	X		X		X	8	X	X	X	13	X	X				
5) Curran-Seeley Foundation		X		X	X												
6) Eastern Wyoming Mental Health Center		X		X													
7) Fremont Counseling Service		X		X	X												
8) Hot Springs County Counseling	X			X													
9) Lincoln County Mental Health Assn.				X	X												
10) Mercer House-Casper				X													
11) Mountain Regional Services Inc. (Cornerstone Behavioral Health)		X		X	X											X	
12) Northern WY Mental Health Center				X													
13) Pathfinder		X		X	X												
14) Sho-Rap Alcohol Rehabilitation Center										X	10	x	1ST COME/SCREEN	X			
15) Southeast WY Mental Health Cen	X	X	X	X						X	12	x	x	X			
16) Southwest Counseling Services	X	X		X	X					X	39	x	x			X	
17) Sublette Community Counseling Services		X		X													
18) WYSTAR (Sheridan House)	X	X		X	X					X	70	x	x	X		X	
19) Washakie Mental Health Services				X													
20) West Park Hospital District (Cedar	X	X	X	X	X	X	6	x	1st come	X	14	x	1st come		X		

The elements of case management require that other needs of the addict also be met. These needs vary widely but usually include mental health, legal and health services, education, employment, and vocational, housing, financial, child care, and family services, among others. While it may seem to be financially expedient to short-change some or all of these elements, the fact is that it is "penny wise and pound foolish" to do so. Substance abuse treatment is not a program that produces a proportionate result. That is to say, making a 50% investment does not assure you of a 50% return. Short- changing the programs usually produces a far smaller result. At times, it even worsens the situation. Put simply, there are elements of a treatment program that, in their absence, render success unlikely or impossible.

Figure 46: Comprehensive Substance Abuse Services



Effective treatment reduces costs and avoids substantial expenditures. The huge cost increases Wyoming has experienced in child welfare, corrections, and special education, among others can be laid in large measure at the feet of an inadequate addictions treatment system. Nationally, it is estimated that more than 75% of those who need treatment do not get it.[175] In Wyoming that number is closer to 90%![176] These numbers stand against statistics that demonstrate that good addictions treatment saves considerable public and private resources.

Consider these numbers: a Center for Substance Abuse Treatment study concluded that one year following treatment, 40% of women addicts had reduced or eliminated entirely their reliance on welfare,[177] effective treatment reduces alcohol and other drug use and thus criminal activity by 40% to 60% among offenders,[178] the benefits of treatment outweighed the costs by a ratio of 4:1 in one California study.[179]

While the studies are unanimous in supporting treatment as crucial, the dilemma is found in creating and funding a comprehensive system. The

National Institute on Drug Abuse (NIDA) has published an important guide establishing research-based principles for addiction treatment. The diagram below depicts NIDA's recommendations for a comprehensive system.

The Gaps

Using the NIDA recommendations as a standard for delivering effective, comprehensive services, the gaps in the current Wyoming delivery system are glaring. Providers use inconsistent tools at intake resulting in a wide disparity of data collection. Few providers use research based tools such as the Addiction Severity Index to assess the client. Fewer still use appropriate tools such as the ASAM to determine the level of services required of the individual. Delivering effective services requires the intake process to result in reliable information.

While there is a paucity of residential capacity, perhaps a greater gap is the fact that there are far too few intensive outpatient programs. Those that do exist are inconsistent in the numbers of contact hours and fail frequently to provide the service when most needed, i.e. weekends.

Transitional services and case management are absent from many programs. One on one counseling is used disproportionately when stronger emphasis on group therapy and therapeutic community concepts would produce a more consistently successful outcome. Drug and alcohol testing is absent in many programs and where done, it is inconsistent and frequently fails to use effective protocols. The programs generally do not have enough access to pharmacological alternatives.

Filling the gaps is important to establishing an effective treatment system. Not all communities will be able to provide the full continuum of services and no one provider will be able to do so. Nor should they. Creating a comprehensive system should be the result of the broad integration of services. Many of the elements currently exist and if a community collaborates it will be able to piece together an effective system. In the process of collaboration, a community will be able to identify and avoid duplication while recognizing and filling any gaps.

There is one gap that must be filled at the state level. The most significant gap is the virtual absence of **treatment standards.** The legislature should authorize the promulgation of standards that must be followed by both private and public treatment providers in order to create not only a comprehensive system, but an accountable one!

Treatment Plan

At the center of any comprehensive system is the treatment plan. In order to develop a client-specific treatment plan, the therapist needs to conduct an addiction evaluation and assess the level of services that person may require. It is important that this information is collected *and that it be collected uniformly throughout the system.* The

quality of the care provided is contingent on the quality of the information gathered during the assessment. As clients move throughout the system, it is useful that different programs and therapists talk the same language. It is also critical to a meaningful analysis of the individual's progress as well as the evaluations of the system that this information be collected the same way regardless of the program administering the evaluation.

We recommend that the Legislature instruct the Departments of Corrections, Family Services, Education, and the Department of Health to jointly promulgate rules designating research-based evaluation tools that will be used in all programs funded by the state or to which courts refer patients for addiction treatment services. These instruments should be used to evaluate the severity of the person's addiction and to determine a recommended level of services. The provider should be required to use this information in developing a client specific treatment plan.

Treatment Standards

While the availability of services may vary from one community to another, the quality should not. Whatever services are provided must be delivered at a high level of quality if taxpayers are going to receive a good return on their investment. It is recommended that the Legislature authorize the establishment of research-based treatment standards. It is critical that the standards adopted be specifically applicable to Wyoming. There are differences to delivering substance abuse services in a rural state that must be recognized. Cultural differences must be honored. The standards must make sense in the context of the people, resources and special needs of our state.[180]

All state-funded providers and any other program to which a court may refer a person should be required to adhere to those standards. Standards should address the quality of the treatment programs plus make certain that high-priority populations are receiving treatment, and that when waiting lists are necessary, people on them receiving appropriate interventions.

Addiction treatment is a matter of significant interest to four large state agencies: the Departments of Health, Corrections, Family Services, and Education, It is recommended that the Legislature require treatment standards be determined jointly by these agencies, and that they be promulgated no later than September 30, 2002.

The Department of Health should be given the responsibility for certifying program compliance with the standards. It should further investigate the option of contracting with a private entity for quality assurance and accountability, including eligibility determination, authorizing services, case tracking, utilization reviews, enforcing state standards, and measuring outcomes. The state of Idaho contracts with a private firm for these services at a cost of about 10% of the funds appropriated for treatment services. A third party contract is probably preferable to increasing the

number of positions in the Department to provide this critical service.

What is an example of treatment standards? A standard might insist that providers use practices that have consistent replicated research showing superior, cost-effective results for the type of patients being treated. Research based practices meeting those standards ought to have:

⇒ Multiple replications in peer-reviewed research.

⇒ Have clear beneficial outcomes such as reduced relapse, reduced "dirty" drug screens, less involvement with the law, etc.

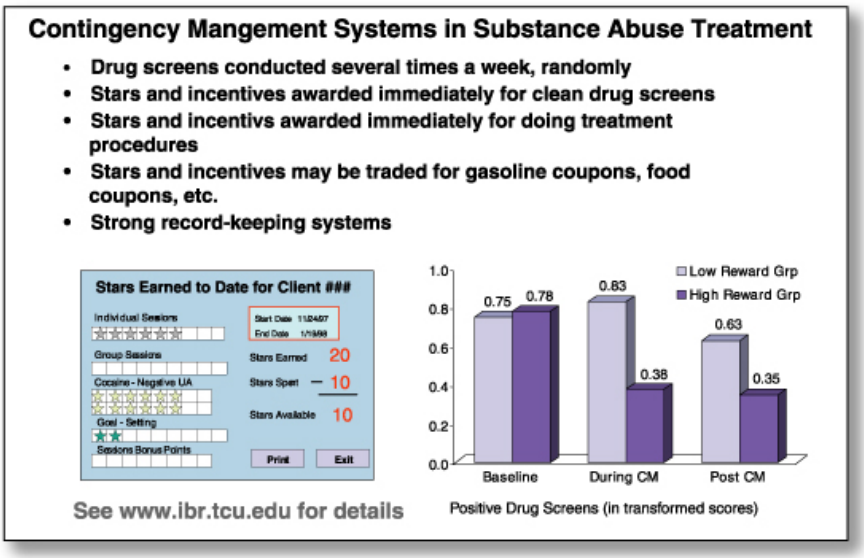
⇒ Produce better results per unit of time invested compared to other practices.

⇒ Have longer-term positive results.

Such procedures for treatment standards need not be expensive, hard to do or even burdensome. That does not mean that the procedures or treatment standards will not challenge "business as usual" or "that's the way we have always done it."

An example for a potential procedure to encouraged by treatment standards might be the use of contingency management protocols, since the evidence for contingency management has been replicated by multiple investigators, for multiple substance abuse related problems and has very cost effective results.[181] The contingency management protocols typically reduce the need for additional services substantially, save money and improve outcomes significantly. The figure below illustrates just one element of the contingency management research in treatment.

Figure 47: Contingency Management Procedures as Example of Science Based Treatment Standard



Case Management

The rural nature of Wyoming poses special challenges to the delivery of effective substance abuse services. with small communities and great separating distances, it is clear that there is a greater need to provide good case management as a part of delivering treatment.

Definition: Case Management

A method of providing services whereby the professional assesses the needs of the client and the client's family and arranges, coordinates, monitors, evaluates, and advocates for a package of multiple services to meet the specific client's complex needs.[182]

In the absence of effective case management, the investment Wyoming makes in treatment will produce significantly limited returns. The length of time a person remains engaged in treatment is the best predictor of success. Good case management has proved to be a strong motivator for keeping the addicted person engaged in his or her treatment program.

"Treatment may be more likely to succeed when a client's other problems are addressed concurrently with substance abuse.[183]

Case management can be viewed as having five basic functions:

⇒ Identification of the client's needs (and strengths),

⇒ assessment of those needs (and strengths),

⇒ service and treatment planning,

⇒ linking and referring clients to proper resources, and

⇒ monitoring cases to insure that services are not only used, but used properly.[184]

At current funding levels of an average of $3.58 per capita, effective case management can not be expected. One of the first casualties of an under-funded treatment system is case management. It is true that even now some form of "case management" usually occurs, but on a limited, disconnected basis. Referrals may be made to other services. Therapists try to connect clients with housing, educational, medical or other services. *But if the taxpayers are going to invest in good therapeutic interventions, failing to follow-up in an intentional and methodical manner frequently negates that investment.*

This is where we must recall the metaphor of the New York subway cars. If, for example, we spend thousands of dollars providing treatment at an ITU in one of the prisons but fail to spend a few more bucks making certain the inmate has a smooth re-entry into the community, we have failed to protect both the public safety and the public investment. Case management oftentimes makes the difference between long-term success and early relapse and recidivism. If an inmate leaves the ITU and is monitored and assisted as he or

she returns, so that adequate housing is provided, job assistance given, medical needs coordinated, and other needs recognized, we will realize a much greater return on our investment. Once we "reclaim" a person, it only makes good sense to commit the necessary resources to make certain he or she remains "reclaimed."

Many of the services clients require currently exist in most communities or, with some coordination, can be identified and used. The problem is that they are fragmented. Some are public, others private. Most are offered through programs that are governed by separate boards or management. There is little communication and collaboration among these providers. The little that takes place is not institutionalized. One of the chief goals of this plan is to create the mechanism to integrate these services, so that in any given community there is a common goal of working together so that substance abusers get good wrap-around care. If that can be accomplished, the success of drug and alcohol treatment will climb significantly.

Rationalization of Record Keeping

When the Legislature instructs the various agencies to create common treatment standards, case management and related protocols, a collateral aim ought to be the rationalization of record keeping and data systems over time. Data systems need to be in the service of treatment, prevention and intervention outcomes, improvements in delivery of services and avoidance of potential risk to the client/patient, family, and community.

Data monitoring systems for outcome and placement need to have high levels of scientific integrity, which is typically defined by powerful discriminate and predictive validity coupled with reasonable ease of use in real-world circumstances (vis a vis pure research on scientific purposes).

The need for careful attention to record keeping and data systems was a frequent issue brought up by practitioners in the field. This voiced concern ought not be construed as a recommendation to eliminate accountability systems.

Creating a Unified Treatment System

It should be noted here that during the course of the study we received suggestions from several quarters that all substance abuse treatment funds be made available on a competitive basis where existing community mental health and substance abuse centers would receive no priority or preference. The argument that competition would be healthy and reinvigorate the system is appealing. However, it may ignore the reality of Wyoming which includes the fact that while such competitive forces may exist in larger communities, they do not exist in many smaller communities. We also believe that unless the system is anchored with community substance abuse center participation, chaos would result from periodic competitive bidding for these basic services. However, that

does not mean a system should be built that does not include significant competitive forces.

As an alternative, we support creating a unified treatment system that permits competition while continuing to support the existing infrastructure. **The system would include the mental health and substance abuse centers as well as other public and private providers in an integrated delivery system unified around common standards.**

The state has invested considerable dollars and years in the development of a community system. As we move toward a unified treatment system, it will be essential that one community-based agency take the lead in integrating services. A unified system does not mean there should be only one provider. It means that all players are integrated so that people in need receive *high quality services*, that *services are client-based* rather than program-based and that, to the extent possible, *the dollar follows the client*. We are persuaded the existing substance abuse centers can effectively serve as the hub for integrating and unifying a comprehensive delivery system. Only where they are unable to do so, should alternatives be considered.

Additionally, these centers already provide the important mental health services that must be coupled with other services provided to virtually all substance abuse clients. The ability to provide for the mental health needs of addicts during the course of addiction treatment mitigates toward strengthening, not weakening the existing structure. We do not believe it should be endangered by these reforms.

We do believe the centers should be encouraged to improve the services they offer. If, as some of the critics of the system contend, the centers have failed in some cases to provide quality services, the responsibility lies in a failure of the state to adequately fund programs and in the failure of the state to establish and enforce clear standards. If the state is willing to take the lead, establish the standards, enforce them, and make the necessary financial investment, the need can be met. Likewise, we believe the community centers are not able to meet the need alone. There are other providers in the public and private sector that must be a part of a unified system of care.

Therefore, we recommend significant increases in the funding for the existing centers with funding tied to the accountability measures outlined herein. The state should establish standards for treatment and integration of services. Funding decisions should be employed to make certain that services are in fact integrated, treatment standards met, and that priority populations are receiving adequate services. Where those goals cannot be met, alternative providers should be sought. Allowing adequate time for the establishment of standards and for programs to meet them, the Legislature should mandate that from and after July 1, 2003, funding be denied to programs that are unable to comply.

At the same time, there is a need to create additional funding streams to assure the need is met with quality services. The certification of providers who meet state standards will mean that additional providers can receive Medicaid payments for services to those who qualify. Bringing additional dollars into the treatment system through Medicaid makes good policy and fiscal sense. Whereas treatment provided by general funds costs the state 100%, treatment purchased by Medicaid dollars costs the state only about 35 cents on the dollar with the federal government paying the remainder.

Additionally, we are recommending that substance abuse treatment dollars be included in the budgets of the Department of Family Services, Department of Education, and the Department of Corrections. These dollars should be used by those agencies to purchase treatment services to meet the unique needs of their clients on a competitive basis from providers that are certified for the services sought. This will provide additional incentives to the community centers and other providers including the private corrections firms to upgrade the quality of their programs. The playing field will be leveled and a unified system created by requiring all programs that receive state dollars as well as those to whom courts refer people to comply with state treatment and certification standards.

A Tiered Delivery System

Given the geography and the demographics of Wyoming, it is clear that not all communities will be able to provide services at the same level. Yet, it is equally clear that all services necessary need be made available as may be required of the target populations. Therefore, we recommend the creation of a tiered delivery system using primarily the existing community mental health and substance abuse centers as the hub for integrating community services and resources.

Tier One

On any given day, there are approximately 4500 people on probation and parole in Wyoming. Over 60% of these folks reside in just 6 counties. Those counties are Laramie, Natrona, Sweetwater, Campbell, Fremont, and Sheridan. The vast majority of these men and women have substance abuse problems. Many of them fail while on probation and are sentenced to prison terms as a result of continued, compulsive drug and/or alcohol abuse. We recommend these people and, therefore, these counties be targeted for the highest level of services.

Targeting these probationers/parolees makes sense in terms of protecting public safety as well as in reducing the costs of imprisonment. These are people who have already committed crimes. The judge has determined their crime did not warrant the people spending over $22,000 a year to house them at one of the prisons. But, when they have a substance abuse problem, the likelihood is very high they will fail, their probation will be revoked, and they will land in prison.

In 1998, forty-two per cent of the Wyoming prison population increase resulted from probation revocations. A whopping 70% of those resulted from substance abuse!

When a district judge orders probation revoked and the defendant sent to prison, he or she is, in effect, appropriating more than $22,000 a year to care for that person. Many of those costs can be averted if Wyoming does a better job of providing substance abuse treatment and other related services to probationers.

Another reason to target this population is that we know who they are, we know when they need treatment, we know where they are, and we are able to exercise sufficient control over their lives *to force them into treatment and keep them there long enough to achieve a good result in most cases.* In addition, the state may require those who might choose to reside where services are inadequate to meet their needs to live, instead, in a C-SAC community. (See the section on the effectiveness of coerced treatment)

The proposal is that these six counties will be the sites of Comprehensive Substance Abuse Centers (C-SAC's). The C-SAC's will provide the most comprehensive set of services available in the state. These centers will provide directly or through referrals the full continuum of services from detoxification and long-term residential care to intensive outpatient, traditional outpatient, case management, and continuing care. More importantly, the C-SAC's will be required to serve as the hub agency in their community integrating and coordinating the services offered by all other public and private agencies and programs. They will not be asked or permitted to do it all, but they will be the catalyst to make certain it is all available and operated effectively. This will require the C-SAC's to bring the other players to the table including the Department of Corrections, private corrections providers, private substance abuse providers, DFS, the local court system, the schools, the faith community and other members of the private sector, the hospital, jail, the recovering community, and any other interested party. *Collaboration among providers is absolutely critical, but it does not just happen*. If a system is to achieve the necessary degree of collaboration, it must be institutionalized. It is hoped that by assigning this role to the substance abuse centers and funding this role, we will be able to institutionalize the kind of collaboration necessary to integrate community programs and resources effectively.

While these comprehensive programs will provide much needed care for probationers, they will in that process also become more effective treatment providers for other target populations such as adolescents, women of child bearing age, and others. The target population will be determined by community demographics. The Substance Abuse Division contracts with the centers will allocate treatment dollars to meet the priority needs. While the

nature of the substance abuse problem may vary from community to community, the C-SAC's and the Division will be responsible for assessing the need with good data and meeting that need directly or through other available programs and services.

The Legislature should direct that all other funds received through state and federal grants for community substance abuse related programs be coordinated with the C-SAC's so that all community players are required to collaborate and coordinate, using state-of-the-art and research-based programs.

Tier Two

The second tier will be composed of those counties that are able to provide all C-SAC services except residential care. The state should not encourage the development of costly residential care facilities in more than the six first tier counties. Counties in the second tier will be encouraged to integrate with larger counties to refer those who need residential care. Like the C-SAC's, these centers will be the hub agency responsible for integrating and coordinating services.

Tier Three

There may be a handful of counties with insufficient resources to meet the requirements of tiers one or two. These counties, when granted a waiver, will constitute the third tier, and will be required to provide limited services at a high level of quality. They will also be required to develop referral or other relationships with larger counties so that clients may be provided an appropriate level of services regardless of the limitations of that particular center.

Priority Populations

One of the recurring concerns raised by people and agencies during this study was that there is no clear definition of priorities. Regardless of funding levels, we cannot provide all services to all who are in need. The system has in many ways attempted to do that and the result has been a dilution of services. Diluted substance abuse services have typically unacceptable failure rates.

We conclude there is a need to provide the system with some direction about which groups or populations of substance abusers are priorities for limited resources. In making this recommendation, we are mindful of the success of drug courts nationally and in Wyoming. Their success stands in marked contrast with the failure rates of many programs. **The reason has to do largely with the ability of the criminal justice system to coerce participants into treatment *and* to keep them there long enough to make a difference.** Their success stems equally from the fact that they take whatever resources they have, e.g. money, treatment capacity, monitoring and supervision, etc., and apply them to a limited number of addicts. They screen and admit a particular, targeted population and then they give them all of the services they require to get into recovery. That is what works, not only in drug courts but also in treatment across the board.

We recommend the Legislature and other policymakers give attention to these factors. The *coupling of coercion with sufficient resources* can reasonably be expected to produce considerably higher success rates than otherwise. In the final analysis that means priority must be given to those persons over whom the system can exercise some degree of coercive power. The combined elements of this plan provide the means of establishing priorities largely built around not only the need for services, but also defining populations where we have the opportunity to exercise some meaningful degree of control that will permit holding substance abusers accountable.

The authors of this report recognize this idea flies in the face of a commonly held myth that teaches addicts cannot succeed in treatment unless they really want it. It is critical to reforming the system that this myth be discarded and replaced with an assertive commitment based on the idea that we all have an interest in providing treatment for substance abuser and when we do so, we need to take the steps reasonably necessary to raise the likelihood of success. The authors also recognize that some may not like the term "coercion." Regardless of the term used, the system must employ a mechanism that permits it to not only engage addicts in treatment but also retains them long enough for the treatment to work. Engaging them without retaining them wastes valuable resources. A system that relies on the addict's voluntary willingness to stay in a program will not justify the investment of public funds and cannot hold users accountable.

The Case for Coercion

The title of this subsection comes from an article written by Dr. Sally L. Satel and published in the Winter 2000 edition of the *National Drug Court Institute Review*. Dr. Satel is a practicing psychiatrist and lecturer at Yale University. She is also an adjunct scholar at the American Enterprise Institute. Dr. Satel is the sort of person to whom those who are serious about investing in treatment should listen.

One of the most damaging myths in the debate over substance abuse treatment is the one that says, "A person really has to want it before it will work." Untrue, says Dr. Satel and many others. It is a myth that makes no sense when you begin to understand the real nature of addiction.

> ***"A massive amount of data, assessing roughly 700,000 patients since 1967, emerged with two clear findings. First, the length of time a patient spends in treatment is a reliable predictor of his or her post-treatment performance. Beyond a 90 day threshold, treatment outcomes improved in direct relationship to the length of time spent in treatment., with one year generally found to be the minimum effective duration of treatment. The second major finding was that coerced patients tended to stay in treatment longer."***[185]

Studies demonstrate that those who enter treatment voluntarily are few. Of them, most will leave early…too early for the treatment to have been effective. "*For these early drop-outs, the benefits of treatment disappeared within the year.*"[186] Dr. Satel acknowledges that some argue coercion is not the key so much as matching the patient with proper treatment. This argument holds that motivational treatment is sufficient to hold the client to an effective duration. Clearly this is an important element of successful treatment, but Dr. Satel's article cites authoritative research that shows that those most likely to remain in treatment sufficient lengths of time are those who were coerced.

"At the American Society of Addictions Medicine's annual conference in 1998, Dr. Norman S. Miller, associate professor of psychiatry and neurology at the University of Illinois, Chicago, declared, 'Coerced treatment is effective in a broad array of people <u>and it should be adopted as policy</u>.' And John Carnevale, director of Programs, Budget, Research, and Evaluation at the White House Office of National Drug Policy, notes that his agency 'embraces the idea of using coerced treatment because it gets people into treatment."[187] We support coerced treatment because it not only gets people into treatment. More importantly, it keeps them there long enough for treatment to work.

The court is an effective coercion agent, but it is not the only one. A serious challenge to addiction means being willing to act early. It is in the interest of public safety not only to hold users accountable, but to do so, whenever possible, *before* they commit crimes. Indeed, one important goal is to tend to people's substance abuse problems early, before they get into the criminal justice system. If we are going to open more doors to treatment and increase the success rates, the treatment system must develop other useful means of coercing addicts. Some other possibilities include:

⇒ Employee assistance programs where employers are encouraged to identify and confront employees with substance abuse problems and give them a choice between losing their job and entering treatment,

⇒ Adoption of policies by state licensing boards that give professionals a choice between losing their professional license and getting treatment,

⇒ Replacing so-called "zero tolerance" policies in schools with policies that encourage the identification of at-risk kids early so that they can be required to get the help they need as a condition of remaining in school,

⇒ Including needed substance abuse treatment in the case management of those who apply for other state benefits such as employment, day care, vocational rehabilitation, etc.,

⇒ Child protection rules that require successful and continuing treatment to be an integral part of the decision accomplish family re-unification,

⇒ DUI court practices that adequately supervise offenders to make certain that return and retention of a drivers license is tied to continuing treatment,

⇒ Involuntary commitments of people who are proved to be a danger to themselves or others or unable to care for their dependents because of abuse of alcohol and other drugs.

⇒ The successful use of coercion requires more than a judge's order that a defendant not use or the requirement of the employer or caseworker that a person stop drinking or using drugs. If coercion is to work in a way that results in successful treatment, an intentional program must be developed that includes effective and motivational treatment, measured and graduated sanctions, as well as supervision and monitoring. Accountability is a two way street. The addict is held accountable only if the system is also accountable. Each plays an important role in the addict's successful recovery.

One of the key goals to be realized by upgrading the treatment delivery system is to make drug and alcohol abusers *accountable by making* certain that effective treatment is available to schools when they identify a student at risk, to employers when they have a worker who needs help, to families when a loved one is ready. It makes no sense to wait until they commit a crime when all of these systems have the ability to coerce the addict into treatment earlier…but the treatment program must be available.

⇒ Accordingly, it is recommended that priority for treatment services be given to those persons over whom coercion may be exercised. Concurrently, the appropriate agencies of state government should be required, with the assistance of the Division, to develop rules and policies that employ reasonable coercion to cause people benefiting from their programs or otherwise under their jurisdiction to receive treatment.

A new study has found that rewards such as vouchers or certificates for food or clothing or tickets to sporting or other events, are effective means of retaining participants in treatment. [188]

Workers' Comp

For example, W.S. 27-14-201(o) already allows the Division of Workers' Compensation to write rules granting "a discount to rates…in an amount not to exceed ten percent (10%)…if the employer complies with a safety program approved by the division." This provision should be used as an incentive for employers to use effective employee assistance programs developed under guidelines established by the Substance Abuse Division. DataCorp's review of the Wyoming situation resulted in a similar recommendation.

Developing incentives, such as reduced rates for Worker's Compensation (premiums), might spur the development of consortium-based EAP's (employee assistance programs). This type of service would allow numerous companies to join together to put a referral and treatment system in place for troubled employees.

⇒ As a matter of public safety, assuring a clean and sober workforce is an important goal that can be achieved in this manner. Such a program, using coerced treatment combined with employer incentives can reduce workers' comp claims and get people the treatment they need.

Department of Workforce Services

⇒ It makes little sense for the state to provide job training, daycare, vocational rehabilitation, food stamps, or other assistance designed to help people to their feet if, at the time they are receiving these expensive state benefits, they are abusing or addicted to drugs and/or alcohol. A Washington State study of AFDC recipients concluded what most would think obvious. Welfare recipients who received substance abuse treatment as a part of their case management fared better than those whose substance use went un-addressed. Welfare payments to those who received treatment declined while their rates of employment rose. It is important to note though, that unless they also received employment and other services at the same time, the increase in self-sufficiency was minimal.[189]

⇒ As the new Department of Workforce Services (DWS) develops its plan, we will continue to work with their team to integrate these efforts. There is an obvious and important relationship between the development of a comprehensive substance abuse plan and the mission of DWS to "develop comprehensive and effective services that build a workforce to meet the changing demands of Wyoming's diverse businesses, citizens, and economy."[190]

⇒ We view substance abuse as a barrier to economic development and the implementation of a good, comprehensive plan to be a necessary adjunct to the important economic development efforts of the state. Businesses are composed of families. A business considering whether to relocate to our state will view our commitment to meet this challenge favorably.

Coincidentally, this plan and that of DWS are due to be submitted to the Legislature and the Governor on October 1, 2001. There have been preliminary discussions between the writers of this plan and the DWS staff focused on the idea of connecting substance abuse screening and treatment with the provision of certain state benefits. A simple and brief screening tool could be used on intake to make an initial determination as to whether or not additional substance abuse assessments are required.

⇒ If red flags are raised, the applicant should be referred for an assessment and, if necessary, treatment should become a part of the overall case plan for providing benefits. To be sure, we are not recommending that people with substance abuse problems be disqualified from receiving state benefits. Rather we propose that the receipt of benefits be made contingent on the applicant getting treatment. In this way, Wyoming sends an important message to businesses considering locating here that we will provide them with a drug-free workforce and a safe community in which to do business and relocate their families. At the same time, we would be assuring taxpayers that the money they invest in these programs will more likely make a difference in the lives of people the programs are intended to help.

⇒ Additionally, the intake and case workers must be cross-trained on substance abuse issues, giving them a working knowledge of the signs of abuse, appropriate treatment, and how to hold abusers accountable.

The Adoption and Safe Families Act of 1997

In November of 1997, the President signed into law the Adoption and Safe Families Act (ASFA). The act identifies key principles regarding child welfare including establishing child safety as a paramount concern of the system. The act requires foster care be only a *temporary* setting, promoting timely adoption for those children who cannot be safely returned to their homes. Finally, the law requires that "permanency planning" efforts for the child begin as soon as the child enters foster care.

ASFA focuses on results and the accountability of the child welfare system as well as the parent. The key relevant requirement of the act is that the state must file to terminate parental rights if the child has been in foster care for 15 of the last 22 months. The act is designed to give kids some sense of permanency in their lives that can be

attained only in permanent placements that mean adoptive families where birth parents cannot get their acts together. In so doing, the act creates a time limit that provides a useful opportunity to coerce or motivate successful treatment.

Parents who have alcohol or other drug problems do not drink or use because they do not love their kids. They use because they are addicts. Their need for the drug or drink overcomes their ability to care for their children.

> ***One of the few prospective studies of children of substance abusers found that nearly all suffered some level of neglect, one-third of children whose parents abused substances suffered serious neglect. *** Children growing up in households with a substance abusing parent demonstrate more adjustment problems, behavioral, conduct, and attention deficit disorders, and generally function less well on many measures of behavioral and emotional functioning.[191]***

There are some other interesting facts to consider here. "Most studies report that between one-third and two-thirds of substantiated child abuse and neglect reports involve substance abuse. Substance abuse is more likely to be a factor in reports regarding younger children, particularly infants, than older children. In addition, substance abuse is more likely to be a factor in child neglect than in child abuse."[192] Yet, alcohol and drug related cases are more likely than others to result in foster care placements. "Nearly a third of cases involving substance abuse resulted in foster care versus less than 20% of other cases."[193]

These kids grow up to have their own set of substance abuse and other problems that not only affect their lives but state and local government budgets as well. We are haunted by the question asked of us when a group from the Governor's Advisory Board on Substance Abuse met with a group of young girls at the Wyoming Girl's School. This 16 year-old girl is a meth addict, now in recovery thanks to the treatment she has received at the Girl's School. She told us of how she grew up in a home, well-known in the community for the fact that her parents were drug dealers and addicts. She had been a good student and an athlete but at some point gave in to the pressures at home and began drinking and using drugs. Her grades dropped. She was kicked off the basketball team. She was arrested over 70 times…and never taken from the home and offered treatment!

She told her story. Then she looked at us and said, "Why didn't someone come and take me out of that house? They all knew what was going on…*and no one came!"*

It is imperative that we devise a system that intervenes early for these kids, protecting children, while providing treatment for parents with the goal of re-unifying families. We can do so if we combine the natural love of the addicted parent with good treatment programs. Simply informing an addicted mom at the time her child is removed

from the home that she has 15 months to get into recovery is insufficient and dooms her, the child, and the system to failure. On the other hand, if these families are truly a priority, a partnership between treatment providers, the child welfare workers, and the courts can result in effective efforts to introduce the parent to treatment, engage and retain him or her, and reunify the family as other necessary, supportive services are provided.

An example of such a program is "Options for Recovery", a Sacramento, California program that *reaches out* to these families rather than waiting for them to come to the providers' doors. Substance abuse workers are present in the courtroom when the judge removes the child and places her in foster care, to take the parent, at that traumatic moment, into treatment. That is a critical moment. The opportunity is frequently missed when the parent is simply told, "You must get treatment and here is a phone number for you to call." This program uses "outreach/engagement teams" that make home visits, encouraging reluctant participants. They provide on-site child-care recognizing that those participants who have children at home need this kind of support if they are to attend treatment groups. They provide means of transportation when simply "getting there" is a barrier. They cross train child welfare workers and substance abuse personnel so that their efforts compliment rather than conflict.

We know and have the responsibility to deal with the fact that addicts do not make good choices particularly in the early stages of treatment. They frequently lack necessary resources to participate in treatment. Many have lost their driver's licenses. Some do not own a vehicle. All have auxiliary needs that must be met if *our* investment is to pay off. In short, if their recovery and their reunification with children is a priority, the system must act differently.

One recent study demonstrates why reunifying these families is critical to the future. In a national survey conducted by Parents' Resource Institute for Drug Education (PRIDE), it was learned that nearly 40% of kids living in a single-father home used alcohol and/or other drugs compared to nearly 30% of those kids living in single-mother homes. The number dropped to 20% for kids living with both parents.[194] Strengthening families must be the goal of any Wyoming substance abuse plan. These kids and their parents are a priority.

Where the system seriously identifies these families as a priority, the programs will develop means of outreach to bring the moms and dads and kids in, identify their specific needs and offer wraparound services to meet them, motivating parents to stay in the program. These programs use the coercive force of the federal law, i.e. the statutory deadlines, to say, "If you want your kids back, this is what you must do and this is the time frame in which you must do it." They do not, however, simply say that. The program itself must be accountable to engage and retain the person who needs the treatment. This is one of the first principles of *all* effective substance abuse treatment.

The standards for treatment under this plan will take these families into account and encourage meaningful partnerships between DFS, the courts, and treatment providers that strengthen families and break the cycle of substance abuse that is furthered when parents do not receive effective treatment.

There is little question that as these families become priorities and programs move to meet their needs, they will undoubtedly impact those other families where kids live with substance abusing parents who do not come into the child welfare system. This is crucial because in truth only a small percentage of kids who live with abusing parents come to the attention of this system.[195]

"Often a family crisis, such as a child protective services intervention, is the catalyst needed to prompt a substance abusing parent to seek treatment. The resolve of an addicted person is often short-lived, however, and unless treatment is promptly available, the opportunity for intervention may be lost. * In addition to the general problem of treatment availability, programs addressing parents' needs are in particular shortage. Parents, and in particular mothers, have specific needs in treatment that most programs do not address….These needs include child care, services to address parenting stress, economic and educational issues, reproductive health care services, psychological services, domestic violence, and more. These services are generally not applicable to male substance abuse treatment clients, but are essential to effective women's services.[196]**

Schools

⇒ While there are those who protest that schools are being asked to do more, the fact is that our children spend more of their waking hours in schools than with parents or elsewhere. Teachers frequently witness troublesome behaviors earlier than do parents. With studies showing that as many as four of ten Wyoming high school students use and abuse drugs and alcohol, the impact on the ability of young people to receive a quality education is significant. The schools must be a major player, whether we like it or not.

The National Center on Addiction and Substance Abuse (CASA), one of the national experts consulting on this study, has recently released a landmark study on the role of the nation's schools in substance abuse. The study, entitled *Malignant Neglect: Substance Abuse and America's Schools,* was released in September 2001. The 117 page report is a must read for educators, legislators, parents and others concerned about this issue.

"Two overreaching findings of years of CASA research have prompted this intensive examination of substance abuse and the nation's schools: an individual who gets through age 21 without smoking, using drugs or abusing alcohol is virtually certain never to do so, and next to parents, the schools (the entire school environment) have the greatest influence on children."[198]

The authors of this report regret that the entire CASA study cannot be reprinted here but strongly encourage that it be read. The study dramatically outlines the "profound and destructive implications" student use of alcohol and other drugs including the impact on academic achievement and the rise in delinquency. It identifies what it calls "Interventions that miss the mark" to include DARE and zero tolerance policies which "mandate predetermined consequences or punishments for substance possession or use-suspension, expulsion or referral to an alternative school."

CASA recommends all teachers, administrators, coaches, counselors and other staff be trained to recognize substance abuse early and be given the community tools to respond effectively. Drug testing should be required of students AND staff when substance abuse is suspected.

Community partnerships must be developed that provide troubled students or staff with the necessary counseling and/or treatment. High risk students should be intentionally targeted for early interventions.

Perhaps the greatest sign of the "malignant neglect" of this issue in the schools is demonstrated in polls that show that "remarkable differences exist between student's and school personnel's perceptions of student drug use. Principals provide the lowest estimates of student drug use, followed by teachers and then students. Only 19 percent of principals reported that

students smoke on school grounds compared to 43 percent of teachers and 69 percent of the students. While only five percent of principals reported that students drink on school grounds, 28 percent of teachers and 33 percent of students report that drinking occurs at school.

"When asked in 1998 if their schools were drug free, only 11 percent of principals said they were not, compared to 35 percent of teachers and 66 percent of the students."[199]

This disparity is not only dramatic, but is also quite troubling. It means that either, those with oversight responsibilities fail to observe or ignore clear signs of substance abuse OR that the students are have an exaggerated sense of how much substance abuse is actually occurring. Either conclusion poses the same problem. Either conclusion itself does result in higher use rates.

Wyoming schools should be encouraged to develop policies that are designed for early intervention in the lives of young people who are beginning to experiment with alcohol and/or other drugs. Prevention programs alone are not sufficient for all young people. Many schools have adopted a so-called "zero tolerance" policy that requires students who use to be expelled. According to a study conducted by the Indiana Education Policy Center entitled "Zero Tolerance, Zero Evidence: An Analysis of School Disciplinary Practice" there is no credible evidence that removing kids from school improves safety. In fact, the study concludes, such removal results in significant negative impacts for both the school and the student. It also negatively impacts the family and the community. "Zero tolerance is a political response, not an educationally sound policy," according to the study.

⇒ During the course of this study, we visited a school in Ft. Collins, Colorado, that has reformed its policy so that it is now designed to identify troubled kids early. Students suspected of using are tested and positive tests result in the student and his family being given a choice between remaining in school and getting treatment. Most opt for treatment and nearly all of them have successfully completed programs, graduating clean and sober. This approach holds great promise to intervene early and effectively, but it presupposes that the state will commit to a major enhancement of the treatment system. The Colorado program only works if kids can be referred to quality treatment.

⇒ Natrona County School District #1 employs a model policy. While it maintains the district's discretion to expel under egregious circumstances, the policy encourages the involvement of the student, the parents, and the school in getting the young person the professional help that is appropriate. A survey of the policies of all Wyoming school districts is attached as an Appendix.

We heard numerous concerns from educators who fear being sued for making treatment referral. We believe the legislature should immunize teachers from such threats, and that educators should further be immunized against lawsuits based on reporting students who are displaying symptoms of substance abuse.

Professional Licensing Boards

Another important opportunity to motivate substance abusers to enter treatment and to remain engaged long enough lies in the fact that the state of Wyoming issues professional licenses to tens of thousands of people allowing them the privilege of practicing their profession. The legislature has made a decision that a license to practice the profession is a necessary prerequisite because the work these people do has a direct impact on the lives and well-being of those they serve. Accordingly, it is reasonable to conclude that the state has an interest in making certain that those it licenses are not impaired by abuse of drugs or alcohol.

Every licensing board should be required to adopt rules that require impaired professionals to obtain treatment when their abuse of substances affects their ability to fulfill the duties they have been licensed to perform.

Some boards have already recognized the importance of doing so. Some have not. The following is a summary of our review of licensing board policies.

Wyoming Licensing Board Survey

Table 7: Wyoming Licensing Board Survey

Board	Numbers of Licensees[ee]	Description of Substance Abuse Policy And available data[ff]
Architects and Landscape Architects	139 Residents 879 Non-residents	None
Mental Health Professions Licensing Board	1095 Residents 131 Non-residents	None
Board of Medicine	882 Residents 1307 Non-residents 91 Retired	Contract with WPAP
Board of CPA's	561 Public practice	No specific substance abuse (SA) authority; board has 579 Non-public, General disciplinary authority, but Actions limited to censure, suspension, And/or revocation
Board of Pharmacy	1020 Pharmacists 250 Technicians	Contracts with WPAP; does not have Specific SA rules but has general Authority to suspend license for "habitual use of controlled substances or alcohol."
Board of Barber Examiners	100	WS 33-7-311 allows suspension or Revocation of license of one whom is addicted to "liquor or drugs to the Extent that the licensee is unfit to Perform the licensed services."
Board of Nursing Home Administrators	90	Revocation or suspension may result from "intemperate use of alcohol or controlled substances."
Board of Occupational Therapy	213	Revocation or suspension may result from "habitual use of alcohol or a controlled substance."
Board of Nursing	4750 RN's 958 LPN's 3657 CNA's	Contracts with Wyoming Professional Assistance Program; since 1996 28 RN's and 11 LPN's participated (CNA's are ineligible for WPAP services)

[ee] Numbers are approximate

[ff] Unless otherwise indicated, the reporting board has no relative data.

Professional Teachers Standards Board	**25,000**	**None**
Board of Professional Geologists	**3200**	**None**
Electrical Board	**5000**	**None. The board does not believe it has Any statutory authority to consider any Complaint against a licensee for Substance abuse.**
Board of Registration for Professional Engineers And Land Surveyors	**5500 Residents 3626 Non-residents**	**None, however, if an "incident is brought to the Board's attention, we would investigate to determine if the Public safety and welfare is at risk."**
Board of Veterinary Medicine	**228 residents 332 non-residents**	**None**
Board of Optometry	**99 Residents 49 non-residents**	**None**
Board of Podiatry	**13 residents 18 non-residents**	**None**
Board of Radiology Technologists Examiners	**458 Residents 79 Non-residents**	**None**
Board of Physical Therapy	**360 Residents 350 Non-residents**	**None**
Board of Insurance Agents Examiners	**2765 Residents 13,702 Non-residents**	**None**
Board of Coroner Standards	**122 Residents 48 Non-residents**	**None**
Board of Dental Examiners Dentists: Hygienists: Assistants:	** 266 Res 164 Non-res 195 Res 116 Non-res 414 Res**	**None**
Board of Chiropractic Examiners	**98 Residents 75 Non-residents**	**Revocation or suspension may result from "addiction to alcohol, narcotics, or Other habit forming drugs."**
Board of Psychology	**124 Residents 47 Non-residents**	**If the Board has "reasonable grounds to Suspect" that a licensee or applicant "may be using controlled substances" an examination may be ordered; license can be suspended or revoked for addiction to drugs, alcohol.**
Wyoming State Bar	**1800**	**Extensive policies for intervention**

The above professional licensing boards authorize more than 80,000 people to practice their profession. We do not believe substance abuse should automatically result in revocation of a license. However, when it comes to the attention of a board that a person it licenses is impaired, rules should require that person to be evaluated and, where indicated, to enter and continue treatment.

In such a way, these boards would provide important assurances to the public that the people Wyoming licenses are not impaired by substance abuse. Using such an intervention opportunity protects not only the public but also impacts the family of the abuser. These rules should be consistent with research-based standards adopted by the Department of Health for licensing boards.

Brief Treatment Interventions

Does every case of substance abuse need months of residential or other long-term treatment? Does every case of substance abuse require intensive therapy? If this is so, the build up of services would be like Christmas in June for long-term providers in Wyoming, and potentially, nearby states.

If there are short-term or brief interventions that would reduce substance abuse, misuse, or use in Wyoming, then the state might very quickly realize benefits on its investment and allow the system to build up appropriate capacity for individuals who clearly need longer-term services. Thus, the question comes up, can we do short term, brief therapies with positive effect?

The answer is clearly, yes. Consider these examples:

Brief Intervention Review

Heavy drinking is a common health hazard among women, and appears to be so in Wyoming. While brief interventions to reduce drinking is convincing not as much evidence exists for interventions in a natural environment of routine health care. Recently, scientists evaluated the effectiveness of long-lasting, brief alcohol intervention counseling for women in a routine general practice setting of five primary care outpatient clinics.[200] One hundred eighteen female, early-phase heavy drinkers, who consulted their general practitioners for various reasons, were given brief alcohol intervention counseling. Intervention groups A (n = 40) and B (n = 38) were offered seven and three brief intervention sessions, respectively, over a 3-yr period. The control group C (n =

40) was told to reduce drinking at baseline. Main outcome measures were self-reported weekly: alcohol consumption, carbohydrate-deficient transferring, mean corpuscular volume (MCV), aspartate aminotransferase, alanine aminotransferase, and gamma-glutamyltransferase. The results were encouraging. Depending on the outcome measure and the study group, clinically meaningful reduction of drinking was found in 27% to 75% of the heavy drinkers. Within all the groups, MCV significantly decreased. However, there were no statistically significant differences between study groups A, B, and C in the mean changes between the beginning and endpoint in the main outcome measures. Conclusions: The present study indicated that minimal advice, as offered to group C, was associated with reduced drinking as much as the brief intervention, as offered to groups A and B, given over a 3-yr. period. Furthermore, in the routine setting of the general practice office, the effectiveness of the brief intervention may not be as good as in special research conditions.

In another study, scientists assessed which types of people complied to brief interventions for heavy drinking. Women and young adults were subgroups of heavy drinkers whose compliance was lower than others, and they may need more powerful brief interventions.[201]

Brief interventions work for a significant proportion of older adults, whose population is growing in Wyoming. Consider the impact of a study tried in Wisconsin. The older adults there who received the physician intervention demonstrated a significant reduction in 7-day alcohol use, episodes of binge drinking, and frequency of excessive drinking (P less than .005) compared with the control group at 3, 6, and 12 months after the intervention. There was a 34% reduction in 7-day alcohol use, 74% reduction in mean number of binge-drinking episodes, and 62% reduction in the percentage of older adults drinking more than 21 drinks per week in the intervention group compared with the control group. The older adults received two 10- to 15-minute physician-delivered counseling sessions that included advice, education, and contracting using a scripted workbook.

The same strategies, described above, were tested in 10 Wisconsin counties with women of childbearing age. Some 5,979 female patients ages 18 to 40 that were screened for problem drinking, 205 were randomized into an experimental group (n = 103) or control group (n = 102). The intervention consisted of two 15-minute, physician-delivered counseling visits that included advice, education, and contracting by using a scripted workbook. As mentioned elsewhere in this document, intervention produced powerful effects. The trial reduced both 7-day alcohol use and binge drinking episodes over the 48-month follow-up period (quite statistically significant). Women in the experimental group who became pregnant during the follow-up period had the most dramatic decreases in alcohol use. A statistical model revealed a 20% or greater reduction in drinking

by the pregnant women in the sample exposed to physician intervention.

In an experiment with wonderful implications for Wyoming, scientists have found that a "correspondence course" cognitive-behavioral intervention can reduce problem drinking.[202] Weekly alcohol intake fell 48% from pretreatment to 18.6 alcohol units at 12 months. The results confirmed that correspondence cognitive behavioral treatment (CBT) for alcohol abuse was accessible and effective for people with low physical dependence.

A brief intervention (15 minutes) at HMO outpatient waiting rooms found promising results on alcohol use but not medical usage over time (6 months to 2 years).[203] This is a useful finding from a public health view and suggests that there might be ways to improve results.

Brief interventions have been successful with college-age students. At 6-week follow-ups, for example, students receiving brief intervention group show reductions on number of drinks consumed per week, number of times drinking alcohol in the past month, and frequency of binge drinking in the past month.[204]

Recent studies suggest that free nicotine patches with advice can help reduce smoking. A natural, prospective, open-label study tested the impact of free nicotine patches with minimal support for smoking cessation.[205] The overall quit rate at 8-weeks was 21% (47/223).

What about drugs other than alcohol and tobacco? Is there evidence that brief interventions can work? Yes.

Physicians developed and tested an Integrated Brief Intervention (IBI) with self-defined problem cannabis (marijuana) users in Australia, which has many circumstances similar to Wyoming. The study was small, but promising. Most participants reported a marked reduction in the frequency and/or quantity of cannabis used. Participants also improved health and social functioning.

A United States' study, somewhat better controlled, showed even more positive benefits for a two-session marijuana intervention.[206] Cannabis use, dependence symptoms, and negative consequences were reduced significantly in relation to pretreatment levels at 1-, 4-, 7-, 13-, and 16-month follow-ups

A major short-term effort of this plan is to have an impact on substance abuse in the state of Wyoming. The brief interventions do not have to result in abstinence for the state and its citizens to have major medical or social benefits.[207] Many of the interventions can reduce both immediate harm and long-term harm by reducing the frequency, intensity, and length of use of substances.

Wyoming Recommendation:

With all due haste, the various departments (Health, Family Services, Workforce Development, Corrections, and Education) must undertake the selection, diffusion, testing, and reimbursement for, brief treatment interventions for substance abuse, misuse, and use in primary care offices, dental practices, psychologists, community mental health, and other providers.

Marketing Brief Interventions to Practitioners

What does it take to get primary care providers to use brief interventions? Just depending on people to do the right thing is not enough. To date, available evidence suggests that the adoption of effective brief therapies takes the same kind of marketing efforts that drug companies use to get their products utilized.[208] This includes media, personal visits, tele-marketing and more.

Wyoming Recommendation:

The state, in partnership with private and non-profit groups, must undertake a powerful marketing program to encourage the use and testing of brief treatment interventions to reduce substance abuse, misuse, and use. This effort will likely yield major short-tem reductions in prevalence rates, setting in motion larger gains and positive community norms.

Brief Interventions in Novel Settings

Primary-care settings are not the best place, nor the most effective place to reach younger adults or some women. Bars are the best places—which is where people drink often to excess, particularly on Fridays and Saturdays. Could brief interventions be launched in bars to reduce substance abuse? The answer appears to be yes, again drawing on science from our Australian colleagues who deal with a cultural context not unlike Wyoming. Like a famous bank robber who was asked why he robbed banks and replied, “That’s where the money is.”, Australian public health folks went to bars and taverns because “that’s where the booze is.” The brief intervention took about 5 min. and consisted of a personalized risk assessment using the Alcohol Use Disorders Identification Test (AUDIT) in combination with a breathalyser to determine blood alcohol concentration (BAC). The scientists followed the bar patrons for 12 months. At follow-up,

almost half (46%) the patrons reported reducing their alcohol consumption. The mean AUDIT score reduced by 15%, weekly alcohol consumption by 13% and frequency of binge drinking by 19%. Those previously drinking at 'harmful' levels reduced most (AUDIT 29%, consumption 22% and binge frequency 37%). Females had almost twice the odds of reducing consumption compared to males, as did participants with initial consumption above the mean. Older respondents showed smaller reductions than young people in composite AUDIT score, but greater reductions on consumption and binge frequency scales.

Computer-assisted strategies at home, at schools and colleges, and other office settings show promise in affecting substance use prevalence.[209] Recent evidence suggests that such interventions may be as powerful as brief interventions by the primary care physician, but nearly completely automated in the doctor's office.[210]

The Canadians have been experimenting with such brief interventions in the probation context, and these strategies show some promise.[211]

Wyoming Recommendation:
The Department of Health, in collaboration with other agencies, non-profits, and community-based services, should undertake a rapid test of brief interventions in novel settings, using novel technologies based on prior promising scientific evidence to reduce substance abuse, misuse, and use.

Employee Assistance Programs

Employers are one of the entities with the potential to exert the coercion necessary to force addicted individuals into treatment and to keep them there long enough for the treatment to work. The Partnership for Recovery is a consortium of the nation's top non-profit treatment providers. Its members include The Hazelden Foundation, The Betty Ford Center, and the Valley Hope Association. The Partnership has extensively studied the role of employers in addictions recovery.

They first point out the costs of not treating employees. Firing them and replacing them is expensive. It costs an average of $7000 to replace a salaried employee. That cost can go much higher, exceeding $40,000, for a senior executive. A termination often occurs after the troubled employee has caused other, even more expensive problems for the company.

On the other hand, the Partnership points to numbers gathered by the Substance Abuse and Mental Health Services Administration demonstrating the value of employee assistance programs (EAP's):

⇒ 85% decline in absenteeism,

⇒ 50% drop in injuries, and

⇒ 82% reduction in tardiness.[212]

The United States Small Business Administration reports drug-free workplace programs cost an average of $22-50 dollars per employee. But, not having a program is not free. Most substance abusers are indeed employed. The Project SAFE ASI project in Casper disclosed 70% of those coming for treatment of addiction are employed. These numbers coincide with national studies. Untreated substance abusing employees cost US business an average of more than $640 per employee each year.[213]

Indeed, employer use of these programs is preferable to allowing an employee to use until he or she causes a fatal accident or commits a crime and enters the criminal justice system where a different kind of coercion is available. EAP's are important early interventions. It is important to recognize that they not only benefit the company and the employee. Most of these employees also have families. Intervening early in the employee's life will have an undoubted impact on the children.

It is important to note that simply offering an EAP does not require the employer to pay the cost of treatment. Indeed, we believe it is important for addicts to invest in their own treatment. However, employers who provide insurance benefits should be sensitive to the need to include substance abuse coverage. Other employers have contributed to the cost. Even then, the payoffs are worth the costs. The Small Business Administration can also be a source of assistance to employers.

We encourage the Legislature to provide other positive incentives for employers to develop and use effective Employee Assistance Programs (EAP's). As previously discussed, the statutory framework for accomplishing this goal already exists. W.S. 27-14-201(o) permits the state to discount workers' comp rates for employers who comply with "a safety program approved by the division." Because of solvency problems in the workers' compensation system, this provision has yet to be implemented. It should be implemented to include rules for utilizing drug and alcohol education and an EAP in any safety program.

Additionally, the Substance Abuse Division should provide technical assistance and training to help employers develop and use effective programs. A necessary adjunct to making this work is the enhancement of the treatment delivery system as recommended herein. Unless that is accomplished, cooperative employers will have no place to send troubled employees. When employers create EAP's, they deserve to know that the community program is an effective partner. These kinds of positive

incentives should promote effective use of EAP's

Involuntary Treatment Commitments

While it is critical to provide treatment for those whose abuse of alcohol or other drugs leads to the commission of crimes, it is equally true that the commission of a crime should not be a necessary prerequisite to receiving treatment. Many times, spouses and other family members are frustrated by the inability of the system to place their drug abusing family member in treatment. While adolescents can be involuntarily placed, that is not true of adults until they commit a crime. Early intervention is the key, not only to effective treatment, but also to protecting public safety.

Accordingly, we urge the Legislature to study measures allowing for the involuntary commitment of those whose abuse of alcohol and/or other drugs results in making him or her a danger to self or others or that the person is incapacitated to such an extent s/he is unable to care for self or dependents.

This proposal is not new. The California Civil Addict Program (CAP) is one of the most successful and most studied. Civil commitment, as implemented in CAP was found to have reduced daily narcotic use and related criminal activity to one-third the levels of addicts not civilly committed.[214] A bill providing the means of involuntarily treating certain addicts was introduced during the 2000 Legislature as HB230. At the time Wyoming did not have the treatment capacity to support the enactment of the bill. If the Legislature approves the recommendations contained in this plan, the increased capacity to provide effective treatment would most appropriately be used to achieve this important early intervention as a means of reducing drug related crime.

But, first…

⇒ It must be emphasized, however, that the foundation of all of these efforts is the availability of effective treatment. During the study, we frequently encountered troubling situations where teachers, employers, physicians, parents, and others including neighbors knew of the drug use of another but did not know what to do or where to go. One young woman at the Wyoming Girls' School talked about growing up in a home next door to a policeman who failed to act despite loud episodes of domestic violence and obvious signs of drug use. Another told of how her grades plummeted and her physical appearance deteriorated as she began using more and more drugs. She said it must have been apparent to her teachers whom did not intervene.

⇒ We believe that good people often fail to intervene because they do not have the tools or because they know that those with the tools use only one…the hammer! A teacher who cares about a student may be reluctant to help if he or she knows that saying something may well

result in that student's expulsion. A fellow employee who knows of another's drug use will not likely step forward if he or she knows the most likely result will be termination rather than assistance. There is a time to use the hammer. It comes when other tools have been tried and failed.

⇒ We want the system to create more tools, tools that will encourage neighbors and others to step forward to help, tools that can be used to force recalcitrant users to get treatment, and tools that will hold the treatment system accountable. And so we turn now to recommendations to develop a comprehensive treatment system that will encourage these things to happen.

Intensive Outpatient Treatment

The writers of this report had anticipated that a study would conclude the most significant gap in the Wyoming treatment delivery system would have been the insufficiency of residential care. That is a major problem. Yet, it is our conclusion that the most damaging deficiency is the lack of intensive outpatient treatment (IOT).

A review of treatment programs readily discloses the paucity of IOT. The table discloses another important, related issue. Of the few programs that exist, there is no standard, no consistency in numbers of contacts hours, integration with other components, use of testing and monitoring, case management, or relapse management.

The Substance Abuse and Mental Health Services Administration (SAMHSA) publishes a series of technical assistance guides called the *Treatment Improvement Protocol Series* (TIP). One of the publications specifically addresses the vital role of IOT in a comprehensive treatment system.

> ***"The IOT level of care has several clinical and consumer advantages. For instance, the cost of IOT treatment is often less than half the cost of inpatient treatment. In an IOT program, patients can continue to function in already established roles with minimum disruption to work and family life. In fact, work and family life are better stabilized through the support and structure offered by IOT. Access to the world outside the program increases opportunities to practice learned behaviors and new responses such as drug refusal skills, open communication, and stress reduction techniques."***[215]

We recommend that strong IOT programs become a part of the treatment provided by every state-funded substance abuse center. More importantly, these programs should follow the promulgation of treatment standards so that the Legislature may assure they are developed using best practices. It is our conclusion that these programs should be the mainstay of the treatment delivery system. Effective IOT will give parents, the school, employers, the court, including drug court and others an effective program in the community to which people with

problems can receive treatment while remaining in their homes, with their children and on the job while getting clean and sober.

Advantages of IOT Programs Over Inpatient and Typical Outpatient Programs[216]

- **Reduced financial costs over inpatient treatment**
- **Flexible, accessible services**
- **Increased duration of treatment (better prognosis)**
- **Higher retention rates than low intensity outpatient care**
- **Daily real world experiences for clients to apply learned skills**
- **Increased opportunities to establish community-based support**
- **Enhanced treatment for relapse**
- **Greater patient responsibility**
- **Participation in local self-help groups from the outset of treatment**
- **Enhanced ability to develop long-term supportive relationships with other clients.**

Detox

Detoxification is not treatment, but is pre-treatment, and cannot be used or viewed as a substitute for treatment. But it is an important component of a comprehensive treatment system. As such, its relative absence is a major gap in the Wyoming delivery system. Only three of the 20 state-funded substance abuse treatment centers include detox on their menu of services. Another program recently opened in Riverton, is the Fremont County Alcohol Crisis Center. Its early experience demonstrates the importance of providing detox services.

One study defined the role of detox as "procedures for alleviating the short-term symptoms of withdrawal from drug dependence" while including "a period of psychological readjustment designed to prepare the patient to take the next step in ongoing treatment."[217] Detox has three primary purposes:

⇒ To provide a safe withdrawal from the drug(s) of dependence and enable the patient to become drug free,

⇒ To provide withdrawal that is humane and protects the patient's dignity, and

⇒ To prepare the patient for ongoing treatment of his or her AOD (alcohol or other drug) dependence.[218]

While the comprehensive detox program in Riverton is not likely to be affordable in every community, we should encourage the growth of such centers on a regional basis and require

every substance abuse center to include, even if it is by referral, a detoxification component.

During the 2000 Legislature, Representatives Luthi, Miller, and Osborn with Senator Schiffer introduced HB230 providing for involuntary detox and treatment commitments. At the time, the Department felt Wyoming lacked a treatment delivery system to make the bill workable. The bill should be considered once the infrastructure for treatment is strengthened, with a phase in allowing the centers six months to a year to upgrade their programs to prepare for the implementation of the proposal. HB230 is further discussed in the section on coerced treatment.

Continued Education and Training

Another important consequence of inadequate funding is inadequate continued education and training. It is one thing to expect professionals to remain current on the on-going research and studies that impact their work. The reality of being the only or one of a handful of substance abuse therapists in a small Wyoming community is that when your time is under continuous demand to provide help to those in need, there is little time or energy for reading the myriad of journals and doing the other study necessary to remain up to date. Relatively low salaries being paid to Wyoming professionals also have an impact. Several substance abuse center managers told us they feared sending staff to out-of-state trainings because of the intense recruiting that takes place at those seminars.

We believe the Substance Abuse Division and the University of Wyoming, working with the community colleges, should be the pivot point for the collection of current research and the dissemination of that information to professionals in the field. By offering continuing education at the regional locations throughout the state, the Division can meet the needs of the centers which include not having therapists away from clients longer than necessary and holding down costs of training. We also believe Wyoming distances require the use of mobile training units as discussed in the next section.

Having studied the practices of the pharmaceutical industry, we believe that by taking a page out of their play book, Wyoming can provide user- friendly continuing education to even the smallest treatment centers. By employing two or three well-informed persons whose job requirements include traveling the state disseminating current information in a user-friendly manner, therapists in even the smallest communities will be kept current on the latest research and therapy techniques. These mobile training teams will provide not only important information but also motivational connections to the Division, other centers and therapists. Therapists will have help with troublesome cases. In this way, the system will create statewide supervision. Importantly, they will also help to assure treatment standards are followed.

We recommend this educational service be provided as a part of the Regional Treatment Teams described below.

Regional Intervention Teams

We encourage the Legislature to authorize the Division to implement a pilot project using Canadian experiments with regional treatment teams. The following is an excerpt from a report provided by DataCorp, one of the experts contracted to review Wyoming's treatment system and make recommendations as a part of the HB83 study. Mobile treatment can be traced back to early American history when doctors routinely provided services within their client's homes.

Additionally, mobile treatment has been used within the mental health field for years. Mobile treatment teams are a multi-disciplinary team of clinicians, caseworkers, outreach workers, psychologists, and psychiatrists who provide home-based services to mentally ill clients (Stein, 1992).

The Canadian Centre for Addiction and Mental Health employs the use of mobile treatment and transportation to increase accessibility of services for rural clients. In rural Canadian communities, accessibility to a full array of health services, including substance abuse treatment is often impeded due to insufficient numbers of health providers, lengthy traveling times, weather, and road conditions. (Virtual Resource for the Addiction Treatment System, Mobile Treatment and Transportation, http://sano.camh.net/resource/mobile.htm). Both mobile treatment services and client transportation programs attempt to respond to these issues by either bringing the treatment to the client, or by providing transportation so the client can get to treatment. Although these forms of mobile treatment are well known in Canada, a less known form of mobile treatment was implemented by the Alberta Alcohol and Drug Abuse Commission (Wiebe & Huebert, 1995). The feature that distinguishes this program from other mobile treatments is the strong emphasis on community involvement. The Alberta mobile treatment team works with the community to help them acknowledge the existence of substance abuse problems and helps them develop commitment to dealing with the problem. They accomplish this by soliciting support from community leaders, and by conducting door-to-door outreach with members of the community. Once the community has been mobilized, the treatment team establishes a short-term residential treatment program for substance abusers and their families. The program is delivered by a team of addiction specialists and whenever possible, community members are trained to assist. The goal is to enroll as many residents as possible, at the same time, into treatment. The intent is to enhance community support, facilitate the development of a supportive network for the addicted, and to encourage other community members to address addiction issues. Because each mobile treatment is tailored to the needs of the community, issues of cultural

appropriateness or relevance are addressed.

Since its introduction in 1984, community mobile treatment has been implemented in approximately 17 Canadian communities located in British Columbia, Saskatchewan, and Alberta. The few evaluations that have been conducted suggest that this approach holds much promise in reducing alcohol and drug-related problems for people residing in rural areas (Wiebe & Huebert, 1995). In addition, Ontario has begun to consider the potential benefits of using this method of service delivery to assist rural and remote clients, as well as other specialized treatment populations (Virtual Resource for the Addiction Treatment System, Mobile Treatment and Transportation, http://sano.camh.net/resource/mobile.htm).

The very reasons this approach has been successful in Canada causes us to believe it should be tried in Wyoming. Small communities, great distances, the unique, rural nature of the substance abuse problem are a part of our landscape just as it theirs. While a Wyoming program will not exactly mirror the Canadian approach, the basic idea of providing small, remote communities with these resources is both appealing and compelling. Beyond providing services, these mobile units could include prevention resources as well as the continuing education services discussed above. They could provide training to providers, schools, parent groups, law enforcement, businesses, faith-based organizations, and other interested groups. The mobile units could serve as crisis teams when specific communities have needs. They could do screenings and provide referrals.

Licensing of treatment professionals

One of the consistent complaints we received throughout this study concerned the licensing of treatment professionals. Many providers felt the licensing board created unnecessary barriers to the licensing of qualified professionals, exacerbating the problem of recruiting therapists. Additionally, complaints were raised about amendments to the licensing law enacted during the 2000 Legislative session.

Very clearly, there is a shortage of qualified treatment professionals. The shortage will interfere with the ability of the state to meet the goals of this comprehensive plan unless satisfactory compromises can be reached. The Legislature must find a way to remove unnecessary barriers without allowing unqualified persons to practice.

We believe that one important goal should be to open licensing to recovering persons. Those who have “been there” have a great deal to offer. Their personal experiences with addictions and the treatment system give them important insights. Many recovering persons feel a “calling” to help other addicts. Their gifts need to be used. Frequently though, these folks do not have academic credentials. Telling a “40 something” recovering person that before she can work with other addicted persons that she must go back to college for several years creates an unnecessary barrier and

in most cases will result in the loss of this resource.

We support a joint effort between the Department of Health, the University of Wyoming, the community colleges, and providers to establish a training program that will allow qualified recovering persons to receive the training they need to become contributors. The 2000 amendments to the licensing act created a professional category called "certified addictions practitioner assistant." This training program should recruit and encourage recovering persons to become a part of the state effort. In order to do so however, the Legislature needs to reconsider an amendment to the 2000 law.

WS 33-38-106(d)(iv) requires a one-to-one relationship between the certified addictions practitioner assistant and a supervisor. Wyoming professionals universally agree this one-to-one supervision requirement is unnecessarily burdensome and discourages effective use of this new position. We agree with those who have told us the ratio should be no more than three-to-one.

Further, we encourage the board to review decisions it has made with respect to reciprocity requests. While we have not reviewed all such requests, there is a consistent complaint from providers telling of several instances where applicants have been denied licensing on seeming insignificant deficiencies. It is critical this board aid in the effort to recruit and license qualified applicants in order to provide the human resources required to meet the need.

In a related recommendation, we believe the recovering community offers an enormous resource. Typically those who have found their way through addiction and into recovery feel a "calling" to help others. This state has limited human resources qualified and willing to engage in the tough work of mentoring substance abusers. We would like to see recovering addicts and ex-offender graduates of quality long-term treatment programs recruited to join the staffs of treatment facilities and programs. If we combine their real world experience and commitment with an effective training program, they could bring to the treatment effort valuable gifts to augment available resources.

Grants Assistance

During the course of the study we became aware of innumerable funding opportunities for substance abuse prevention and treatment programs. In addition to federal grants, there are many private foundations that are placing significant resources into community efforts to address the problem.

We have found that in many cases, school districts or other local government and private entities are ill-equipped to learn about these opportunities and even less able to write credible grant applications. Grant writing is a science and ill-prepared grants seldom result in funding.

We believe the Legislature should fund a pilot project by allocating funds allowing the Department of Health to contract with a private entity that has significant expertise, experience, and success in writing grant proposals. The

contract would provide a base payment with incentives. Through priorities established by the Department, the contractor would be available to agencies of state government, units of local government, drug courts, and other public and private sector organizations to provide technical assistance in identifying grant opportunities and writing grant applications.

This program should be funded for two years and then its usefulness evaluated.

Conclusion

> ***"What I learned…convinced me that in coerced treatment rests the elusive secret to effective rehab. That secret, however, lies not only in coercing addicts into programs, but in coercing the programs to do rehab right!"***[219]

"Accountability" is the key to understanding this plan. As policymakers consider the recommendations, we hope they will keep standards of accountability at the fore. Combining accountability for substance abusers with measures assuring accountability of treatment providers will produce an effective system. In the final analysis, we must work together to create a system through which the people of Wyoming get their money's worth. Establishing a comprehensive system will be expensive. We do not want the Legislature to simply "throw money" at the problem, yet it will take significant dollars to improve the current system to achieve the results. We recommend the Legislature enact accountability provisions so that the taxpayers may be assured their investment will pay off.

Among the accountability reforms we seek are as follows:

⇒ Authorize the Departments of Corrections, Education, Family Services, and the Department of Health to work together to jointly promulgate strong research-based, Wyoming specific treatment standards.

⇒ Authorize these departments to jointly promulgate rules designating research-based instruments to be used for intake, assessment, diagnosis, monitoring, testing, and determining appropriate levels of services for clients.

⇒ Authorize these departments to jointly promulgate rules for using data to establish target or priority populations for services.

⇒ Authorize these departments to jointly promulgate rules for data collection and outcome evaluations.

⇒ Require the above rules be promulgated no later than September 1, 2002.

⇒ Require these departments to report annually on the outcomes achieved by specific programs and other matters indicating whether systemic goals are being met.

⇒ Require that the Department of Health may not contract with and no court may refer persons to programs that are not certified as complying with the rules.

Helping Kids! Helping Families! Helping Communities!

The Wyoming Legislature is encouraged to support initiatives that strengthen Wyoming families by making Wyoming kids and their families a priority when tough choices have to be made. Using research-based programs, the Legislature is asked to provide prevention and early intervention programs designed to break the cycle of substance abuse.

The image, the reality…and the vision!

The image of the West has always been an important part of who we are. We often speak of Wyoming as being "what America was." We talk about our beloved state as being "like no place on earth. To simply say "Wyoming" creates images of great mountains, vast prairies, roaming wildlife and clear, flowing streams. The image includes small towns with strong values, connected one community to another by caring people. A former Governor was fond of saying that Wyoming is 'one small town with very long streets.' How often we say, 'Wyoming is a great place to raise a family.' The people of Wyoming have a self-image as well. It is one of rugged individualism, ingenuity, confidence, and courage. We see ourselves as independent and strong, able to meet the challenges of life in a way uniquely formed by our rural experience.

It is that image that has always beckoned people to come. They came and they continue to come in order to better themselves, if not materially, then spiritually. They come even today relying on that image to give them and their children a quality of life they cannot find anywhere else.

But…does the image square with the reality?[220]

For many of our fellow citizens, the promise of life in Wyoming has been fulfilled. But because of the increasingly widespread abuse of alcohol, meth, and other drugs, there is a growing number for whom the promise has given way to the reality of addiction, domestic violence, child neglect and abuse, educational and occupational failure, and hopelessness. This is a reality that has fallen tragically

and disproportionately on Wyoming's young people and their families.

The statistics tell one story…

Statistics are able to convey important information. They can also tell stories only if the reader is able to imagine the reality portrayed by them. As you read these statistics, imagine. Imagine how they translate into the daily life of teachers, parents, young people, and families. Imagine what these numbers mean in neighborhoods and communities.

For example, when you read statistical information that informs you that a pound of meth, cut for sale in your community has a street value of approximately $40,000, you may find that to be quite interesting information. But it becomes compelling information if you are able to imagine what havoc that pound of meth creates in your community.

First, there is the obvious impact. Somebody uses the drug. Its use begins or furthers a deadly addiction. There is a community-wide impact on the families involved, the school system, employers, and others.

In the process of bringing that pound of meth into your community, the dealer takes out $40,000. From where does that large amount of money come? Much of it comes from the proceeds of crimes like check fraud, burglaries, and robberies. Some of it comes from money stolen from parents and grandparents, crimes that most often go unreported, dollars that were needed to support children, grandchildren, and families. The stories behind the stats paint a picture of havoc wreaked by drugs.

Last year, the Division of Criminal Investigation alone seized 3528 grams of cocaine with a street value of over $388,000. The 270,899 grams of marijuana seized would have sold for as much as $722,000! Nearly 8000 grams of meth were seized in 2000. It is valued at $800,000. PLEASE note these numbers do not reflect the true drug activity on the streets of our towns. These numbers reflect only the amounts and values of drugs actually seized by one law enforcement agency. There are likely many times more than this being passed through to our kids and others.

And indeed, our children are the most vulnerable. According to studies completed recently, Wyoming young people are at or near the top in the nation in too many categories of substance abuse. They are first in current cocaine use and use of that drug before the age of 13.[221] Each month, one of 10 of our 8th graders reports she gets drunk. The number rises to one in three by the time they are in high school.[222]

Most alarming is the fact that over 40% of Wyoming children surveyed in grades 10-12 meet the DSM-IV definition of a current alcohol and/or drug abuser and the substance use of one in ten is so high as to classify them as dependent.[223]

Over the years, Wyoming has had a higher than average "low birth weight rate." Low birth weight is frequently an accurate predictor of health problems, substance abuse, and delinquent behavior. It is often caused by the use of tobacco,

alcohol and/or other drugs by the mother while pregnant. Two-thirds of Wyoming women of childbearing age, surveyed in health clinics under one study, were shown to be using tobacco, alcohol, and/or illegal drugs. Forty percent of them were in fact pregnant at the time and 10% admitted to using all three.[224]

…the children tell another

The statistics may tell the story but not near so convincingly as the young people and their parents whose lives have been altered by substance abuse. For example, we sat with a group of young men at the Intensive Treatment Unit at Rawlins. There we heard stories of how they began using alcohol and other drugs as young as 5 or 6 years of age. "My grandfather said he wanted to teach me to be a man," said one inmate. He was 5 years old when he first got drunk…with his grandfather.

The Legislature should deal with the fact that this grandfather was not breaking any law by providing his 5 year-old grandson with alcohol. Under Wyoming law, a member of the immediate family may legally provide alcohol to a minor regardless of age. Shamefully, neither was this 5 year-old in violation of the law so long as he was "in the presence of his parent or legal guardian." W.S. 12-6-101.

A 16 year-old girl told of how she grew up in a home with parents who were "big drug dealers and everyone in town knew it." Once a star athlete and good student, she succumbed to family "norms" and became an addict, being jailed 70 times before finally being sent to the Wyoming Girl's School where she received the treatment she needed. "Why," she asked us, "Why didn't someone come and take me out of that house?"

Lest you operate on the myth that this happens only in broken homes or with "bad parents" listen to another youngster. The 16 year old boy, told us that he grew up in a "good home" with an intact family, "good parent who set clear boundaries, talked about the danger of drugs." Yet he began having academic and social problems by the 6th grade and was using marijuana daily by the 8th grade, later running away, expelled from school, he ended up at the Boy's School.

Many times the community is deaf to the cries of troubled kids. JoAnne's (not her real name) mother used heroin. Her earliest childhood memories are of mom…shooting up. When JoAnne was in the 1st grade, she found some of her mother's drugs and took them to school. If it was a clear cry for help, it went unanswered. Mom was arrested but the little girl was sent to live with her alcoholic father in a home without adequate supervision. By the 9th grade she was drug and alcohol dependent, using marijuana, cocaine, PCP, crank (meth), and huffing. Placed on probation, she continued to use even though she was tested regularly. Tested 90 times, she failed only 7 of the tests despite continuous drug use. One of the people who taught her how to beat the UA's, she says, was her caseworker.

If you have no contact with families that have experienced substance abuse and are willing to talk about it, it is easy to reach erroneous conclusions. On the other hand, when you sit with young people and hear their stories, it quickly becomes clear that the issue is so much more complex than it would be if it were simply a matter of someone making "a bad choice." Genetics play a role, a major role, and one that defies even the best parenting.

For kids who grow up in homes where substance abuse is a part of their reality, choices have been made for them. It is easy for spectators to argue that parents should be more responsible. Clearly they should. But some are not. Some are giving it their best shot and that may not be enough given limited parenting skills that are passed along from one dysfunctional generation to another. Read this actual essay written by a little Wyoming school girl.

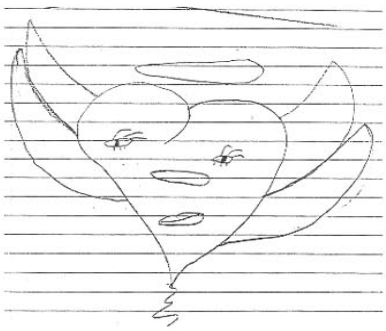
Figure 48: A Little Girl's Story

My Famly

Once I was in school it was three days
utel we got out for the summer my mom pold us out
of school that day we did not know were we
where going and our mom tould us that we
where mouving we went to our house and pkat
stuf in boxes and we loded them on a big
truck and left. We made a rong tur Soms
were and we mouved our stuf into a trater in
Lontree. that was were my mom met Rick and
Ray. Rick mouved in with my mom. I did
not like that but I had to live with it.
my life grow longer. school stared and I was
nerves but I didnot care it was October and
I'm still in school. I met a lot of friend
one of my freind are nice. My dad mouv to
floret. I miss my dad from this day on. In
Noveber my brthday is coming up My
mom said if I dont sfraten my atutad
up I want get anything for my brthday
When I was a little gril my dad rasd me
I was with him in a semi it was neet I
Love it. My dad came to get us and take
us to Lander to veset my grama
I had a good time we Left and my
dad drop us of. I started crying I was
scard my hol Life would brack a part and
he rot us a not Sayna hi and he Loved us

I cry for two days I did not sleep our
drenck our tatk I was scard It was over.
I was tird of fiting over my dad.

The End



These sorts of stories may not be commonplace in the social circles in which most of us spend our lives. However, if you dwell *even for a brief moment* where teachers, social workers, public health nurses, probation officers, judges, and substance abuse therapists dwell, you will find these Wyoming stories to be troublingly commonplace. These stories describe the reality of life for a growing number of Wyoming children, families, and communities.

This plan is the basis for a renewed commitment to dramatically and quickly change their reality.

The Department of Family Services

The central player in children and family services is obviously the Department of Family Services. The Department provides services for youth through three general program areas; child protective services, youth and family services, and juvenile probation. A majority of the young people for whom services are provided enter the system with significant substance abuse issues, sometimes it is their abuse of substances, at times the abuse of drugs or alcohol by parents or other care givers, often both. Frequently this problem co-occurs with emotional, psychological, educational, and other behavioral issues.

Juvenile court involvement is a common characteristic, either through a consent decree or adjudication as a status offender (Child in Need of Supervision or CHINS) or delinquent.

Services are provided in the home, or in community programs or court directed placement. Home and community services provided for young people with substance abuse problems are most often provided in the context of probation supervision, therapeutic/specialized foster care, and group home involvement. Out of community placement services are provided in a residential treatment setting or the Wyoming Boys' or Girls' Schools.

According to a state budget analysis by the National Center on Addiction and Substance Abuse (CASA), total state expenditure on juvenile justice matters in FY98 exceeded 16 million dollars. CASA estimates 66.7% of that was spent on substance abuse involved offenders.

Table 8: Placement of and Expenditures for Wyoming Juveniles for 2000-2001

PLACEMENT AND EXPENDITURES
FY 00

	# YOUTH	EXPENDITURES
RESIDENTIAL TRTMT	489	$ 10,884,166
GROUP HOME	379	$ 2,578,546
THERAPEUTIC FC	131	$ 383,763
SPECIALIZED FC	175	$ 648,175
WBS	204	
WGS	104	

FY 01

	# YOUTH	EXPENDITURES
RESIDENTIAL TRTMT	564	$ 12,160,480
GROUP HOME	435	$ 2,796,354
THERAPEUTIC FC	128	$ 378,748
SPECIALIZED FC	182	$ 829,992
WBS	199	
WGS	106	

Dealing with the substance abuse problem

According to DFS, recent data from residential care providers reveal that as many as 76% of the children entering the system have significant substance abuse problems. Virtually 100% of the boys entering the Boys' School and 83% of the girls going to Sheridan have substance abuse problems. The statistics are mind-boggling. The average age of kids entering either the Boys' or Girl's School is about 16. The boys have already experienced 7 "out of home" placements and the girls 5. Only about one-half of the boys and less than a quarter of the girls report a positive experience in school. Nearly one in four were expelled from school because of drug/alcohol use.

Policymakers need to understand how young they are when they begin to drink or use. Average age of girls' first use of tobacco is 10, while boys, on average, start smoking before they are 9. This is critical information. The studies are quite clear that it is frequently this early use of tobacco that leads to the use of harder drugs and alcohol as well as delinquent behavior. One study compared 7th grade

smokers, experimenters, and non-smokers at both 7th and 12th grades. It found that when compared with the non-smokers, early smokers were at least 3 times more likely to use marijuana and harder drugs, sell drugs, have multiple drug problems, drop out of school, and experience early pregnancy and parenthood.[225]

Does this mean that everyone who smokes cigarettes becomes a drug addict? Of course not. But it does mean that when you start so young, while the brain is still forming and growing, there is a seriously heightened chance that the child will abuse harder drugs.

The predictive factor of early tobacco use found in the studies, holds true with these Wyoming kids. Among them hard drug use began at 9 years of age among the boys and under 12 for the girls. The problem appears to be worsening. In a 1999 survey of the boys, 17% said they could not get through a week without drugs. In 2000, that number had jumped to 43%. In the 1999 survey, only 29% admitted they had engaged in criminal activity in order to obtain drugs. In the 2000 survey, nearly half made that same admission.

Despite this high rate of alcohol and other drug use and despite the fact that these kids had been in the juvenile system an average of about 3 years each before going to the Boys' School, only one in three has received prior treatment.

In addition to the children placed in residential care, there are about 1000 each year in the Department's probation supervision program. At least 80% of them have substance abuse problems. Oftentimes the caseload for regular probation officers is burdensome, averaging 50 youth per officer. A caseload this high precludes the kind of intensive supervision and case management required to be successful for many of these youthful offenders. To meet the challenge, DFS has begun an Intensive Supervision Probation program, modeled after the adult ISP. Currently the program operates only in Laramie and Natrona counties and on a limited basis. There are two ISP agents in each county with caseloads averaging 15 youth.

As with the adult counterpart, this program employs drug testing, intense monitoring and supervision, a range of immediate sanctions, and partners with local services to meet the needs of the kids in the program. One of the most common comments received from judges, prosecuting attorneys and other people working in the juvenile system was that this program works. It should be expanded.

Findings

A significant amount of time in the course of this study focused on the juvenile population. We are persuaded that while the state must address the needs of adult offenders and substance abusers, *the real opportunity to break the cycle* lies with the development and implementation of early intervention programs targeting young, at-risk children. The following is a summary of the study's findings:

⇒ Substance abuse among Wyoming's youth is at a crisis level.

⇒ The perception of the ready availability of alcohol and other drugs itself leads to higher use rates among young people.

⇒ A permissive cultural attitude in our state about the early use of tobacco and alcohol must be confronted.

⇒ A successful effort to reduce risky youth behavior must take a lifespan approach with an understanding that many of the problems kids have begin when they are in the womb and/or by the age of three years.

⇒ The early use of tobacco products poses a serious problem.

⇒ Underage drinking results from easy access to alcohol and poses a serious problem.

⇒ Untreated substance abusers become parents and, left untreated, their troublesome values and lifestyles are passed along to the next generation.

⇒ There are insufficient adolescent treatment programs in Wyoming at all levels including traditional outpatient, IOT, residential, and detox.

⇒ Existing treatment programs including the residential programs are attempting to meet the need but are under funded for that purpose, do not have standards under which they deliver the treatment, and offer inconsistent treatment.

⇒ There is a lack of effective case management, transition programming, and aftercare for adolescents.

⇒ Too many young people are being criminalized and/or jailed and although statutory procedures exist for the expunging of juvenile records, the process is unnecessarily complicated.

⇒ A multiplicity of courts addressing youthful offenders results in an inability for the system to know what it needs to know about each child.

⇒ Consistent assessments of youth and their families are necessary to determine the needs. Currently assessments are not consistent and often families are not included.

⇒ Courts are not using the statutory authority they have to coerce parents into treatment along with the children who come into the system.

Recommendations

The recommendations that follow are intended to overlay a commitment to enhance the community treatment structure as recommended elsewhere in this report. It is expected those improvements will permit early intervention in the substance abuse and related problems of youth and families. For example, the Department of Family Services has identified one of the key gaps in youth services to be the lack of detox facilities. When an adolescent is arrested, the responsibility for detox usually falls on the jail, the community crisis care provider, or the family, none of whom have the expertise to handle that crisis safely. This is one of several significant gaps that should be addressed in the

proposals to enhance community treatment delivery.

Another important impact of that part of the plan will be the availability of intensive outpatient treatment. Filling this critical gap will open important, effective treatment doors for these kids and their families, giving courts and DFS a major new tool to succeed in their work.

Treatment standards

One of the consistent complaints we heard throughout the course of this study was that there are no standards for treatment. The result is an inconsistency in approaches from one provider to another and from one facility to another. The services provided to families and youth will greatly benefit from the establishment of high treatment standards. It is necessary that treatment standards include specific requirements for adolescent treatment. Community-based programs have been found to be very effective early interventions for young people if they are designed and implemented correctly.[226] These programs must include strategies specific to youth in order to engage them until completion.

Legislators who fund these programs, judges who place juveniles in them, and the families they serve need to know that the program meets research-based standards and that the outcomes are being continually evaluated to make certain the programs deliver. There is far too much at stake to do anything less.

The standards should include protocols for drug testing. The young people with whom we spoke talked candidly about the failures in the current testing system. Testing is a key element of treatment and the integrity of the tests must be protected by uniform standards that change to meet available technology.

It is also critical that the high standards adopted be applied equally to publicly funded programs as well as the private programs to which courts frequently refer juveniles. As recommended elsewhere in this report, the Departments of Family Services, Education, Corrections, and Health should jointly set the standards.

Review of existing treatment programs

Substance abuse treatment is provided currently at the Boys' School and the Girls' School as well as other residential treatment facilities in Wyoming at which children are placed such as Cathedral Home and St. Joseph's. The treatment, however, is inconsistent from one institution to another. This study has not adequately reviewed the programs to reach solid conclusions about the effectiveness but we do have concerns. For example, the average length of stay at the Boys' School, for some with substance abuse problems is about two months.[227] This is the result of the fact that the Boys' School takes in an average of about twice the number taken in each year by the Girls' School. The average length of stay for all boys is about 5.5 months. The girls, on the other hand, remain at Sheridan for an average of nine-months. That is about the recommended length of stay for effective residential treatment.[228]

As important as these two facilities are and given the extraordinarily high rate of substance abuse among the kids placed there, we believe it is imperative that the Legislature fund a performance-based assessment of these programs as well as the other programs to which juveniles are referred. The goal should be not to criticize anyone. We are persuaded that those who administer these programs are doing the best they can with the resources they have. But there has been significant, recent research on what makes a juvenile treatment programs effective. It is time for Wyoming to assess these programs and adopt research-based recommendations to improve the treatment provided. These programs provide a critical opportunity for early intervention that can save the young person years of trouble and save the taxpayers millions of dollars.

It is recommended that independent adolescent treatment experts conduct the review, using research-based, up-to-date criteria. The review should be jointly overseen by the Department of Health, the Substance Abuse Division, and DFS. Recommendations should be implemented as soon as possible.

Intensive Supervised Probation

There is general agreement that the DFS initiative with intensive supervised probation has been successful. We recommend a major expansion of the program. Though it is expensive, these expenditures should reasonably be expected to avert millions of dollars in other expenditures for the juveniles who are placed in ISP. It also saves families…and lives.

ISP permits an agent to concentrate time and resources on a smaller, more manageable caseload. Their caseload of about 15 compares with the normal probation officer's 50. The smaller caseload is oftentimes the difference between early success in a kid's life and continuing encounters with drugs and the law. ISP agents intensely supervise their charges, visiting them at school, work, and in the home. The program usually lasts eight months and uses three levels of restrictions and a range of sanctions to hold youthful offenders accountable. Many of the young people to whom we spoke told us this program had been the difference in staying clean. They knew the ISP agent would be checking on them and testing them. They also found this to be someone to whom they could turn when they needed help.

Importantly, an expanded ISP program would give the courts and communities an effective alternative to out-of-home placements and incarceration while permitting the treatment to take place in the context of the home. Kids can stay at home and in school. ISP promotes accountability in a way that gives greater assurance of effective treatment while protecting public safety.

Just as with adult ISP, these officers will use a system of graduated sanctions to hold their wards accountable. Graduated sanctions provide the means to immediately address behavior, good and bad.

"Graduated sanctions hold juveniles accountable for their actions and, at the same time, reward them for positive progress toward rehabilitation. *** Based on an individual's progress, sanctions and therapeutic interventions can be made more or less intense. If the offender lapses into alcohol or drug use and/or delinquent behavior at any point in the treatment process, graduated sanctions involving placing the juvenile in a higher security, more intense therapeutic environment are applied."[229]

Real, long-term change is promoted by providing intensive services for substance abuse, case management, mental health, life skills, cognitive behavior, education/vocational training, and employment skills.

ISP can serve as an effective alternative to residential placement and also as the means of transitioning young people from institutions to the community.

…actual text of letter from a Wyoming young person

"What I want for probation that I think will help

- ***one-on-one counseling***
- ***random UA's***
- ***(12 step) meetings often as can***
- ***getting strict probation***
- ***not telling me when I am going to get a UA or when my probation will end***
- ***getting set up with things (activities) to keep me busy***
- ***a job that will keep me at work on a late shift on weekends***
- ***not setting me up with groups that involve youngsters that get court ordered there because I will not talk because they may go out and talk about what I say to their friends***
- ***calling my house to check on me and to see if I make it in when I am supposed to and am doing what I am told."***

Families must be held accountable

When a young person is identified as having a substance abuse problem, most often successful treatment requires family participation. Some families are quite willing to be a part of the process. However, we more frequently heard of families that were less than cooperative. In some cases, one or both parents have their own substance abuse problem. A private services provider told of parents who refused to remove the alcohol from their homes even though the refusal meant their child could not then come home for a weekend visit.

In other cases, the child has so disrupted the family, that parents are ready to simply turn him or her over to "the system" to be taken care of. Regardless of the reason, it is problematic to try to treat a child without involving the family.

We believe families must be held accountable for the recovery of their child. Expecting "the system" to make their child well without the participation, financially and personally, of the parents is unfair and ineffective.

It is hoped that the enhancement of the community treatment system will open more doors to families that voluntarily seek treatment for a child. However, when the child comes into the system, the participation of parents should no longer be voluntary and their unwillingness to participate should not be tolerated. Although the courts have sufficient statutory authority to require parents to undergo treatment with their child and to be financially responsible, it appears that does not happen regularly. Courts must be urged to make these expectations mandatory unless the participation of a parent presents a danger to the child.

Examples of statutory authority

WS 14-6-203. [T]he court has jurisdiction to…order any party to the proceedings to perform any acts, duties, and responsibilities the court deems necessary…to refrain from any act or conduct the court deems detrimental to the best interest and welfare of the minor….

WS 14-6-247. [T]he juvenile court may…order the child, his parents, or the guardian, to undergo evaluation and indicated treatment or another program designed to address problems which contributed to the adjudication…order the child's…parents to participate in the child's treatment…require the child's parents or guardian to attend parenting classes or other appropriate education or treatment at their own expense.

WS 14-6-415. The court shall insure the presence at any hearing of the parents, guardian or custodian of any child subject to the proceedings under this act.

WS 14-6-229. The court…shall order the parents or other legally obligated person to pay a reasonable sum for the support and treatment of the child….

When a child enters the system, he or she should be fully assessed. So should his or her parents. *The statutes dealing with examinations appear to apply only to the child.* WS 14-6-219 (Juvenile Justice Act)

and 14-6-419 (CHINS) provide for court ordered examinations of the child. These statutes should be amended to include the parents or guardians where it is suspected their own use of alcohol or drugs is a factor. If the parent has a substance abuse problem, it must be treated along with that of the child. Even if the parent is not abusing substances, addiction is a disease that affects the family and parents can be helpful to their child by learning something about the nature of addiction and how to avoid enabling their child. Frequently there are family dynamics that contribute to the child's drug use that need to be addressed in treatment.

It is recommended that the statutes be amended to mandate that the court may not order out-of home placements by the court until after other alternatives prove unsuccessful. With the enhancement of the community treatment system recommended in this report, there will be sufficient outpatient services available to reasonably accommodate the needs of many families while permitting the child to remain in the home and in his school. In the event these services are inadequate, the court should then be able to impose out-of-home placements in the community. If the court finds on the basis of the evidence that community placements are inadequate, it may order an out-of-community placement.

This change is intended to emphasize the need to treat substance abuse as a family problem, to hold parents accountable, and to enhance community treatment systems while holding down costs.

We recommend statutory changes that mandate family assessments and participation. Further we recommend the Child Protective Services Act and the Child Protection Act be amended to define "abuse" and "neglect" to include allowing illegal drugs to be present in the home of a minor and permitting the minor to use drugs or alcohol or exposing the child to the use of illegal drugs by others.

Juvenile Offender Accountability

As with adult offenders, juveniles must be held accountable for their conduct. Holding children accountable may be the most effective early prevention technique. However, courts need to recognize that the earlier a child first goes to jail, the more likely she or he is to have repeated detentions and even go to prison as an adult. Accordingly, we need to think harder about which juvenile offenses justify jail time and which demand alternatives.

As we have recommended with adult offenders, we also recommend that the courts be required to look at whether there is an effective treatment alternative before placing a child in detention.

In a Nutshell…

All juveniles who are convicted of or plead guilty to alcohol or drug related charges or are convicted of or plead guilty to a felony will receive, as a part of a pre-sentence report, a substance abuse assessment.

Qualified offenders will be given an opportunity for treatment.

"Qualified offenders" are persons whose substance abuse assessment demonstrates they have a dependency on drugs and/ or alcohol.

Those juveniles who pose an unreasonable risk to public safety are not "qualified offenders" for purposes of this act.

Qualified offenders must be given a suspended sentence requiring them to complete a treatment program provided there is an adequate treatment program available.

"Adequate treatment program" is a community-based or other non-prison/jail treatment program certified by the Wyoming Department of Health for purposes of treating the adolescent, criminal justice population that includes protections that can be reasonably relied upon to protect the public safety and hold the offender accountable.

A qualified offender may be sentenced to jail or, where permitted under law, prison only if the court concludes, on the basis of the evidence that no adequate treatment alternative exists, if he commits a felony while in the program or engages in conduct posing an unreasonable risk to public safety. In the absence of the commission of a new crime, probation under this section shall not be revoked.

During the course of our study, there were many who raised concerns about criminalizing young people. Some courts have routinely sentenced young people to as much as 45 days in jail for possession of marijuana. Under federal law there are long-term consequences tied to some drug convictions including the loss of some educational benefits. Additionally, there is a problem resulting from the multiplicity of courts involved with, at times, the same child.

Under the Juvenile Justice Act, the juvenile court shares jurisdiction in certain cases including minor-in-possession offenses. Accordingly, the same or similar conduct may be treated in the juvenile court at one time and in the county or circuit court on another. The result is inconsistent disposition and a lack of communication between courts.

While we firmly believe drug law offenders must be held accountable, under the reforms of the treatment system recommended herein, the courts will have the necessary tools to intervene early, make a difference in the lives of children, and hold them accountable. We have found teachers, parents, and others who are afraid to intervene now because the potential penalty and impact on the child's life are so potentially onerous. The goal need not be to simply punish but must be, as well, to educate, treat, and hold these young offenders accountable in a way that does no long-term damage to their lives.

The proposed act will make treatment the preference. We would encourage the legislature to enact additional provisions making the first offense one that results in a pre-plea diversion, i.e. on the first offense, the youthful offender who is qualified for the treatment alternative would be given that opportunity prior to the entry of a guilt finding. The charge would then be dismissed upon successful graduation from treatment. Failure to complete the program would result in the entry of the guilty plea and sentencing would proceed accordingly.

Along the same lines, we urge the Legislature to review the expunging statute in an effort to make it more meaningful. W.S. 14-6-440 currently allows for the expunging of juvenile court records once a child reaches the age of majority. The law, though, requires the person to petition the court. The expunging should be automatic. The statute should provide that in the absence of the commission of a felony since adjudication, all juvenile misdemeanor offenses are deemed expunged without petition or further order of the court. Under the current law, only those young people who are both aware of the existence of the procedure and able to use it, are able to take advantage. The formal filing of a petition serves no purpose but to penalize the unknowing.

Competitive Purchase of Treatment Services by DFS

While the recommendations in this report are, in significant part, intended to strengthen Wyoming's community mental health and substance abuse centers, we have also concluded that

creating a competitive system is a valid goal in improving treatment.

While we are asking the Legislature to enhance the ability of the community centers to provide effective treatment, we recognize there are other public and private providers who should be given an opportunity to compete. It is urged that significant funding be included in the DFS budget for the direct purchase of services under a Request for Proposal process. Contracts should be entered directly between the Department and the provider giving the Department significant control over the quality of the services and the accountability of both the provider and the offender.

At the same time, the Department of Health should certify additional providers to receive Medicaid payments for treatment services. No one group of providers is able to fully meet the need. Therefore, we believe creating "preferred provider" status for one group is unwarranted. So long as the provider meets the treatment standards established through the recommendations contained herein and is certified by the Department of Health, the provider should be able to receive Medicaid payments.

TANF

The following paragraphs are taken directly from a document issued by the US Department of Health and Human Services, Administration for Children and Families, Office of Family Assistance. The booklet is entitled "*Helping families Achieve Self-Sufficiency: A Guide on Funding Services for Children and Families Through the TANF Program.*" It is designed to simplify a rather complex program.

"States decide the services or benefits that are to be provided using their Federal and State funds. A State must use all of its Federal TANF and State MOE (maintenance of effort) funds to meet one of the four purposes articulated in the Federal TANF statute or, in the case of the Federal TANF funds, to continue providing services and benefits that it was authorized to provide under its former (statute) which covered Aid to Families With Dependent Children, Emergency Assistance, Job Opportunities and Basic Skills Training and Supportive Services. In brief, the four purposes are:

1. Provide assistance to needy families,
2. End the dependence of needy parents by promoting job preparation, work, and marriage,
3. Prevent and reduce out-of-wedlock pregnancies; and
4. Encourage the formation and maintenance of two-parent families.

It is recommended that priority be given to the use of TANF funds that furthers the goals set forth in this report. These funds provide significant opportunities to support prevention as well as treatment programs for a population that should be targeted.

Medicaid and Kidcare

In order to provide additional treatment options to priority populations, we encourage the legislature to expand eligibility for the Children's health Insurance Program and to allow additional providers to become eligible for Medicaid payments.

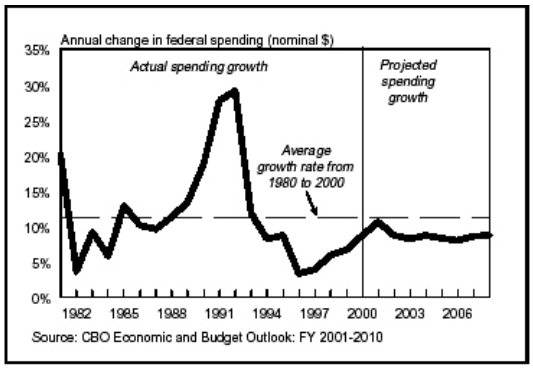
Today Wyoming has the most restrictive income qualification in the nation. While 39 states allow families at or above 200% of the federal poverty line to be eligible, Wyoming precludes eligibility unless the family income is below 133%. The standard not only denies health insurance to many of Wyoming's working families, it also limits the availability of substance abuse and other mental health services to these families, many of whom are at risk.

These options would mean the federal government would make available most of the new dollars needed in this part of the system.

Would expanding Medicaid increase costs for the state? Several items of data suggest that Medicaid and expansion of services to children would have modest impact on costs:

⇒ The Congressional Budget Office (CBO) is projecting increases in Medicaid spending at annual rates of 8% to 9% over the next couple of years. This is below the average annual rate of increase of 11% between 1980 and 2000. The CBO study indicates that the increase is attributable to increased use of health services and health care inflation. The authors conclude that Medicaid has been moderately more successful than the private sector in holding down health care costs per enrollee in 1999 and 2000 with continued expectations into 2003—even though Medicaid pays far more for substance abuse and mental health related claims (which the private sector does not).

Figure 49: Projected Federal Medicaid Expenditures by Congressional Budget Office



⇒ Federal Medicaid costs have been rising faster than state costs. Data from the National Association of State Budget Officers indicate that while federal Medicaid expenditures rose 7.3 percent during state fiscal year 1999, Medicaid expenditures financed from state general funds grew 5.6 percent.

⇒ According to a report by the Center on Budget Policy and Priorities (April, 2001), the key factors underlying the projected growth in Medicaid expenditures are increased utilization of health services and health care inflation, including increases in the cost of prescription drugs. Analyses of the CBO estimates indicate that nearly three-fourths of the projected increase in

federal Medicaid expenditures over the next five years will be attributable to these factors. Interestingly, analyses of the most significant increases in prescription drugs are for psychotropic drugs largely for many of the co-morbid mental illnesses that may be prevented over time by the interventions recommended in this plan.

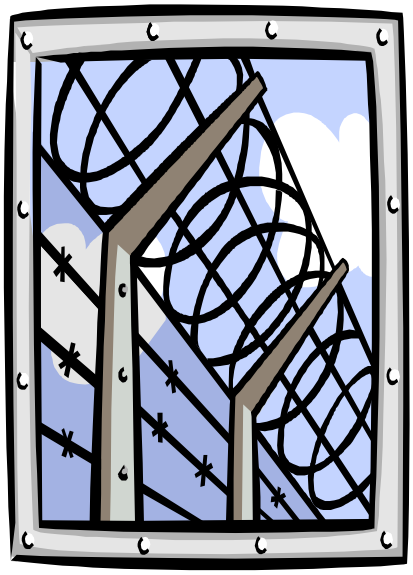
⇒ Care for disabled and elderly beneficiaries (not children) is expected to have a much more powerful effect on Medicaid expenditure growth, both because those beneficiaries are considerably more expensive to serve on average and because the number of disabled beneficiaries is expected to grow faster than the number of other types of beneficiaries. Nearly three-quarters (75%) of the projected increase in federal Medicaid spending from 2001 to 2006 is related to the provision of health care to disabled and elderly beneficiaries. CBO estimates show that more than half of the total increase in Medicaid expenditures in these years will result from higher average health care costs per enrollee for the current number of disabled and elderly beneficiaries, while about one-fifth of the overall increase in Medicaid costs will be due to the cost of serving additional elderly and disabled beneficiaries.

⇒ Analyses of the new CBO projections, however, indicate that increased enrollment of children is not a significant factor behind the projected increases in Medicaid expenditures nationally, nor will enrollment of more parents be a large factor. Specifically, the new estimates anticipate that six percent of the increase in federal Medicaid expenditures during the current year will be attributable to the enrollment of more children (and an additional two percent due to increases in the number of adults enrolled.

Breaking the Drug/Alcohol-Crime Cycle

The Wyoming Legislature is asked to support efforts to reduce crime, reduce recidivism, restore victims' lives, and protect public safety by demanding drug and alcohol abusers be held accountable in ways that promote successful addictions treatment, family responsibility and community re-entry.

"If you don't hold addicts accountable, then you know nothing about the nature of addiction and how to treat it in the criminal justice population." Major General Barry McCaffrey, Former Director, White House Office on National Drug Policy



Where Wyoming Is… and How We Got There

The Wyoming Constitution reserves the power to appropriate money to the legislative branch of state government. However, in a real way, decisions about how much to spend, and where to spend it are made by judges when they sentence criminal offenders. When a judge decides to sentence an offender to either the State Penitentiary, the Wyoming Women's Center, or a county detention facility, that decision carries with it an appropriation of public funds. In the case of prison sentences, it is an appropriation of more than $22,000 tax dollars for each year served.

The cost of imprisoning offenders is consuming a significant share of the state budget. This biennium's appropriation to the Department of Corrections is just a few dollars short of $136 million. The average daily cost for Wyoming's four correctional facilities was $61.79 in 2000, a nearly 31% increase since 1996. The annual average cost is $22,553.35 per inmate.

While the average daily cost of imprisoning offenders is jumping, the numbers of offenders being sentenced to terms in prison is skyrocketing. In the decade between 1990 and 2000, the numbers of males arrested in Wyoming rose 25%. However, prison intake during that time increased by a whopping 64%. For women, the numbers are even more startling. While arrests of female offenders over that 10-year period increased by 38%, intake at the Wyoming Women's Center rose by 153%. These statistics reflect a time when violent crime rates were declining. The numbers are driven largely by drug and alcohol abuse.

While more people are being sentenced to prison in Wyoming, their average length of stay is lengthening, a fact that adds to the continuing growth in prison population. Five years ago, the average length of stay at the men's prison was 24 months. By last year, it had increased by one-third to 32 months

It should be noted that the problem Wyoming confronts with quickly rising corrections costs because of substance abuse is a nationwide problem. More than a million Americans are arrested each year on drug-related charges.[230] One study projects that if the jail population continues to grow at the current rate, by the year 2053, the United States will have more people in jail than out.[231] Prisons are expensive to build and expensive to operate.

The Department of Corrections estimates that as many as 80-85% of the inmates have substance abuse problems. Recently the DOC has begun to screen all incoming inmates. The preliminary results support that estimate. Of the 84 women screened initially at Lusk, 65% scored at a level indicating both a need and a desire for treatment. Another 6% "may" need treatment. At Rawlins, the initial screening of 78 men showed 44% need treatment and another 21% may.

Probationers also report high rates of drug and alcohol abuse. Forty-three percent of them report alcohol use and 2/3 of that number indicate high-use rates. Twenty-nine percent report using meth, 16% use cocaine, and a whopping 64% use marijuana.

Wyoming taxpayers have just anted up approximately $65 million for a new men's prison facility, and the state is in the process of deciding how to spend millions more on either refurbishing the old unit or building another. Wyoming prisons are bursting at the seams. With structural and security problems at the old men's unit and space limitations at the Lusk facility, Wyoming is renting prison space from other facilities. There are approximately 427 Wyoming prisoners at Crowley, Colorado, and another 72 at Wallens Ridge, Virginia. Fifty female prisoners from Wyoming are at the McCloud, Oklahoma facility.

It is an opportune time for lawmakers to consider whether to make fundamental changes in the way in which we hold addicted offenders accountable.

There are some other interesting numbers for the Legislature to consider in this regard. In round numbers, there are approximately 6,000 persons under the Department of Corrections jurisdiction on

any given day. About one-quarter or 1500 are institutionalized in one of the four state correctional facilities. The remaining 4500 are on probation or parole. The obvious implication is that most of the criminal justice (CJ) population is on the streets, in the community, where the DOC responsibility for maintaining public safety is huge. About 60% of these folks are located in just 6 counties, i.e. Laramie, Sweetwater, Natrona, Campbell, Fremont, and Sheridan.

In 1998, nearly one-half of the increase in the prison population resulted from probation revocations and approximately 70% of those involved substance abuse. In other words, while the offender's original crime did not warrant a prison sentence at a cost of more than $22,000 per year, 7 of every 10 of these people ended up doing time due to on-going criminal thinking complicated by their addiction to drugs and/or alcohol.

It is important to consider that not only do we need to be concerned with this population of probationers, but also with the parolees. While it is clear that many offenders will need to be imprisoned for their crimes, policymakers must focus on the fact that most of them will also be released. People who enter prison with addiction problems return to the community with the same addiction unless effective treatment interventions occur while they are incarcerated. We must ask ourselves whether these men and women are better citizens after their release than before? It is an important question to consider if one of our goals is to protect the safety of the community.

> ***"There are many reasons to believe that today's army of released prisoners poses even more danger and faces even worse prospects than the smaller cohorts of the past. Ex-cons spend more time in prison than they used to…Longer sentences weaken the social and economic ties that may shield prisoners when they return to society. The longer you serve, the less contact you have with family, friends, and employers, the more your job skills deteriorate, the more your social network revolves around other criminals."***[232]

It follows that while prison is necessary for many who commit crimes, a prison sentence entails consequences for society as well as the offender. In addition to the enormous financial costs involved, we must be continually aware that when these men and women return they will again be somebody's father or mother and neighbor. Wyoming may want to think harder about whom it is that should go to prison. If the person is not a violent criminal and is addicted, are there good alternatives that keep the community safe, hold the criminal accountable for his or her conduct, cost less, and produce a better citizen?

> ***"Prison cells are expensive. Perhaps they should be reserved for people we are afraid of… rather than for people we are mad at!"***

Why Should We Treat Criminal Offenders?

There is ample evidence that treatment, when done right, works. Every

dollar spent on treatment, according to one study, leads to a $7.46 reduction in the value of crime-related costs.[233] The effectiveness of prison-based treatment was evaluated in a more recent federal prison study. The study included 760 inmates who received treatment and a comparison group of 806 who did not. Comparison subjects were drawn from 30 different prisons. The results indicated those who entered and completed in-prison residential treatment, are less likely to experience post-release arrests and substance abuse during the critical first 6 months following release.[234]

Although there is increasing frustration with efforts to curb drug-related crimes, evidence has been consistent in demonstrating that alcohol and drug abuse treatment not only reduces alcohol and other drug use, but also reduces criminal activity.[235]

It is important to note the leadership provided by the Wyoming Department of Corrections in meeting the challenge of addicted offenders. The DOC has moved aggressively to develop treatment programs for both the incarcerated, probation, and parole populations. There are Intensive Treatment Units (ITU's) at both prisons and an on-going effort to expand treatment throughout the facilities. Additionally, DOC has added a substance abuse specialist to the management staff.

DOC has developed an effective Intensive Supervised Program (ISP) program allowing probation officers to be given limited caseloads permitting intense supervision. Frequent drug testing is required of probationers and parolees and their plan includes appropriate treatment. During the fact gathering for this study, people throughout the state and the system praised the effectiveness of the ISP.

Findings

During our meetings and interviews with DOC and other corrections officials the following findings were made:

⇒ Despite the fact that the criminal justice population has an extraordinarily high rate of alcohol and other drug addiction resulting in high crime rates, recidivism, and significant expenditures of tax dollars, there is no system-wide understanding that these people are a priority for treatment resources.

⇒ Where treatment exists there are significant problems of availability, accessibility, and affordability.

⇒ The treatment system lacks uniformity in the manner in which people are screened, assessed, and treated with few measures to assure quality and assess outcomes.

⇒ Community programs are not integrated in a way that would permit and promote effective case management.

⇒ These factors, combined with an absence of any common understanding of how to hold addicted offenders accountable, result in inconsistent, at time inappropriate, disposition of cases. Whether an addicted offender is given a prison sentence or treatment

depends too much on the personal views of the judge, the prosecutor, or the probation officer.

⇒ Other than in ISP, programs seldom have the ability to mete out immediate consequences for probation violations.

What is working?

There is already in place a solid foundation of successful corrections programs on which to build. The leadership of DOC in developing effective prison and community-based treatment has already demonstrated the usefulness of expanding these programs. While the programs are too new to have produced definitive data, it is clear they are making a difference.

The ITU at Rawlins has space for 28 participants and the ITU at Lusk has space for 16. With some 85% of the men and women in the system needing addiction treatment, these numbers are clearly inadequate, but they form an important beginning. The programs provide necessary long-term treatment. Addictions treatment is combined with corrective-thinking therapy in a way that recognizes the inmate needs more than substance abuse treatment. They also need to learn how to change the way they think and make choices. Accordingly, the program includes more than 100 hours of corrective-thinking, group therapy and education.

The first 9 male inmates to undergo the program graduated on June 19,1996. The first graduation at Lusk was this last June. One hundred seventy-six men have graduated in the intervening years. Of those, 170 departed the prison on parole. Only 12 of them or 6.8% have new felony convictions. Forty (23.5%) were revoked.

We always asked what is working well. We were consistently told by judges, prosecutors, public defenders, and others that the Intensive Supervised Program was a program worthy of expansion. The ISP was established at the request of the DOC in 1995. As the statute clarifies, the program is designed to allow the "participants to live or work in the community under close supervision methods." W.S. 7-13-1101(a)(ii). While officers working in the regular probation program often have excessively high caseloads of as many as 75-100, those working ISP have a limited number of persons to supervise, usually no more than 15. Obviously, this is the key to providing the degree of supervision and accountability necessary to hold an addicted offender accountable.

Under ISP, the offender may be required to submit to "electronic monitoring, regimented daily schedules or itineraries, house arrest, telephone contact, drug testing, curfew checks," and other intense supervision. W.S. 7-13-1102(b)(i). Participants are expected to perform community services, family, educational and vocational counseling, treatment for substance abuse and mental health, pay restitution, and meet other case specific requirements. W.S. 7-13-1102(b)(ii). Another important element of the program is the ability of the probation officer to use graduated administrative sanctions to provide immediate consequences for violations. These sanctions may include

anything from additional community service to jail or other detention.

The DOC has provided ISP agents to be assigned to the Rock Springs and Sheridan therapeutic community treatment programs. They are assigned to these programs, providing supervision as well as assistance in corrective-thinking therapy. The Department has also cooperatively worked with the Natrona and Laramie County drug court teams to provide ISP agents for their programs.

Through the DOC efforts, intensive, outpatient-type services have been started at both Lusk and Rawlins for the general population. They have added 4 counselors to the staff at Rawlins, one at Lusk and a specialized assessment officer at Rock Springs. The IOP, originally called "in reach-out reach", was recently renamed by the ITU participants. It is called TACT, "Treating Addiction and Criminal Thinking."

The commitment of DOC to this issue is further demonstrated by their initiative in arranging for an independent review and evaluation of the two ITU programs. Independent, national experts will conduct this review. The willingness of director Judith Uphoff to initiate these programs and to expose them to honest evaluation should become the model for all state funded programs.

Wyoming can count on good law enforcement

The Wyoming Legislature should continue to acknowledge the vital role of law enforcement in meeting the challenges posed by drug and alcohol abuse.

Their stories

During the course of this study, we met with a group of agents for the Division of Criminal Investigation. What became clear is that they and their counterparts in other law enforcement agencies around the state are taken for granted by many of us in Wyoming. While few believe we can "arrest our way out of this problem" it is clear that the continuing success of law enforcement is pivotal to any comprehensive policy.

When we met with the DCI agents, they were asked what they thought should be done to address this issue. They talked about treatment. "We provide the candidates, sometimes it works and sometimes it doesn't." They complained that the system does not often enough mete out immediate consequences. They object to inconsistent treatment of similar cases from one judge or probation officer to another. Loudly, these fellows objected to the studies that seem to do a lot more "blaming" than solving.

While some felt it inappropriate to ask law enforcement to do "social work"

others see enforcing drug laws about more than arresting people. It may also be about "solving the problem." They felt it was unreasonable to expect programs like DARE to provide the magic bullet. One memorable quote on the topic: "We spend a few weeks with these kids in 5th or 6th grade, teach them about drugs, tell them to 'just say no', walk them across the stage, shake their hands and give them a tee shirt. But we forget that in a couple of months, they will outgrow that tee shirt!"

We listened as they told stories about their experiences. When you do that, it becomes apparent that these men and women are doing work that we cannot appreciate, but must. Quickly, the listener begins to understand the magnitude of Wyoming's drug problem. It is not in just one part of the state but every part. It encompasses not just bad guys, but really bad guys and some others who get hooked by their addiction and still others, usually children, innocent and yet "in the line of fire."

And as we listened, it became clear that legislators and others need to hear these stories. We gathered some and hope you will read them and talk to your local law enforcement officers for more. Wyoming needs to acknowledge the contribution these men and women and their families continue to make.

We asked them to share some of their stories.

One undercover agent presented himself as a "new person in Gillette." He looked the part. Dirty. Not the kind of person you would ask to care for your children…unless you were a meth addict. During one buy, a woman offered to obtain the meth for the undercover agent, but she needed him to front the money. The agent asked for assurance she would not simply disappear with his money. She offered up her infant child as "collateral" to this unkempt, scummy-looking stranger who only moments earlier had appeared at her door looking to buy drugs. She left the baby with him for over an hour and a half while she went for the meth.

A traffic stop in Platte County resulted in the arrests of four men when a deputy discovered three bags of marijuana. A search of the car turned up $2,179 in US currency, over 463 grams of marijuana and a glass pipe with residue. Five days later, one of the men arrested appeared before a justice court judge, was found guilty and was sentenced to 6 days in jail, given 90 days unsupervised probation and fined $230. There is now an outstanding warrant for his arrest for a probation violation. Two of the others received suspended prison sentences and the other has yet to come to trial.

In a bust in Casper, agents were forced to use a military, assault-type vehicle. When they entered the house, they found children sleeping in the same room as a dangerous crank lab. One of the kids, a 15 year-old who had been taught to fear the police, attacked them and had to be subdued.

In Sweetwater County, the bust of a meth lab in a residential neighborhood occurred one afternoon. Inside the house officers found three young children. Outside, neighbors cheered the officers. Officers report it is common to find infants

crawling on floors among used syringes and deadly chemicals used to make the drugs.

In Pine Bluffs, a small, quiet farming community on the southeast corner of the state, an agent made 5 controlled buys of methamphetamine. A Pine Bluffs man was selling drugs he bought from a contact in Colorado. On one occasion, he traded a 9mm handgun for one ounce of meth and when he was busted, there were confiscated multiple ounces of meth and 6 firearms.

In Sublette County, a young woman agreed to buy marijuana for an undercover agent from her Utah source. She came up with a quarter pound of the drug and sold it for $1500. In Afton the police department executed a search warrant finding ephedrine tablets, hydrochloric acid, isopropyl alcohol, acetone, Coleman camp fuel, distilled water, and a small amount of methamphetamine. Determining the occupant was manufacturing meth, he was arrested and subsequently sent to prison. A woman who arranged to receive her meth through the mail was arrested in Jackson. Her dealer was in Pennsylvania and the leader of a motorcycle gang there.

Another meth investigation in Gillette discovered a meth lab in a residential area. The suspect was "cooking" the meth in a kitchen, despite the fact that the process produces deadly toxins and gases. He disposed of the hazardous waste by throwing it into a neighbor's garbage can. When they busted him, two elementary age children were found living in the home-drug lab. On entering the house the agents found significant quantities of meth. They also found the house was infested with lice. The children were placed with DFS. They had lived in this environment for approximately six months before the bust. The landlord incurred thousands of dollars in expense "gutting" the house and refurbishing it before anyone else could move in.

These are stories from one level of the law enforcement effort in Wyoming. Sheriffs and their deputies, police chiefs and their officers, the highway patrolmen and the federal agents working on controlling the supply of drugs should be acknowledged. The acknowledgement is not simply because they have a dangerous job though clearly they do. The real acknowledgement is that they are doing the work the Legislature and the people want them to do, and they do it well. As a result, they deserve not only to be acknowledged but to be heard.

"This is not a 'war'…

As we listened to them, one of the most poignant comments came from one of the DCI agents who objected to calling it a "war on drugs." He said, as the others agreed, this is not a war. *It is a criminal act.*

That is an important comment for us to hear. This is not a "war." Using terms like that conjures up images and creates expectations that are inappropriate for this challenge. Wars have battles that are intended to bring about decisive victories and surrenders. The "war" language has resulted in claims that we have "lost the war on drugs." As the DCI agent's

comment reminds us, this is not a war and it has not been lost anymore than any other effort to stop crime.

The challenge posed by widespread abuse of alcohol and other drugs is so much more complex. When crimes involving drugs are committed, there are law enforcement actions to be taken, tracking information and suspects, gathering evidence, conducting searches, making arrests, getting convictions. The men and women we have hired to do those things, do them well. They have not lost anything.

The complexities of the problem include social aspects as well as medical and educational. There are cultural forces at work that make ending the challenge difficult. But, without a continuing commitment to strong law enforcement, we lose any real hope of meeting the challenge. Their efforts put real pressure on those whose greed exposes our children and families to the danger of drug abuse.

Recommendations

We recognize the success of the programs outlined above. In analyzing other solutions, we urge policymakers to come to understand what has made them successful.

Guiding Principles

First, there is a clear understanding in each of these programs of the nature of addiction. *Regardless of length, jail sentences do not cure addiction.* Those who have never been addicted or faced the problem in a loved one will find it very difficult to understand why a woman faced with the certainty of the loss of her children and a long prison term if she uses drugs again…will use again. It is impossible for non-addicts to fully appreciate why a man who knows a second DUI conviction will result in mandatory jail time, loss of his driver's license and perhaps his job and family…may still drink and drive. That is the nature of addiction.

One of the key findings in this report is that the lack of a common understanding of the nature of addiction creates barriers to successful interventions. Dr. Alan J. Leshner, the Director of the National Institute on Drug Abuse (NIDA) says:

> ***"Too often, discussions about how to reduce substance abuse and addiction turn to intense debates between polarized views. Is drug addiction a brain disease or a bad personal choice? Should we treat addicts or "hold them responsible" and punish them? There are no simple solutions. The correct answer is: 'All of the above."***[236]

Accordingly, it follows that what allows these programs to succeed is the knowledge that in the final analysis, the people in these programs are more than addicts, they are also criminals. Treating only the "brain disease" without also addressing the criminality, produces something nobody wants: a sober criminal.

Second, the programs hold offenders strictly accountable. Inmates who desire ITU treatment must apply and once in the program must comply with strict rules and guidelines. In ISP and drug court, the

offenders are intensely supervised, they are drug tested frequently, the supervisor (whether it is a probation agent with ISP or the judge in a drug court) makes certain rules are followed, obligations kept, child support or restitution paid.

Each of these programs understands that intense supervision and accountability are fundamental to changing the behavior of addicted offenders. The nature of addiction is that the user is manipulative and dishonest. That is the way an addict survives when they need the drug. Additionally, addicts who are also criminal offenders, think differently than others. It is this thought process as well as the using behavior that must change. That change comes through the constant presence of someone who holds them accountable. And so, the good news is that criminals can and frequently do respond to appropriate interventions.

Finally, the ISP and drug courts employ a system of graduated sanctions that allow for immediate consequences. This system is not so much a part of in-prison treatment, but it is critical to treatment that occurs when the offender is in the community. This is what we call "managed punishment." Recognizing that although relapse is not a good thing, it frequently happens during the course of effective treatment, having in place a system of graduated sanctions is central to the program. Graduated sanctions are tools used by the judge or ISP agent to give appropriate consequences for negative behavior.

Not every violation that takes place while an offender is in a program should result in imprisonment. If the only tool the mechanic has is a hammer, it is what he will use regardless of what may be wrong with your car. You probably wouldn't take your car to such a mechanic. The same thing is true of substance abuse treatment. The supervisor needs more tools than the threat of prison. If the violation warrants prison, that possibility exists. But when a prison sentence costs the taxpayers over $22,000 a year, it should be used only when necessary to protect the public safety.

Other tools are included in the ISP statutes. More treatment, additional community service, jail time of up to 30 days are among the possibilities. Some drug courts impose levels of sanctions to include fines. For most participants, a "wake-up call" will suffice. In addition to giving the supervisor additional tools, these sanctions allow him or her to give *immediate* consequences. The ability to act quickly can prevent greater problems.

And so these common elements of successful programs, i.e. understanding the nature of addiction, strict accountability and intense supervision and using a range of appropriate sanctions and rewards, should be considered as other programs are developed for the criminal justice population.

Criminal offenders as a priority

The Legislature and other policy makers need to be clear and consistent. The treatment of the criminal justice population is a priority. These are the people who threaten public safety. They are the ones costing taxpayers the most

money both in terms of criminal activity, recidivism, law enforcement, detention, court costs, supervision, and imprisonment. We know who they are. We know where they are. The system can exercise sufficient authority over their lives to hold them accountable to treatment and other related services. This is clearly a population of people on whom the treatment system can have an impact. It is also important to note that when we impact their lives, we are impacting the lives of their children and spouses as well.

This decision is central to a comprehensive plan. It effects more than the Department of Corrections. While these folks have always been the top priority for DOC, that is not true of other state and local agencies that will be effected by this decision. Some of those agencies may not welcome this decision. When the DOC issued a Request for Proposal for the establishment of the ITU at Lusk, not one of Wyoming's mental health and substance abuse centers submitted a bid. This group of men and women are not easy to work with, there is a stigma about them and they bring with them bags full of problems.

Prioritizing this group will impact community mental health and substance abuse programs. They will have to integrate services in their communities so that this population is adequately served. Their staff will have to be trained in working with this specific population. Other state agencies will also be required to coordinate what they provide to meet the needs of this group.

However, unless this priority is established through funding and other policy decisions, the system will not likely focus enough resources on the problem to meet the challenge.

Increased Prevention and/or Treatment Efforts in All Correctional Facilities and Jails

While the DOC is in the process of expanding treatment in the men's and women's prisons, the Legislature should support an on-going expansion of these programs. The results of the DOC review will be ready before the end of the year (2001) and should be considered in determining how treatment is accomplished in the prisons. It is also encouraged that the legislature make the need for prison-based treatment a prime consideration when making decisions about future site selection for prison. It is critical that such facilities be built where the local community is able to support the needs associated with effective treatment.

Second, alcohol and other drug treatment should be expanded at the conservation/boot camp and the Honor Farm.

Third, facility-appropriate treatment and/or educational programs should be required at all Wyoming jails and detention facilities. No criminal offender should be allowed to spend time in a Wyoming detention facility without being exposed to education and/or treatment opportunities. For offenders who are clearly substance abusers, these programs should not be voluntary. This should not

be another un-funded mandate. Neither does it have to cost a great deal. By creating partnerships between the detention facility and others, including the Substance Abuse Division and local substance abuse centers among others, a great deal could be accomplished inexpensively.

It is noteworthy that many detention facilities currently offer programs. The following table is a summary of existing programs.

"Prevention efforts could include educational hand-outs, informative videos, and didactic group discussions focused on the negative consequences of substance abuse. Basic education on alcohol and other drugs should be offered. Prevention and intervention efforts should include life skills interventions, life competency skills training, other behavioral topics, and attention to criminogenic characteristics. Prevention materials and videos should be available to all persons in the criminal justice system."[237]

Correctional and detention facilities "should work to create an environment which reinforces positive change and focuses on personal responsibility and accountability. All correctional staff should be trained about chemical dependency treatment and related interventions. Treatment professionals with expertise in criminal justice programming should be used as resources to make recommendations to correctional facilities about treatment programs. Characteristics of effective treatment programs and therapeutic communities should be integrated into correctional settings where possible."[238]

The Wyoming Law Enforcement Academy should include appropriate courses and seminars in its curriculum and the Substance Abuse Division should provide additional training throughout the state to accomplish this goal. The current curriculum for the Detention Officer Basic Course includes just 2 hours of training on substance abuse of a total requirement of 273 hours of instruction. Those two hours are assigned to giving officers "a basic understanding of…the problems caused by substance abuse in jail."[239]

The Department of Corrections and the Substance Abuse Division, as well as C-SAC's and other community programs can also provide local detention facilities with technical assistance. The Division would also be a source for providing training for detention staff in corrective thinking techniques, for example. Local 12 step groups can become involved in providing volunteers to lead jail house meetings. Information referring inmates to treatment programs should be provided. This effort need not be onerous or top heavy with state imposed requirements. The goal of the recommendation is encourage sheriffs and others to think of creative ways they can use the time that offenders spend in their custody to acquaint them with prevention and treatment. Such a concerted effort would signal the common goal of the state to target this population. It will also sow important seeds in some offenders…at little cost.

Table 9: County and Prison Substance Abuse Services

County	House Juveniles?	If no, where do they go?	If yes, educ. serv. provided?	Do you have any adult programs?
Albany	Yes	N/A	School dist will send a teacher to keep them up on their studies. If they have been expelled, there is a GED program available thru LCCC.	GED Program - weekly; AA weekly; currently trying to get a mental health center to organize a group on criminal thinking, will probably happen in the fall.
Big Horn	No jail in Big Horn County, contract with Washakie County.			
Campbell	Yes	N/A	Teacher comes in 5 days a week during school year, weekly AA & NA meetings	GED Program - weekly; AA & NA weekly; church services/bible studies weekly.
Carbon	No	No facilities around to house them.	N/A	No services available, but not opposed to them.
Converse	Yes	N/A	Eastern WY College provides GED program couple times a week; local high school provides tutoring services couple times a week.	GED Program, AA & NA available upon request, services can be provided a couple times a week.
Crook	Yes	N/A	GED program on request	GED program on request; AA available on request, church services weekly.
Fremont	Yes	N/A	School 5 days a week	No services available. Hoping to have something in about a year.
Goshen	Temporarily < 72 hours	Frontier Corrections	N/A	GED Program as requested; Church services 3x a week; Mental Health Counseling if physician warranted; AA weekly but only available to Protective Custody inmates, medium and maximum security and female inmates not able to participate.
Hot Springs	No	Frontier Corrections in Casper	N/A	GED Program - request; Church Serv weekly; Counselor for substance abuse & criminal behavior 2x a month; AA type meetings 2x a month; few other counselors available on request.
Johnson	No	Frontier Corrections or youth home	N/A	GED Program - upon request, weekly; AA and church services weekly.
Laramie	yes			This facility has many programs including GED, religious couseling, corrective thinking and AA/NA as well as a women's program
Lincoln	Yes	N/A	Go thru Drug Court System	GED Program - upon request. Substance Abuse treatment thru Drug Court System.
Natrona	No	Frontier Corrections	N/A	GED Program - upon request; church services 2x weekly; set up to do AA & NA meetings but don't have sponsor willing to conduct regular meetings. Sponsor on call to do individual talks per request from inmate.
Niobrara	No	Frontier Corrections	N/A	GED Program if court ordered; church service weekly; No substance abuse programs - not much available in Lusk.
Park	Try not to	If can, refer to Sunlight Shelter	No services available, but would try to accommodate it requested.	AA and church services 2x a week.
Platte	No	Frontier Corrections	N/A	Books for GED but no one to teach; AA and Church services weekly; Counselor from SE Mental Health available upon request of inmate.
Sheridan	No	Frontier Corrections	N/A	GED Program - up to 5x a week; church services weekly; AA & NA weekly.
Sublette	Try not to	Signing contract w/ Frontier Corrections	N/A	GED Program on request; counseling on request; church services weekly; AA & NA weekly & on request.
Sweetwater	Yes	N/A	None.	None.
Teton	No	Sheridan, Worland or Casper	N/A	GED Program on request; counseling on request; church services 2 x week; AA weekly.
Uinta				
Washakie				
Weston	No	Frontier Corrections	N/A	Books for GED but no one to teach; church services weekly; counseling upon request; no substance abuse programs available

Expanded Use of ISP

The current ISP offers a cost effective way of holding addicted offenders accountable. The statutory framework under which the program operates lends itself perfectly to managing the recovery of substance abusing criminals. We urge the legislature to expand the program by funding six additional agents. These ISP agents will be assigned to the six counties that have extraordinarily high numbers of probationers and parolees.

The six new agents will supervise approximately 90 offenders, making certain they participate in treatment, stay employed, pay restitution and child support and other debts, and conduct themselves properly. As the DOC has been able to assign ISP agents to drug courts in Laramie and Natrona Counties, these additional agents would make it possible to do so elsewhere.

Drug Courts

During the 2000 Legislature, an important step was taken. The Legislature funded a statewide, drug court initiative. At the time, there were three drug courts operational in the state:

In Sheridan County, Uinta County, and Lincoln County.

The legislation provided one and a half million dollars to use for local drug court implementation and continuation grants. Importantly, the bill also mandated the Department of Health to establish rules for the certification of treatment standards in drug court.

Today the Department has promulgated rules and the drug court panel will soon decide on grant applications. Several Wyoming communities have received drug court training conducted by the US Department of Justice. These include Laramie, Natrona, Park, Fremont, and Big Horn Counties. In addition, Gillette has received federal funding for its court. These courts and the commendable efforts behind their creation will produce important changes. They have already demonstrated success in reducing jail costs and recidivism.

The success of the drug court concept is universal. The national statistics speak loudly:

- More than 57,000 offenders have graduated from a drug court program
- Almost 50% of the participants had been using alcohol and/or other drugs heavily for 10 years or more
- 73% are parents of minor children
- 65% were previously incarcerated for drug-related charges
- Recidivism rates that run as high as 80% among non-treated addicts range from 2% to 20% among drug court graduates
- More than 4500 parents with previous child support orders are now current on their child support

- 3500 parents have regained custody of their children through drug court participation

Compared with other treatment programs, drug courts provide more comprehensive supervision and monitoring, increase the rates of treatment retention , while reducing drug use and criminal behavior….[243]

We recommend that the initiative be continued and that funding be doubled. The grants to local communities are capped at $200,000. This amount of money may treat between 40 and 50 participants per year. The initial appropriation provided $1,350,00 for grants that will fund perhaps 7 local courts. If funds are to be available to continue their operation and develop additional sites, the appropriation should be doubled.

The writers of this report have a concern about this program. Clearly the state cannot afford to provide grants to all communities that may apply. The concept will prove effective and as more communities seek to implement drug courts, the funding will be insufficient. At some early point, a policy decision must be made about how many courts will be funded and where. Will they serve juveniles as well as adults? How will drug courts be integrated with the rest of the judicial system? Will treatment be available to some offenders because a community has a drug court but unavailable to those who live in a community that does not?

Coupled with that concern is one that causes us to ask whether it is wise to establish a certain group of judges and courts as "drug courts" while others continue to operate as they have been. During our hearings on this plan, one former district court judge who attended said, "The truth is that every judge IS a drug court judge whether they call themselves that or not!" What he meant is that every judge sees a myriad of both civil and criminal case in which substance abuse is at the heart of the problem. All judges deal with substance abuse in the regular flow of their duties. His observation caused us to consider the wisdom of a long-range policy built around designating only a handful of courts as "drug courts" without considering how what they do is to be integrated into the entire judicial system.

The development of specific drug courts should not be viewed as an end to itself but rather as the means of changing the way things are done throughout the system. That should be the goal rather than continuing to designate and fund special courts to do the work that in fact confronts every court.

The Addicted Offenders Accountability Act of 2002

Having spent more than $65 million on the new prison facility at Rawlins and faced now with the decision on how to spend millions more on either refurbishing the older unit or building a new one, it is an opportune moment to

study whether there are alternatives. We believe there are.

> ***"Alternatives to incarceration are designed to stop the revolving door of drug abuse and crime by using the coercive power of the court to engage drug-abusing offenders in treatment. The criminal justice and substance abuse treatment systems work together to provide offenders with the services they need while still holding them accountable for their crimes. Compliance with alternatives to incarceration programs is generally based on measurable performance goals, such as completion of treatment phases and abstinence. Programs provide clear choices, sanctions, and incentives to help individuals take control of their own recovery and to hold them accountable for failure to comply with treatment.***[244]

This recommendation is based on the following guiding principles:

⇒ Decisions regarding criminal offenders must be made in a manner that reasonably assures public safety and recognizes the interests of victims.

⇒ Criminal offenders must be held accountable for their conduct.

⇒ Prison space should be reserved primarily for offenders whose continued criminality presents a threat to the public.

⇒ Well-developed and accountable community-based corrections programs have proved effective in treating addicted offenders particularly in conjunction with a supervising judge of probation officer.

⇒ Offenders should be assessed prior to sentencing to determine the need for substance abuse treatment and the level of services required.

⇒ Where possible, courts should require addicted offenders to enter treatment programs deemed effective and require offenders to successfully complete the treatment as an alternative to a prison sentence.

⇒ Clear standards should be established, defining acceptable treatment alternatives while giving attention to the need to protect public safety by providing intense supervision where necessary, frequent drug testing and monitoring, and case management services.

⇒ Those offenders who are placed in prisons should be required to serve a minimum sentence AND a term of mandatory aftercare provided through an integrated re-entry program addressing the variety of needs of a returning inmate.

⇒ If drug courts are so successful, we need to find ways to transplant drug court concepts such as monitoring, accountability, and intense supervision throughout the system.

Virtually every state is struggling to get a handle on this problem. In California, the voters passed what is

known as "Proposition 36" mandating treatment for addicted offenders in lieu of prison. Last year, the New York Chief Justice ordered all lower courts to offer treatment instead of imposing jail sentences on addicted criminals.[245]

These efforts are problematic in our opinion. In both cases, there is a real concern that the treatment capacity is unable to meet the need. Second, under the California law, an offender knows he or she will receive treatment instead of incarceration. Under that approach, the court loses its big hammer, i.e. the threat of prison if the offender does not take advantage of the treatment alternative.

The effort to reduce prison populations cannot be achieved unless we first guarantee the availability of adequate treatment. Additionally, the ability of the court to coerce successful treatment is a necessary component.

Among other states grappling with increasing prison costs for incarcerating non-violent, addicted offenders, Kansas and North Carolina appear to have found some useful answers. In North Carolina, Legislators have approved the use of a sentencing grid designed to measure the impact of addiction on the criminal activity in which the offender engaged in a way that determines the risk to public safety. Those who are determined to pose unreasonable risks to public safety receive prison sentences regardless of their addiction problem. However, non-violent, addicted offenders are held accountable in well-supervised, community-based treatment regime. We have concluded that there may be a need to discuss sentencing reform to provide for a more consistent sentencing and a more common philosophy. However, we believe there is a useful first step that should be taken.

In Kansas, certain non-violent juvenile offenders and other chronic misdemeanants found to have substance abuse problems are placed in community-based treatment programs rather than jail or other detention, unless the court determines based on the evidence that no adequate treatment alternative exists. Aftercare is mandated for all offenders, juvenile and adult, who are sent to detention facilities.

In consideration of the experience of these two states and the situation in Wyoming, we propose the Legislature consider the following sentencing alternatives:

⇒ Each convicted offender will be screened and, if appropriate, receive a thorough substance abuse assessment prior to sentencing regardless of the nature of the offense. This may be the key to the success of both the program and individual treatment. If the court and the attorneys are to make determinations about adequate treatment, the quality of information gathered here is critical.

⇒ Qualified, addicted offenders will be given suspended sentences contingent on successful completion of substance abuse treatment unless the court finds, on the basis of the evidence that no adequate treatment alternative exists.

⇒ The legislation should define "adequate treatment alternative" to mean an alternative to prison that poses no unreasonable risk to the safety of the public, with treatment taking place in a community-based program certified by the Department of Health to treat criminal offenders.

⇒ The legislation should mandate regular case review by the court and intense supervision of participants including requirements for frequent drug testing, payment of restitution, contributions to the cost of treatment, educational achievement, community service, and other accountability measures.

⇒ Upon completion of the treatment program, probation should extend for one to three years with specified aftercare requirements.

Implementation of this alternative must await other reforms recommended in this report. Until the treatment system is upgraded pursuant to the recommendations contained herein, these changes will not be possible or wise. Accordingly, the Addicted Offenders Accountability Act should not be considered in the absence of a commitment to enhance the delivery of treatment services.

If that commitment is made, the Act should have an effective date of January 1, 2003, giving the system the time it will need to meet the requirements of the Act. It should also carry a sunset provision requiring the Department of Corrections and the Department of Health to evidence its effectiveness before being renewed. We recommend the Legislature sunset the Act effective June 30, 2008, unless the evidence justifies its extension.

We are persuaded that non-violent offenders can be held accountable and public safety protected by creating an effective treatment alternative. By *requiring* the consideration of a treatment alternative in these cases, the Legislature stands a good chance of managing prison growth at the same time. Under this proposal, every court becomes a "drug court." Every court will be asked to consider whether treatment is an adequate alternative to prison.

That determination is key to achieving the results. In each case where the offender has substance abuse problems, the court, the prosecutor, and the defense counsel will be required to consider not only treatment but also whether treatment is effective. The local treatment providers will, in effect, be on trial.

Currently, when programs are used as sentencing alternatives, neither the judge nor the attorneys have the means of determining whether that program actually works. Under this proposal, the question becomes important. If the prosecuting attorney is unconvinced that the local program works, he will argue against the treatment alternative. The public defender or other defense counsel will have the duty to identify and present to the court an adequate treatment alternative.

In a nutshell…

(a) All chronic misdemeanants and persons convicted of or pleading guilty to a felony will receive, as a part of a pre-sentence report, a substance abuse assessment. A chronic misdemeanant is a person who has been convicted of more than one misdemeanor charge directly or indirectly involving the use of drugs and/or alcohol.

(b) Qualified offenders will be given an opportunity for treatment.

(c) "Qualified offenders" are persons whose substance abuse assessment demonstrates they have a dependency on drugs and/ or alcohol.

(d) If a person has been convicted of a violent crime or delivery of controlled substances, there is a rebuttable presumption that the person is not a "qualified offender" for purposes of sentencing under this act. This presumption may be rebutted by clear and convincing evidence that a person convicted of a violent crime could participate in a treatment program without posing an unreasonable risk to public safety. As to persons convicted of delivery of a controlled substance, the presumption may be rebutted by clear and convincing evidence that the person committed the crime in significant part because of his or her own dependency rather than for purposes of monetary gain.

(e) Qualified offenders must be given a suspended sentence requiring them to complete a treatment program provided there is an adequate treatment program available.

(f) "Adequate treatment program" is a community-based or other non-prison treatment program certified by the Wyoming Department of Health for purposes of treating the criminal justice population that includes protections that can be reasonably relied upon to protect the public safety and hold the offender accountable.

(g) A qualified offender may be sentenced to prison only if the court concludes, on the basis of the evidence that no adequate treatment alternative exists, if the offender refuses to agree to participate in the treatment program, if the offender commits a felony or engages in other behavior that poses an unreasonable risk to public safety while in the program. In the absence of the commission of a new crime, probation under this section shall not be revoked.

The adoption of the other systemic reforms recommended in this report will result in the establishment of treatment standards, the development of comprehensive programs, protocols for drug testing and case management. The bottom line is that if the local providers are not offering effective programs, the judge will find, on the record, that no "adequate treatment alternative" exists. Such a finding will serve to motivate the provider, the Departments of Corrections and Health as well as the community to find out why. Their inquiries will lead to improvements where needed.

With this approach, everyone in the system becomes accountable for the public's safety and for the taxpayers' dollars. The addicts are held accountable for their conduct. Judges are required to consider whether there are effective, safe alternatives to costly prison sentences. The prosecutors and defense counsel have to think about whether treatment exists as an alternative, and the treatment and private corrections community will be required to prioritize this population and be asked to prove that what it does works.

With the power of the court looming over them, both the addicts *and* the programs behave better. And that can make rehab work![246]

Criminal Justice Treatment Standards

As has been recommended in another section of this report, we believe the DOC together with the Department of Family Services, the Department of Education, and the Department of Health should promulgate standards for all

treatment programs receiving state funds as well as other programs to which courts refer offenders. These standards should include specific provisions for treating the criminal justice population. It is important, as well, that the standards include provisions for drug testing to insure the usefulness and integrity of the testing programs administered by each Department.

Standards for treating the addicted criminal offender will share some elements with treatment standards for the non-criminal addict but there are very important differences as well. In his book, The Criminal Personality: The Drug User, Dr. Stanton Samenow, the developer of corrective-thinking therapy techniques, says poignantly:

> ***"Unfortunately the family and society, almost universally focus on drugs as the cause of the user's antisocial behavior, whereas the truth is that the havoc raised by the user is not solely the result of drug use. The more appropriate focus is the pre-drug personality.***[247]
>
> ****** "Before they began using drugs, the men in our study made a series of irresponsible choices that resulted in a criminal way of life."***[248]

That does not mean that the addiction is a matter of choice. Clearly, addiction involves compulsive use of substances. It does, however, mean that if we treat the addiction alone, without treating the criminal thinking, we may get what nobody wants…a sober criminal! It is, accordingly, important that treatment standards for this group be specific in addressing criminogenic factors. The policies should address initial assessment and diagnosis, treatment, case management, monitoring, testing, supervising, outcome evaluation, and other necessary standards to assure taxpayers they are getting a fair return for their investment.

These standards should be promulgated by September 30, 2002.

Children of Incarcerated Parents

What happens to the children of the men and women we send to prison? It is an important question but one for which there is no systematic answer. It is important because of the obvious. These kids face unique difficulties. The trauma of the arrest of a parent, the sudden separation from a caregiver, unexplained placements in foster homes or with relatives all combine to create a haze of confused, even conflicting feelings of fear, anger, anxiety, depression, shame, guilt, sadness. These children have lived in homes where they are at-risk and upon the arrest of a parent, that risk is accelerated. The behavioral consequences are often severe in the absence of considerable intervention. They frequently withdraw emotionally, fail in school, and engage in delinquent behavior and substance use. Many are at risk to funnel into intergenerational incarceration.[249]

These kids are falling through the cracks. Unless they are already "in the system," they are often forgotten. The

Division of Criminal Investigation agents tell us that frequently there are young children present when a drug bust occurs. Currently there is no systematic way to make certain of an immediate and continuing intervention to reduce the risk for those kids or others whose parents are arrested and jailed.

Neither do sentencing courts concern themselves with the children of the man or woman they are sentencing to prison. The focus is on the parent being sentenced. We have a great deal of data about him or her. We know how many go to prison or a county jail and for how long. We even know that some of the women going to prison are pregnant and give birth while incarcerated. But nobody collects sufficient data on the children. We don't know how many of them there are or where they are or, for the most part, whom they are with and whether that is good for the child.

Limited DOC statistics indicate that about one half of the male inmates report they have 1853 "dependents." The statistics do not reflect whether these are minor children or other dependents. A number that large could reasonably be assumed to include mostly children and given the age of most inmates, the vast majority of these "dependents" are likely minor children. Of 169 female inmates, 119 report a total of 250 "dependents."

If we are going to break the cycle, we must begin to focus on these kids, as well.

"According to Denise Johnson, head of the Center for Children of Incarcerated Parents, up to half of all male children of prisoners will go on to commit crimes themselves, perpetuating a cycle that will feed the prison boom for generations to come. Certainly, some kids face grave risks in the hands of drug addicted or crime-prone parents. But even for them, the loss of a parent is deeply damaging."[250]

What is clear is that there is a negative impact on the children. A number of studies verify that fact. They found that these children suffer from multiple psychological problems that manifest in a variety of troublesome behaviors including a decline in school performance, truancy, use of drugs and alcohol, and aggression.[251] What is important to know is that the impact falls not only on older children but infants as well. Infants experience an impaired parent-child bonding leading to a variety of continuing difficulties. This premature termination of the parent-child relationship with an older child, e.g. late adolescence, is a high predictor of the child's own subsequent criminal activity and incarceration.[252]

It may not be obvious but it is logical that the problem is more serious when the incarcerated parent is mom. Mothers are the primary care giver and her sudden absence frequently is the source of greater anxiety and hardship.[253] All of this is true even in the absence of incarceration when a parent is repeatedly arrested or in trouble with the law.

It is recommended that the Department of Corrections, the Department of Education, the Department of Health, and the Department of Family Services be asked to undertake a collaborative effort to create a focus on the children of incarcerated parents. The result should include appropriate interventions beginning at the time of arrest and involving the child's school. It should include a mechanism for considering the placement of a child whose parent is being imprisoned, continuing contact with the parent where appropriate, programs for pregnant prison moms, and other interventions designed to reduce the risk posed for these kids.

Offender Re-entry

"We've locked 'em up. They're getting out. What do we do now?"[254]

Using Malcolm Gladwell's theory about the New York subway system, i.e. the way to clean it up is one car at a time, coupled with the commitment that once a car is reclaimed, all necessary resources will be used to make certain it stays reclaimed…we recommend the Legislature establish a coordinated offender re-entry program.

We all agree that some offenders need to be imprisoned. One of the challenges of just sending people to prison is that they get out, and most often they are more ill-prepared to be productive citizens upon their release than they were when they were sentenced. Family ties have weakened. Job skills, if they had any, are lost. Educational deficits are magnified. They return home handicapped by a prison record in obtaining a job and housing.

We must acknowledge that incarceration is not the final destination for most of these men and women. *Our communities are.* Making adequate provisions for their re-entry is in our own self-interest and in the interest of protecting the community. Furthermore, it makes good economic sense. If we are going to spend more than $22,000 a year housing them in a prison, it makes sense to spend a few more bucks trying to make their re-entry into our neighborhoods successful. The goals of this re-entry initiative are:

⇒ Help offenders become productive, responsible, contributing members of the community;

⇒ Help offenders obtain and retain long-term employment;

⇒ Meet on-going substance abuse and mental health needs;

⇒ Provide adequate supervision and monitoring of returnees; and

⇒ Involve the private sector and faith community.

There is a dynamic tension between the community's need for safety and the ex-offender's right to return to society. Although protecting public safety and social order are paramount, significant investment also must be made in the successful re-entry of the offender. In this sense, "good re-entry is good public safety." People who suffer from mental illness (as do many inmates) are greatly stigmatized, hindering both their treatment and social adjustment. Likewise, there is a recognized stigma for individuals who have encountered the criminal justice system through arrest, detention, conviction, and incarceration. When someone has both a criminal record and mental illness (or substance abuse problem), this stigma grows exponentially and becomes a way of excluding the offender from the society.[255]

The enhancement of community substance abuse treatment resources, as recommended herein, will help greatly to facilitate this effort. Nearly 60% of Wyoming parolees reside in the six counties targeted to have Comprehensive Substance Abuse Centers (C-SAC's) under this plan. This change alone will substantially increase the ability to provide re-entry services for the returning inmates. But more will be needed.

As the enhancement of community services is taking place over the coming year, the Legislature should ask several state agencies to collaborate in writing a plan for the integration of re-entry services. This plan should include provisions to meet the varied needs of this population - including employment and education services, medical and mental health care, substance abuse treatment and monitoring, housing, legal needs, family bonding and domestic violence counseling services, family and childcare, and more. It should include provisions for intense supervision and monitoring. The plan should also be developed to motivate the involvement of the private sector and the faith community as well as local 12 step groups.

> ***"Business leaders can provide invaluable assistance in planning training programs and providing opportunities for job placements."[256]***

This initiative should be phased in after sufficient time is devoted to planning an integrated program to enhancing community services. The Legislature should commit the necessary planning funds during the 2002 budget session and approve the plan with adequate funding in 2003.

Competitive Purchase of Treatment Services by DOC

While the recommendations in this report are, in significant part, intended to strengthen Wyoming's community mental health and substance abuse

centers, we have also concluded that creating a competitive system is a valid goal in improving treatment.

While we are asking the Legislature to enhance the ability of the community centers to provide effective treatment, we recognize there are other public and private providers who should be given an opportunity to compete.

We believe it would be beneficial to allow them to compete with other publicly-funded providers for contracts with the DOC. It is urged that significant funding be included in the DOC budget for the direct purchase of services under a Request for Proposal process. Contracts should be entered directly between the Department and the provider giving the Department significant control over the quality of the services and the accountability of both the provider and the offender.

The State Government Can't (and Shouldn't) Do It All!

The Wyoming Legislature is willing to become a partner with parents, addicts and others, with individuals and organizations, businesses and the faith community, with schools and courts and local government. The state will provide the incentives and the commitment to create partnerships that work to meet the challenge of preventing and treating substance abuse.

"Wyoming is a small town…with very long streets!"[257]

The government, at all levels, has an important and vital role to play in any genuine effort to prevent and treat substance abuse. Through its ability to tax and appropriate, the government can not only raise much of the necessary financial resources, but must also use that power to make certain that programs are held accountable.

We have concluded, though, that the primary role of the state government is to create partnerships. The government cannot solve this problem by itself. Even if the government was willing to try to go it alone, the nature of the substance abuse problem creates natural barriers for an "all government" solution. Substance abuse is, in one instance, a personal problem with definite spiritual roots. It is a family problem and there are, and ought to be, definite limits on the ability of the government to intrude into family.

Finally, substance abuse is a community problem. The substance abuse problem, its causes and its solutions differ considerably from one Wyoming community to another. The resources available to meet the challenge differ, as does the political and communal will.

Any truly promising approach must acknowledge all of these factors. The plan must seek to employ the resources of the state to develop effective partnerships. The plan needs to be inclusive, asking all players to the table, giving them an opportunity to use what they bring to help. While we believe the state must exercise considerable leadership, it must also know when to follow.

A new way of thinking

We have an opportunity in Wyoming that honestly does not exist in many states. Our small population gives us a chance to come together as a community to meet the challenges of substance abuse. As we do, we will need to agree that is our common goal. Political, business, professional, religious leaders, and others will have to agree that together we can solve this problem, that it is a common goal, and that it is a common priority. If it is not a common goal, it will not be enough that the Legislature or the Governor makes the commitment.

Wyoming Vision 20/20 has a goal of placing Wyoming among the national leaders in creating a healthy environment for our children, a place where they achieve academically and personally, where families are indeed strengthened, and communities are healthy. If we are to succeed, we will have to think differently, smarter about how we come together.

Success will require decision makers to think about budgets and programs. There is no question that meeting our goals will require people who demand accountability. The commitment to meet this challenge will require a financial investment and the taxpayers need to know that the investment will give them a return.

Smarter thinking about this issue will also require that we think *spiritually* as well. The truth is that the problems Wyoming is confronting related to the abuse of alcohol, tobacco, and other drugs are in a fundamental way, spiritual problems. Clearly there are political, economic, and social implications. But at the heart of the experience is a spiritual sense that causes people to make bad choices and communities to fail to come together. If we can talk honestly about the spiritual connection to the problem and its solutions, we will make the right political, economic, and social choices. Those choices will encourage our people to become a part of the solution rather than relying on the government to take care of it.

Ending the stigma

If you ask at any meeting you attend, church services, business meetings, community events of any kind…"how many of you have been impacted by a family member's use of drugs or alcohol?"…nearly all hands will be raised. The statistics are cold revealers of the fact that so many of our families have suffered the experience. But, for the most part, they suffer quietly.

There is a stigma about substance abuse and addiction. Despite the fact thousands of Wyoming families have been ravaged by drugs and alcohol, there are few who are mobilizing for more treatment or prevention programs. If 41% of our kids were diagnosed with an incurable disease, imagine the outcry! The state would be up in arms, demanding something be done. Their families and friends and neighbors would be holding meetings, organizing, writing letters to their legislators and the editors of the local paper. Political leaders would clamor to be a part of developing efforts to meet the need. Professionals would take great pride in being a part of the campaign.

But with 41% of our kids using drugs and alcohol, little has been said.

To be fair, the silence is beginning to be broken. The Governor, the Legislature, a few community groups, and parents have begun to make helpful noises. Their leadership has been critical to creating an environment where reforms are now possible. The Wyoming drug court initiative is one result of their leadership. This plan is another.

If we are to succeed in taking their efforts from vision to reality, we will have to end the stigma. It is a stigma that prevents physicians from raising the issue with patients who present with obvious symptoms of drug abuse. It is a stigma that prevents parents from recognizing clear signs of trouble in their own children. It is the stigma that precludes the best and brightest of our young people from planning careers in addictions programs. It is this stigma that likely explains why of the more than 7000 people seeking treatment in Wyoming last year, only 5 were referred by their pastor. Physician referrals accounted for under 2% of the total, as did employer and school referrals.[258]

Accordingly, the key to achieving our goals is to be creative about partnering with our citizens. They must understand this is a campaign that is designed to achieve a spiritual connection in Wyoming that will strengthen our kids, our families, and our communities. It is our common goal.

Has 'parenting' become a counter-cultural activity?

To fully understand what it means to "parent" in these times, one should read a book written by theologian Cornel West. The book, The War Against Parents, argues that at the beginning of this new century, parenting has become a challenge unlike at any time in our history. Dr. West contends that regardless of what we teach our children in our homes and churches, the broader, popular culture is working hard to persuade them otherwise. The values

parents try to convey frequently conflict with those our children hear and see on TV, in the movies, their music, on billboards, in popular magazines, and among the celebrities in entertainment and sports.

> **"Some days it feels as though (parents) are swimming upstream, cutting against the current of all that is valued in our market driven society. In late twentieth-century America, parenting has become a counter-cultural activity."** [259]

We believe one of the most important partnerships is the one between the government and parents. Too often they view each other as the problem when they are, in a real way, one in the same. While the government needs to be sensitive to charges of interfering with families, there are important ways that government policy can be crafted to help families. For example, if parents are working hard to convince their children not to smoke cigarettes, the message is lost when a local convenience store clerk is willing to sell tobacco to kids. Parent's attempts to discourage underage drinking are significantly undermined by lackadaisical enforcement of laws against selling to minors.

If, for example, the government policymakers are serious about creating an environment where use of alcohol by minors or pregnant women is discouraged, it will have to decide between competing voices. The decision to make families the top priority will often mitigate against long held views.

The government cannot meet this challenge without the involvement of parents. Given real and often negative cultural forces, neither can parents do it alone. The messages kids hear at home must be reinforced by government policies. Only a consistent message will make a difference.

Involving the private sector

There is little question that one of the pivotal events in changing the way Wyoming looks at this problem was the 1998 statewide conference sponsored by the Wyoming Business Alliance. When this group of community and business leaders acknowledged substance abuse as a problem and demonstrated a willingness to talk openly about it, something important happened in our state.

Employee Assistance Programs

The involvement of the private sector in this partnership is vital. It will happen as business people recognize it is not only a matter of community responsibility but also a matter of "the bottom line." Over the last year, Project Safe, a citizens group in Casper, has spearheaded a program to assess all persons seeking substance abuse treatment in Natrona County. One of the many interesting findings is that 70% of those needing treatment are employed.

Those numbers substantially mirror national surveys.

Congressional findings contained in the Drug-Free Workplace Act include these facts:

⇒ 74% of adults who use illegal drugs are employed,

⇒ drug and alcohol abuse accounts for a 66% higher rate of absenteeism than that experienced in employees who do not abuse,

⇒ health benefit utilization is 300% higher among drug and alcohol abusers,

⇒ 47% of workplace accidents are drug/alcohol related, and

⇒ disciplinary actions and employee turnover is much higher among substance abusing employees.[260]

The Wyoming Department of Employment, unfortunately, does not keep statistics on the numbers of workers compensation or unemployment insurance claims that are affected by drug and/or alcohol abuse, but acknowledges it is significant. They indicate at least one employer has told them he has halted drug testing "because we need the bodies." Many employers have accepted drug and alcohol abuse as a reality of doing business. That can change. Indeed it must change. A partnership with Wyoming employers is a critical part of the solution to Wyoming's substance abuse problem.

Employers are one of the entities with the potential to exert the coercion necessary to force addicted individuals into treatment and to keep them there long enough for the treatment to work. The Partnership For Recovery is a consortium of the nation's top non-profit treatment providers. Its members include the Hazelden Foundation, the Betty Ford Center, and the Valley Hope Association. The Partnership has extensively studied the role of employers in addictions recovery.

They first point out the costs of not treating employees. Firing them and replacing them is expensive. It costs an average of $7000 to replace a salaried employee. That cost can go much higher, exceeding $40,000 for a senior executive. A termination often occurs after the troubled employee has caused other, expensive problems for the company.

On the other hand, the Partnership points to numbers gathered by the Substance Abuse and Mental Health Services Administration demonstrating the value of employee assistance programs:

⇒ 85% decline in absenteeism,

⇒ 50% drop in injuries, and

⇒ 82% reduction in tardiness.[261]

"To immediately terminate those who suffer from this disease only compounds the problem for both the employee and the company (as well as the family and the community)." Jerry Spicer, CEO Hazelden Foundation

The United States Small Business Administration reports drug-free workplace programs cost an average of $22-50 dollars per employee. But, not having a program is not free. Untreated substance abusing employees cost US business an average of more than $640 per employee each year.[262]

In the section of this report entitled "Treatment…for the treatment System", we have included a lengthy discussion on coerced treatment. Dr. Satel, whose work is prominently cited in that section, includes employee assistance programs as effective ways to "coerce" addicts into treatment.[263]

> ***"Recall the public service announcement, 'Help an addict. Threaten to fire him!' made popular in the late 1980's by the Partnership for a Drug Free America. Employers who follow that directive have established effective employee assistance programs providing treatment for workers."[264]***

Indeed, employer use of these programs is preferable to allowing an employee to use until she causes a fatal accident or commits a crime and enters the criminal justice system where a different kind of coercion is available. EAP's are important early interventions. It is important to recognize that they not only benefit the company and the employee. Most of these employees also have families. Intervening early in the employee's life will have an undoubted impact on the children.

It is important to note that simply offering an EAP does not necessarily require the employer to pay the cost of treatment. Indeed, we believe it is important for addicts to invest in their own treatment. However, employers who provide insurance benefits should be sensitive to the need to include substance abuse coverage. Other employers have contributed to the cost. Even then, the payoffs are worth the costs. The Small Business Administration can also be a source of assistance to employers.

We encourage the Legislature to provide other positive incentives for employers to develop and use effective Employee Assistance Programs (EAP's). The statutory framework for accomplishing this goal already exists. W.S. 27-14-201(o) permits the state to discount workers' comp rates for employers who comply with "a safety program approved by the division." Because of solvency problems in the workers comp system, this provision has yet to be implemented. It should be implemented to include rules for utilizing drug and alcohol education and an EAP in any safety program.

Additionally, the Substance Abuse Division should provide technical assistance and training to help employers develop and use effective programs. A necessary adjunct to making this work is the enhancement of the treatment delivery system as recommended herein. Unless that is accomplished, cooperative employers will have no place to send troubled employees. When employers create EAP's, they deserve to know that the community program is an effective partner. These kinds of positive incentives should promote effective use of EAP's

However, the ability of employers to motivate treatment and reduce substance abuse is far too promising to ignore. If such positive incentives are not successful in creating greater usage of EAP's, **it is recommended the Legislature next consider negative incentives. Recognizing that substance abusing employees cause more accidents and pose a danger to the public and other employees, those employers who fail to provide adequate programs should not be allowed to challenge workers' comp or unemployment claims on the basis of substance use by the employee.**

The Legislature and business community must recognize the great potential for this partnership, potential that extends beyond helping a few employees who are abusing drugs or alcohol. The potential is to help them in a way that promotes public and workplace safety, increases productivity, and makes Wyoming more attractive for economic development while helping families.

Employment Opportunities As Recovery Incentives

Without government involvement, the private sector employer associations and labor organizations should implement partnerships with drug courts, probation and parole, and treatment providers, to open job opportunities for recovering addicts. Remaining clean deserves the rewards that accompany sober lifestyles. Employment in decent paying jobs is one of those rewards. The business community should be called on to supply those jobs.

If employers are willing to create the jobs, the partnership must do what it can to reasonably assure employers they are getting good workers who are remaining sober. Ongoing treatment, to include testing, provides employers with an assurance of clean employees *they do not have with other potential workers.*

We believe it is important that this initiative be entirely a private sector program. It is the business community that will benefit most by developing a program that has the potential to supply them with a continuous stream of good workers. This program can best be accomplished without government rules and red tape and can be the cornerstone of a commitment to recognize that the government can't and shouldn't do it all.

Insurance Benefits

During the course of this study, many treatment providers have urged us to recommend that the state mandate insurance coverage for substance abuse treatment on the same level as other disease treatment is covered. The idea is often called "insurance parity." In another section of this report, we have dealt specifically with the issue. Here, however, we wish to address only a recommendation that in providing health coverage, employers examine the possibility of including meaningful substance abuse coverage.

According to a Wyoming Department of Employment study, only about two-thirds of Wyoming employers currently even offer health insurance benefits. Fewer than 60% include dependent health care benefits.[265] There is great concern at the Wyoming Business Council that this number will decline in the near future as a result of escalating insurance premiums. We are reluctant to make recommendations that will exacerbate this problem.

Accordingly, we recommend that employers inquire of their insurance provider about the cost of adding substance abuse benefits to their policy. This coverage can be useful in the development of an EAP and, additionally, to encouraging employees to seek help early when they or a family member is in need.

Education and Testing in the Workplace

We are reluctant to support state requirements for drug testing in the workplace. We are persuaded, though, that drug testing in the workplace is helpful. We believe the state should encourage testing for a couple of reasons. One, the real possibility of being tested by one's employer has a dramatic impact on experimental drug use. Employees who believe their employer may test them are far less likely to engage in so-called "recreational" drug use. Second, announcing that drug testing is a part of the workplace environment sends an important community message about the employer's values. Finally, testing is an important way to open the door to effective early interventions through employee assistance programs.

In addition to testing, the workplace is an important context in which to conduct educational efforts. The workplace educational program can be as simple as making brochures available or hanging posters. It can be as elaborate as setting aside time for videos and speakers. It should include making available information that allows an employee to discretely obtain information about where to go for help for himself or a family member. Just having such information available in the workplace sends a powerful message about values.

The Substance Abuse Division should provide technical assistance to

employers willing to establish educational and testing programs.

Employee and Professional Organizations

There are many private sector organizations representing the interests of their members with whom we need to be intentional about partnering. Ranging from the agricultural, industrial, and business groups to labor unions and teachers associations to special interest groups, these organizations represent people. All of their members, regardless of the nature of the organization, have a stake in the success of this effort.

They also have immense credibility with their members. A message from the Substance Abuse Division of the Wyoming Department of Health may not carry the same weight as when the same message is delivered by an organization a person trusts to represent their personal and professional interests. We need to acknowledge their credibility and ask that they use it to help achieve our goals of reducing substance abuse in Wyoming.

Self-directed Recovery Homes

Housing is frequently one of the most pressing needs for newly recovering addicts. As a recovering person makes his or her way through treatment they learn they must leave behind the "people, places, and things" with which they were involved when they used. Recovery is seriously challenged when they find it necessary to return to the same places where they used or where their old using friends live. And so it is critical, particularly in the early months, that recovering persons have safe, supportive housing.

This need creates a wonderful opportunity for the faith community and the private sector to partner with recovering addicts, treatment providers, drug courts, and probation and parole. Self-directed recovery houses offer a proven method to meet this need. In much of the country a model program called Oxford House works with realtors and landlords to open decent housing to recovering addicts.

"Each house represents a remarkably effective and low-cost method of preventing relapse. This was the purpose of the first Oxford House established in 1975, and this purpose is served, day by day, house after house, in each of the approximately 650 houses in the United States.[266]

Oxford House is not a treatment program or facility. It is, in its simplest form, a house, shared by recovering addicts. They rent it and share the expenses. No public funds are used although each state has a revolving loan fund to make available low interest loans to help these houses and the tenants. The houses have two ironclad rules. Tenants cannot use drugs or alcohol and if they do they MUST be promptly expelled. Second, each person must pay his or her share of the expenses. They are gender specific. Beyond that, the tenants in a

democratic fashion, establish the house rules.

Tenants may stay as long as they choose. These houses have a very good record of helping addicts remain sober because they offer supportive environments. All of the tenants are "in the same boat", sharing a common struggle. When one is in need, there are others to help.

The use of Oxford House - like other community programs are important not only in providing needed housing, but also in terms of making connections between the recovering addicts and the rest of the community.

Faith-based initiatives

"Government has great responsibilities for public safety and public health, for civil rights and common schools. Yet compassion is the work of a nation, not just a government. And some needs and hurts are so deep they will only respond to a mentor's touch or a pastor's prayer. Church and charity, synagogue and mosque lend our communities their humanity, and they will have an honored place in our plans and in our laws." President George W. Bush, Inaugural Address

Likewise, they should have "an honored place" in Wyoming's plans to make our people, their families and our communities healthier places to live.

As this is being written, there is pending in the US House of Representatives a major faith-based initiative. The effort to involve the faith community in social programs began in 1996 with the welfare reform legislation. President Bush seeks to expand the concept to additional programs and to provide tax incentives for charitable contributions in order to assist in the promotion of the program.

Regardless of the fate of the federal effort, we are persuaded that especially in the substance abuse arena, there is a need to promote a Wyoming faith-based initiative. The initiative should begin by recognizing the on-going contribution of the faith community. Wyoming churches already play an important role by making facilities available for AA, NA, and other 12 step meetings. A Cheyenne church has made a house available for a self-directed recovery home. Ministers serve as volunteer chaplains at the prisons and in most of the jails. There are a variety of other ways in which the faith community is already taking the lead. The "faith community is more than the churches. It includes hundreds of Alcoholics Anonymous, Narcotics Anonymous, Families Anonymous, Alanon, and Alateen groups around the state. As a result of their work thousands of Wyoming people are in recovery. We need the contributions of the recovering community to make this plan work.

We believe this plan should build on that involvement and find additional ways in which the churches and other faith-based organizations can serve as a catalyst for community involvement.

Those who know anything about addiction are aware of the irreplaceable role spirituality plays in recovery. Acknowledging one's own inability to solve the problem and turning to a "higher power" is a common element among recovering addicts and alcoholics. Not all turn to a church or religion but most do find the strength to stay sober in a higher power.

Accordingly, it makes sense that the efforts to meet this challenge necessarily involve the faith community. We recommend the state commit itself to a Wyoming faith-based initiative regardless of the outcome of the federal proposal. It should begin with the Governor's appointment of a Coordinator of Faith-based Programs. This person should be a current state employee or official, well enough positioned to make certain that all state agencies and programs working in substance abuse will remain open to the involvement of the faith community.

The coordinator should not only stay abreast of national developments and funding opportunities but should serve as the liaison between the state agencies and the faith community. He or she should make certain the faith community is made aware of opportunities to become a part of the prevention and treatment efforts of the state, local agencies, and providers. Without one person to whom this responsibility falls, it will not likely be done effectively. For too long there has been a false understanding of the "separation of church and state" that has led many in government to understand the faith community is not welcome in many of these programs. Changing that image and encouraging the involvement of the faith community is too important to be left to chance.

Private sector community leadership

We recommend the Legislature fund community grants, making available the funding and technical assistance necessary to encourage the development of community leadership resources. There are hundreds of Wyoming people with the ability to make a difference. We need to nurture their involvement.

These grants should also be used to encourage the faith community and others to undertake community-based projects such as after school programs and other prevention efforts. Spending dollars strengthening communities will produce results particularly in prevention and early intervention efforts that are critical to breaking the cycle.

Monitoring Wyoming's Future & Creating Accountability

Wyoming Vision 2020 Act

The Wyoming Legislature hereby authorizes the Wyoming Monitoring the Future Project, under the auspices of the Wyoming Vision 2020 Act, whose purpose is to encourage individual and collections actions whereby the State of Wyoming will lead the country in major indices of well-being, productivity, health and safety. The project, housed at the University of Wyoming Statistical Analysis Center, shall have the following charter:

1) *To monitor progress toward Vision 2020 using indices of health, productivity, public safety, and well-being (hereinafter referred to, Wyoming Futures Indicators), as established by a collaborative state agencies, citizens and advisors who are appointed by the Governor;*

2) *To undertake a series of studies and monitoring activities as outlined in the Comprehensive Blueprint on Substance Abuse;*

3) *To report on Wyoming Futures Indicators to the citizens of the state in such a way that individuals and groups might be able to act to further the goals of Vision 2020;*

4) *To analyze and suggest pathways for progress toward Vision 2020 and Wyoming Futures Indicators, based on the best available science;*

5) *To make recommendations annually to the Governor, Legislature, and Agencies about strategies that can be sustained, altered, or created to achieve the goals of Vision 2020 and the Wyoming Futures Indicators;*

6) *To collaborate with prestigious entities and individuals worldwide in the development and testing of strategies that might further Vision 2020; and*

7) *To enhance the capacity of Wyoming citizens and entities to create, test and further activities that move the State toward Vision 2020, as measured by the Wyoming Futures Indicators.*

The various state agencies shall adopt standardized conventions for geo-coding of information, to facilitate data analyses pursuant to this legislation. Agencies will issue annual combined state-standards of geo-mapping on or before December 31 of each year.

The various agencies shall report to Legislature each year how they have assisted in improving the Wyoming Futures Indicators and how they will do so in the next biennium, and agencies shall adopt rules for contractors to likewise promote Wyoming Futures Indicators.

The Governor, based on nominations proposed by the Wyoming Legislature, shall appoint Wyoming civil servants or citizens annually to serve as Wyoming Citizens in Residence at the Center for a period of one year, when they will conduct collaborative projects and studies that further Vision 2020.

The Governor, upon the advice of Cabinet, shall appoint one or more distinguished individuals from any state or country to serve as Visiting Advisors, whose knowledge, skill or expertise might significantly enhance the capacity of Wyoming to achieve Vision 2020.

The Monitoring the Future Project shall sunset on December 31, 2020.

Monitoring Metaphor

In the course of this study for House Bill 83, many would ask, "How did we get in the mess with substance abuse in Wyoming? How could the problem have gotten so big?"

A metaphor came to mind on a trip to a meeting in Jackson Hole. The mountains loomed suddenly, with rocky peril evident.

"What if you tried to fly into Jackson Hole on a moonless night?"

"You'd need good instruments to monitor your path."

"What if you didn't have instruments?"

"Then, you'd likely hit a mountain."

Figure 50: C130 that Crashed in 1996 Flying Out of Jackson Hole

The mountains of modern society are sometimes not easily visible, until we are upon them. The problems of drug abuse, school violence, youth depression, and other issues have crept up on all of us—because we lacked the instruments to alert us early.

Monitoring the mountains and hazards is not enough, however. Just saying, "We avoided hitting the Tetons," is only part of the story. We must have measures and indices of the journey progress? Did we arrive on time? Did we land where we wanted to? Did we have all the people on board we wanted to?

Measures of Wyoming's Future

The authors of this study strongly believe that Wyoming is well served over the long-term system by monitoring community-level indicators, based on a general consensus of scientists and experience from research.[267] Effective monitoring will help us avoid future injury to the common good, and effective monitoring will help us select strategies and practices that increase the common good. For state initiatives, community-level indicators can be seen as one ultimate outcome of the effort.

Tracking Harms and Hazards

In the case of substance abuse, hazards can be conceptualized as either specific dangerous outcomes or dangers that predict adverse outcomes. In the social science literature, the first is often called "harms." The second is often called "risks." Public health or medicine tends to

use the respective language of mortality and morbidity. Sometimes, harms and hazards tend to cluster. For example, the use of methamphetamine obviously harms the user, and can be hazard (risk) factor for any minor child of the user. When harm and hazard decline over time, the people of Wyoming benefit.

Below is a partial list of harms that most scientists and citizens want to be as low as possible for the common good.

- Fatal or serious injury vehicle crashes, especially involving teen drivers at night involving single or multiple cars.
- Drug positives from samples of arrested people.
- Number of arrests for drug possession.
- Alcohol and tobacco consumption per capita measured by tax revenue
- Teen pregnancy or low-birth weight babies.
- Student self-reports of alcohol, tobacco, and other drug use.
- Juvenile arrests for alcohol, drug, and tobacco offenses.
- Drug test positives in pre-employment screenings.
- Alcohol or drug related events in emergency rooms.
- Perceived availability of drugs, alcohol, and tobacco by minors.
- Number of drug positives from urine or cord samples at birth or positives for fetal alcohol syndrome.
- Fetuses exposed to high levels of stress, injury, tobacco, alcohol, or other drugs.
- Assaults, domestic violence, and other violent crime by children, teens, or adults.
- Property crime such as vandalism, theft, robbery.
- Alcohol or tobacco related diseases (e.g. various cancers, lung disorders, liver disease).
- Behavioral and emotional disorders such as depression, ADHD, personality, bipolar or conduct disorders.
- Addiction and substance abuse disorders.
- Driving under the influence of alcohol or other drugs.
- Diseases as a result of inject able drugs (e.g., HIV and hepatitis).
- School failure and dropping out.
- Poor academic proficiency or readiness.
- Need for special education services.
- Need for foster placement as a result of child abuse or neglect.
- Accessibility to tobacco, alcohol, and drugs by minors.

- ↓ Early initiation of tobacco or alcohol use by children.
- ↓ Genetic or familial predisposition to substance abuse and related problems.
- ↓ Association with peers who engage problem behaviors.
- ↓ Community norms and actions that increase risk such as easy access by minors to alcohol, tobacco, and other drugs or alcohol service to intoxicated persons such as pregnant women.
- ↓ Per capita prescription of Schedule 2 drugs or combinations of drugs that can be abused at different ages.
- ↓ Per capita prescription of drugs used to treat co-morbid disorders or related to adverse outcomes in children (e.g., maternal depression).
- ↓ Prescription fraud cases.
- ↓ Quantity of drugs per capita seized.
- ↓ Per capita public assistance for families.
- ↓ Per capita Medicaid spending for mental health and selected medical conditions by age groups.
- ↓ Intercommunity mobility in rental housing.[268]
- ↓ Percentage of students completing high school.
- ↓ Percentage of youth with delinquency petitions.
- ↓ Percentage of youth with multiple delinquency petitions or charges.
- ↓ Number of students chronically absent or truant.

Tracking Protections and Successes

Let us extend the metaphor of our trip to Jackson Hole a bit. After landing, we excitedly go Jackson Lake. The children wearing flotation devices, the use of a well-designed boat, and appropriate behavior driving the boat, can predict our safety on the lake. Our success is not any of the above, however. Our success is having a joyous time and returning to the dock at the time we set.

In the case of substance abuse, there are number of indices of protection and success whose increase would benefit the common good in Wyoming:

- ↑ Children entering school ready to learn, with socio-emotional-cognitive competencies.
- ↑ Children with positive parenting.
- ↑ Marriages and relationships with high warmth and low conflict.
- ↑ Community reinforcement of positive behavior among children and teens, measured by items in paper, newsletters, and other media.
- ↑ Children supervised by adults after school and engaged in meaningful activities.
- ↑ Individuals of most ages screened for substance abuse and prompted for brief

or motivational interventions for change.

- ↑ Conversations between parents and children about substance use behaviors.
- ↑ Column inches or airtime devoted to prevention strategies and successes in the community.
- ↑ Indices of a protective school and classroom environment.
- ↑ Frequency and publicity around randomized checks for driving under the influence of alcohol or drugs.
- ↑ Percentages of persons who need treatment or early intervention that are receiving effective, timely services.
- ↑ Effective child rearing observed at grocery stores or discount stores.
- ↑ Percentage of youth with little or no alcohol, tobacco, or drug use.
- ↑ Percentage of students with family members attending school events by grade level.
- ↑ Per capita church attendance by age groups.
- ↑ Number of community service projects reported in local media.
- ↑ Number of children and youth reporting meaningful roles in school, home, or community.
- ↑ Test calls or behavioral observations of community acts of kindness.
- ↑ The number of stores or clerks passing out social marketing materials.
- ↑ Sponsorships of community events by non-alcohol or tobacco sources.
- ↑ Number of intervention and prevention screenings implemented.
- ↑ Number of service projects by children and youth in community.
- ↑ Number of pages read per child or youth annually in a community in special contests.
- ↑ Number of books checked out per minor and adult from public library.
- ↑ Children's book sales per capita at selected sites.
- ↑ Youth report of friends who tell them not to use drugs, alcohol, or tobacco.
- ↑ Average daily attendance and on-time arrival (no tardies) to school by different grades.
- ↑ Number of sales tax permits.
- ↑ Per capita sales tax receipts.
- ↑ Number of club meetings and pro-social community events per week without alcohol.

Ways for Monitoring Wyoming's Future

The University of Wyoming has recently developed several research centers that can collaborate with the state in this effort. The primary center for the purposes of this project is the Wyoming Statistical Analysis Center established by Governor Geringer in 2000. Other centers of research at UW that will aid in this research collaboration are the Survey Research Center, the Center for Rural Health Research and Education, and the Spatial Visual Data Collection Center. The University with its research muscle and technology is poised to aid the state government to undertake the following activities described below.

Secondary Student Surveys

Annual census sample of grades 6, 8, 10, and 12 of students enrolled in secondary school to measure substance abuse and other related multi-problems, which presently appears will be the Youth Risk Behavior Survey on even years and the Prevention Needs Assessment based on the Communities That Care Student Survey on odd numbered years. The YRBS is being preserved, because of long-standing trend issues. The Prevention Needs Assessment replaces the American Drug and Alcohol Survey used in 1997 and 1998. The authors of this report suggest that Substance Abuse Division review the additions of risk and protective factors made in the YRBS by the State of Oregon with the assistance of the Oregon Research Institute and consent of the Centers for Disease Control. This addition would improve comparability between years.

Child Strengths and Difficulties Surveys

The Department of Health in the United Kingdom has begun a monitoring project of that country's children. The rationale for this monitoring emerged from the research on children's development and resiliency at the University of London, Institute of Psychiatry, under the direction of Sir Michael Rutter. The UK Department of Health uses the Strengths and Difficulties Survey.

The (SDQ) is designed to detect behavioral, emotional, or relationship difficulties in children aged 4-16.[269] The questionnaire is based on 25 items divided into 5 scales with 5 items each: hyperactivity, emotional symptoms, conduct problems, peer problems, and pro-social behavior. A 'Total Deviance' score is derived from the sum of scores from the hyperactivity, emotional symptoms, conduct problems, and peer problems scales. The SDQ correlates highly with the Rutter questionnaire and the Child Behavior Checklist (widely used in the United States but is 4 times longer). Both are long-established behavioral screening questionnaires for children that have been proved valid and reliable in many contexts and correlate highly with one another.[270] However, the SDQ is shorter than these screening instruments and is the first to include a scale focusing on positive behavior: the Pro-social Behavior Scale.

Some samples of the Strengths and Difficulties Survey appear on the next page. One is for use by a teacher or parent of a 4-11 year old child. Another sample is a self-report by children age11-17. Other versions exist at http://www.sdqinfo.com/.

Figure 51: Strengths and Difficulties Parent or Teacher Survey for 4-10 Year Olds & Teen Self-Report Form

Strengths and Difficulties Questionnaire — P or T[4-10]

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's name ..... Male/Female

Date of birth .....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children, for example toys, treats, pencils	☐	☐	☐
Often loses temper	☐	☐	☐
Rather solitary, prefers to play alone	☐	☐	☐
Generally well behaved, usually does what adults request	☐	☐	☐
Many worries or often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, depressed or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often offers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets along better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Good attention span, sees work through to the end	☐	☐	☐

Signature ..... Date .....

Parent / Teacher / Other (Please specify:)

Thank you very much for your help

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Strengths and Difficulties Questionnaire — S[11-17]

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain . Please give your answers on the basis of how things have been for you over the last six months.

Your name ..... Male/Female

Date of birth .....

	Not True	Somewhat True	Certainly True
I try to be nice to other people. I care about their feelings	☐	☐	☐
I am restless, I cannot stay still for long	☐	☐	☐
I get a lot of headaches, stomach-aches or sickness	☐	☐	☐
I usually share with others, for example CD's, games, food	☐	☐	☐
I get very angry and often lose my temper	☐	☐	☐
I would rather be alone than with people of my age	☐	☐	☐
I usually do as I am told	☐	☐	☐
I worry a lot	☐	☐	☐
I am helpful if someone is hurt, upset or feeling ill	☐	☐	☐
I am constantly fidgeting or squirming	☐	☐	☐
I have one good friend or more	☐	☐	☐
I fight a lot. I can make other people do what I want	☐	☐	☐
I am often unhappy, depressed or tearful	☐	☐	☐
Other people my age generally like me	☐	☐	☐
I am easily distracted, I find it difficult to concentrate	☐	☐	☐
I am nervous in new situations. I easily lose confidence	☐	☐	☐
I am kind to younger children	☐	☐	☐
I am often accused of lying or cheating	☐	☐	☐
Other children or young people pick on me or bully me	☐	☐	☐
I often offer to help others (parents, teachers, children)	☐	☐	☐
I think before I do things	☐	☐	☐
I take things that are not mine from home, school or elsewhere	☐	☐	☐
I get along better with adults than with people my own age	☐	☐	☐
I have many fears, I am easily scared	☐	☐	☐
I finish the work I'm doing. My attention is good	☐	☐	☐

Your Signature .....

Today's Date .....

Thank you very much for your help

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The authors recommend that Strengths and Difficulties Surveys be adopted for use by families and schools in Wyoming as both a monitoring device for public health issues and to help guide service decisions in Wyoming. The use of these instruments will be voluntary but highly encouraged.

Data from the Strengths and Difficulties Instruments (SDQ) can be used in the following ways:

SDQ for Public Health and Policy

⇒ Predict need for mental health, special education, and related services geographically in Wyoming.

⇒ Predict future prevalence of adult and adolescent behavioral disorders, inclusive of substance abuse and antisocial behavior.

⇒ Predict future work-force capacities.

⇒ Evaluate the impact of policies undertaken to improve the developmental outcomes of children in Wyoming.

SDQ Use for Classroom and Family Self-Help

⇒ The information about the combined mix of students in a classroom or school can help a teacher or site team choose prevention and other strategies that will ameliorate the factors related to multi-problem such as substance abuse, anxiety disorders, depression, attention and conduct concerns.

⇒ Information back to a parent or guardian can help them choose early interventions to improve the developmental outcomes of the child.

SDQ Use by Health, Mental Health and Service Professionals

The instruments can quickly help professionals determine what interventions a child might need, and their use at several time intervals can help professionals monitor the progress and success of various intervention strategies, which invite comparisons of results and efficacy. The data could also provide a developmental history for professionals, invaluable for examining the onset of various problems.

SDQ Implementation in Wyoming

It will be necessary for three departments in Wyoming to work collaborative with University of Wyoming Statistical Analysis Center to develop protocols for the use of the SDQ (Strengths and Difficulties Questionnaire). The three departments are: the Department of Health, the Department of Family Services, and the Department of Education. The implementation of the SDQ in Wyoming ought to meet the following objectives:

⇒ No linkage of any computer record with name of the child, family, and SDQ data except by written permission of the guardian or parent. Such data must have the high levels of security including of encryption so that files are not readable as standard ASCII data.

⇒ If data are generated by parent, storage of information of information by a user number known only to the parent or guardian, which assures anonymity of data.

⇒ If teachers generate data, no name or ID numbers are attached to any computer record without the written permission of the parent or guardian.

⇒ SDQ data generated from a child may only be done by written permission of the legal guardian or parent.

⇒ No child, parent, guardian, or teacher may be forced or coerced into completing the SDQ.

Data collection on the SDQ might work as follows to meet the public health and prevention agendas for the benefit of the future of Wyoming.

- At school enrollment, parents or guardians would be asked to complete an anonymous version of the SDQ each year, which could be done electronically (Palm OS, Internet, etc) or via related technologies (ANNOTO, for instance)[gg]
- At the enrollment time, parents or guardians would be asked if they optionally wish to code the special ID (known only to them) for attachment to their child's developmental record.[hh] Otherwise, the only identifier would be the grade or classroom for the child and the school. The use of the code would enable the parent to access the information later from any Internet connection to find out specific information for t heir child (again, there is no name attached to the computer record).

Figure 52: Example of Parent's Card for Child

- Teachers and schools would receive a general report and recommendations (based on current research) on how to address the collective need of groups of children with different score patterns on the SDQ.
- Reports would be generated for the various agencies and Legislature about the patterns of difficulties and strengths of Wyoming youth by county or zip code of the data. No data would be released to the public by school level beyond the school itself.

[gg] Annoto is a new technology that uses special paper with nearly invisible grid printed on it. By using a special pen, information marked on the paper is transmitted to a computer.

[hh] The special ID card number for the developmental record could be given out at several occasions: 1) the birth of a child, 2) the application for welfare benefits involving a child, or 3) as a question at annual enrollment. The cards would simply have a complex, unique alphanumeric code (e.g., X1cVf25d). On first use of the number, the computerized registration screen for use by the parent or guardian would ask for the person to establish a password, which would be encrypted and not visible to any other party. Once the password was established, no one would be able to access the records (which have NO name or other linking info). If the password were lost, the records could no longer be accessed from the Internet and no retrieval would be possible. The only way for a parent or guardian to have a record would be to manually re-enter the data from hard copy saved by the parent or guardian. The printouts generated via the Internet (with the encrypted code) would never show any ID on screen or when printed.

- Reports generated for schools would not provide data by question by classroom to reduce changes or deducing a pattern for a child. The only time data on an item level could be generated for a child would be with the written consent of the parent or guardian, using a special one-time run.
- Teachers could use the Internet at any time to compute their own rating of their classroom of students (no identifier name could be attached) for the purposes of generating a prescription of possible strategies, based on their own ratings. Thus, if they had some children with elevated levels of aggression, the Internet version might generate a set of recommendations that a teacher could use to improve their circumstances of their own classroom. The computer program would not allow teachers to enter data for a single student, only for the whole classroom to focus on the overall classroom mix rather than individual interventions.
- Licensed professionals (doctors, nurses, counselors, psychologists) would be permitted to enter individual student data for a report, though no name or similar identifier would be allowed for storing the data on the database.

The implementation of the SDQ could be partly paid for through recent changes in Medicaid rules, which allow physicians to be paid for using screening tools during well-child checks.

The use of an Internet system for parents or guardians to access developmental records has an interesting capacity for surveys to be embedded or requested when a parent or guardian logs on. For example, for children with above normative scores on the SDQ, a set of optional questions might be triggered at the next log-on to ask if the child has received any kind of special services and what those services might have been.

Random Digit Phone Surveys

The National Household Survey is an example of a random phone digit survey, which provides useful information not easily available from other sources. While such random digit surveys tend to underestimate such things as drug use compared to other types of data collection, these type of phone surveys can provide information not available by any other means or help evaluate the impact of various prevention, intervention, or treatment strategies being implemented by the state, such as:

⇒ Percentage of adults who have attempted to use a cessation service promoted in the media.

⇒ Number of parents who have implemented some family based strategy

⇒ Number of families concerned about needing treatment for a relative.

⇒ The differences in responses from target communities or wait-list communities based on intervention strategies.

⇒ Availability of tobacco, alcohol, and other drugs by minors.

⇒ And more…

Other Phone Surveys

In order for there to be overall accountability of the efforts intended by HB 83, there will need to be surveys of various aspects of the interventions and prevention strategies. For example, we may wish to conduct:

⇒ Survey of restaurants on issues that might predict outcomes: 1) number of adolescents trying to get service, 2) number of intoxicated patrons demanding service, and 3) use of family- friendly interventions.[271]

⇒ Surveys of local advertising for tobacco and alcohol products in stores.

⇒ Surveys of grocery stores for self-help racks or advertising for products or services that reduce problem behaviors.[272]

⇒ Surveys of waiting rooms for the presence of signs asking for no smoking for the health of others.

⇒ And more…

Direct Observations

Surveys are not sufficient in many cases, can be inaccurate, or less efficient. The intent of HB 83 and this report is to create a measurement system that puts accountability for results strongly in the minds of Wyoming citizens and stakeholder entities. Thus, the authors of the report strongly endorse the use of some direct observation events in Wyoming to evaluate how different factors might be moderating or mediating various substance abuse related outcomes or trends. For example, some of the following direct observations might be undertaken based on prior science:

⇒ "Would have been" sales of alcohol to minors such as is being done with the Tobacco Reward and Reminder Campaign in Wyoming.

⇒ Service of alcohol to intoxicated individuals.

⇒ Measurement of displays promoting alcohol and tobacco in retail stores such as grocery and convenience stores.

⇒ Measurement of displays promoting **Wyoming Wins** interventions in public places.

⇒ Column inches devoted to various substance abuse issues in Wyoming newspapers.

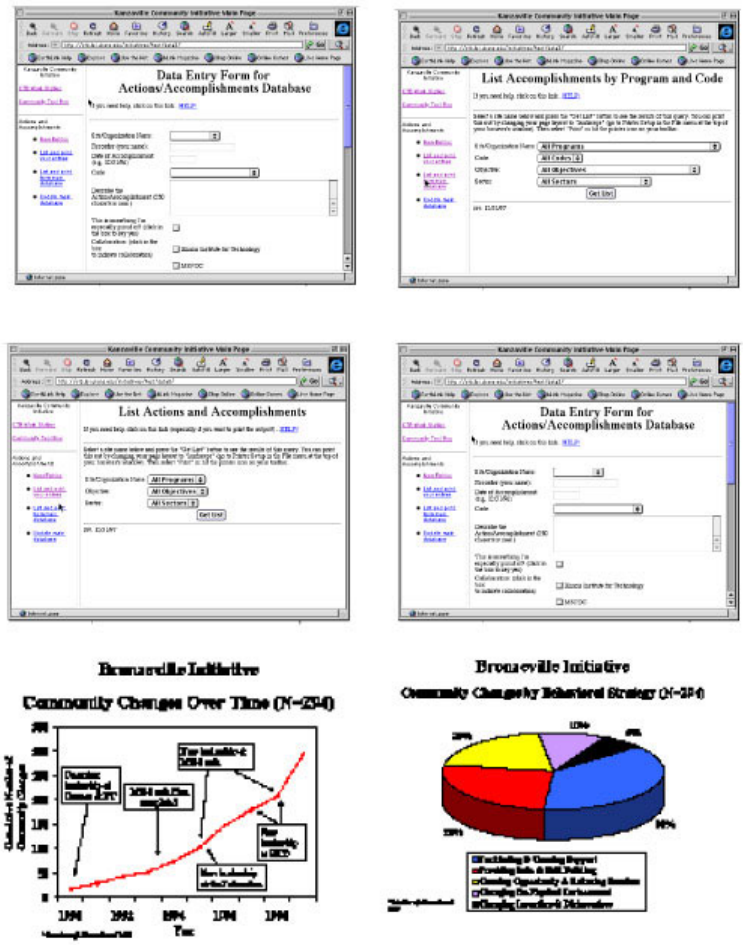
Community Toolbox

The authors recommend the use of the Community Toolbox system, which was pioneered at the University of Kansas for evaluating comprehensive community-change efforts to reduce substance abuse and other major community-level problems. This model has been tested on a number of different change projects. The model and toolbox are useful because they are well grounded in behavior-analytic theory and measurement, yet made responsive to issues that the community identifies as important. The fact that the model is moving toward an internet based system is especially useful, because the

data-drive system provides feedback to the stakeholders and users about the effects they are having. This means that assessments become a true empowerment model. Extensive documentation and detail of the system can be found on http://ctb.1si.ukans.edu/initiatives/initiatives.htm and http://ctb.1si.ukans.edu/initiaves/test/.

Various federal agencies consider the Community Toolbox as a best practice, when a central precept is that the government cannot do it alone. The Community Toolbox has enabled communities to collaborate to increase economic development and other serious risk factors, which are difficult for a state government to affect at local level. Additionally, the Community Toolbox approach has shown major impact on substance abuse, teen pregnancy, and crime.[273] The Community Toolbox is both a process and a system of coalition building, costing about $125,000 to set up and a much smaller amount to maintain. The Community Toolbox would tie into other strategies being planned in this overall report. Data and computer screens from the Community Toolbox appear below.

Figure 53: Community Tool Box



Data Sharing

State agencies and major stakeholders need a way of studying and manipulating data to find out what is working and what is not in Wyoming. Furthermore, Wyoming needs a way of creating an ongoing "model" of its own experiences Generally speaking, most data are not stored or connected in ways that can be studied appropriately, and this may be worse in Wyoming.

Early in the work reviewing Wyoming, one of the authors examined citations in Medline, ERIC, and PscyInfo for Wyoming specific citations about any medical, educational or behavioral science issue. What was discovered is that almost all Wyoming citations are related to animal or biological research, with virtually a handful of studies of Wyoming people. This need not be the case. Some very small states, such as Kansas, have thousands of studies published on their people, and have made major contribution to scientific study.

One possibility of stimulating Wyoming-specific science would be the creation of a Wyoming Data Warehouse, much like the federal government has started to build for a variety of research data. How could such a thing as a Data Warehouse benefit Wyoming?

One need only look at the example of the data analysis undertaken of some 25,000 responses in Wyoming to the American Drug and Alcohol Survey for 1997 and 1998. Prior to the data analysis conducted by Drs. Kami London and Narina Nunez in collaboration with Dr. Dennis Embry, our state had never had a model of substance abuse prediction remotely specific to our young people.

Yes, Wyoming has published "flat file" reports of graphs of substance use indicators over time, but no multi-variant analyses had been undertaken. Indeed, few states have done so, despite the obvious advantage in effective policy, procedure, and strategy if a state had a powerful model of behavior *specific* to its own borders—instead of just a generic national model.

What was learned from that model is that the prediction of substance abuse (at least for the subset of the Wyoming youth taking the survey had very specific parameters:

⇒ Positive Predictor: Perceived availability of substances (e.g., alcohol, tobacco, and other drugs) by young people.

⇒ Positive Predictor: General anti-social behavior (aggression, fighting, stealing, etc.)

⇒ Negative Predictor: Friends who tell you not to use.

These finding are powerful, and will help greatly with the first wave of prevention efforts in the state. They are not sufficient. We need to find out other variables that link and further refine our prediction model.

This could happen with a Data Warehouse and promotion of the use of the data by University faculty and students as well as public agency officials. We

recommend that a data system start to be built that allow on-line (where appropriate) data that can be manipulated to test hypotheses about our own communities. For example, we might be able to analyze statistically such relationships as:

⇒ Alcohol and tobacco sales to minors by community as a variable for perceived availability.

⇒ The number of drive-up windows selling alcohol or the percentage of adults reporting using alcohol while in a car.

⇒ Signage in stores for tobacco and alcohol related to substance misuse and abuse in communities. (We have anecdotal evidence from community coalitions in Wyoming of wide variation of how stores observe the regulations and laws related to tobacco displays, such as open displays and access by minors of tobacco as seen from a store picture from Lander, Wyoming).

⇒ Time-lag correlations between low-birth weight babies per capita in counties and substance abuse prevalence rates among young people 10-15 years later or special education services 5-10 years later. [Both of these could be predicted from international research].

⇒ Prediction of juvenile crime in communities based on special education placements 5-7 years earlier. [Again, this is strongly suggested from international research, but we have no confirmation in the Wyoming context.]

⇒ Mobility patterns and substance abuse within communities, as measured by various indicators such as connections and disconnections of utility service. [This would help us answer the question: How is our problem related to new people moving into our communities with the boom and bust cycles of resource economics of our state?]

Figure 54: Lander Store Display (illegal by Wyoming Law)

These are just a few of the questions that come to mind. There is virtually no way to answer them quickly, because we have no depository of data.

The revolution of the Internet, On-Line Applications Programs (OLAP), server technology, and graphic routines now

make it far easier to develop a capacity for students, academics, policy makers, and even interested citizens or international researchers to have a query-based model for examining relationships between processes and outcomes in Wyoming.

It is therefore strongly recommended that all state agencies develop a plan with the University of Wyoming Statistical Analysis Center for a Wyoming Data Warehouse, available on-line. Certain data would not be on-line for public access, such as any information with identification by name of individual.

Clinical Outcomes Data System for Life Span Services

As a part of state standards for treatment services, the Department of Health is in the process of issuing policies and regulations, which will include the use of standardized clinical assessment and outcome tools. For example, the newly authorized Drug Courts will require the use of the Addiction Severity Index (ASI) be completed with individuals who enter and leave treatment, as well at certain follow intervals. Such information is critical for accountability and improvement of therapeutic services.

All of the named "best practices" use valid assessments of progress to guide the course of therapy, which simply makes common sense. As the process of this blueprint is rolled out, virtually every area of prevention, intervention, and clinical services must have standards of monitoring results.

Part of the role of the newly created Statistics Center at the University of Wyoming will be to develop feedback tools for use by individual clinicians or change agents, by agencies, by communities, and the state. For example, the regional teams proposed in the section on prevention and intervention will use these data in training and staff development of both public and private providers.

Accelerated Multi-Cohort Longitudinal Study

The generations in America are clearly different in their risk for problems such as substance abuse and other mental disorders. This helps explain the common comment of adults in their 50s and older who say, "Well, we did that, and we didn't get into all this trouble. It's really nothing to worry about."

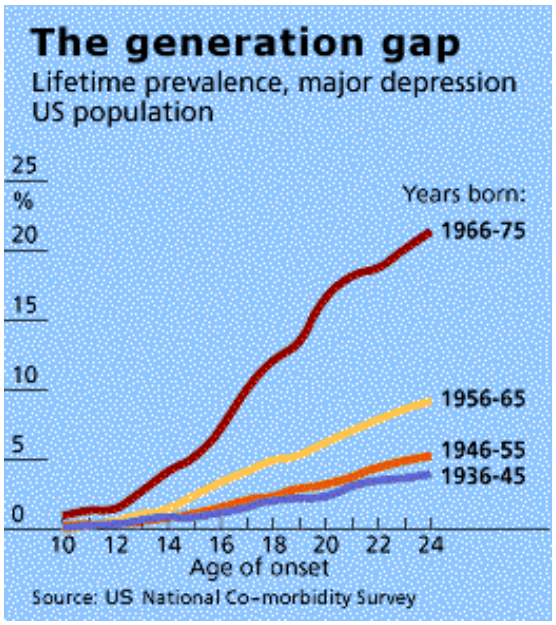
The problem is that people, culture, and the whole environment can change dramatically over time. The evidence for this can be seen from several sources, such as the various cohort studies over time of the incidence of diseases and disorders. A few simple illustrations will make the point superficially obvious.

Cohort Effects

In early 1950s, polio was a major epidemic, and so was tuberculosis. Neither are major health hazards today. The advent of antibiotics was hailed as a miracle in saving lives, and freely given out for things that they have no effect on such diseases as viral infections. In hospitals today, the bacteriological

diseases are starting to have an upper hand, because the bacteria evolved resistance to the drugs—something that evolutionary medicine experts were fiercely worried about. These are cohort or generational effects. A major cohort effect can be seen relative to major depression and its lifetime prevalence, shown below.

Figure 55: Depression and Generation Cohort Effects



What does the figure tell us from the major federally sponsored study on mental health disorder frequency (which corrects for over reporting, better diagnoses, etc)? First, people born between 1946 and 1955 (a significant percentage of our state policy makers) have only 5% lifetime probability of having had an episode of depression. Second, by comparison, people born between 1966-1975 (most of the younger adults in Wyoming), have nearly a 25% percent chance of having a major depression. This difference is huge, and worrisome for many reasons:

⇒ The children of people born between 1966-75 are many times more likely to have problems of substance abuse, antisocial behavior and school failure. Why? Because parents who are depressed are many times more like to have harsh, inconsistent or non-contingent (permissive) parenting, and such parenting style has very adverse consequences for effective child-rearing. For example, maternal depression when a child is the primary grades predicts conduct disorders (the worst kind of behavior problems such as involvement with the law, serious substance abuse) in those adolescents in longitudinal studies.[274] Depressed parents are unlikely to effectively supervise or monitor adolescent behavior, too.

⇒ The depressive episodes are correlated with higher health risk for many illnesses and reduced workforce capacity, which could adversely affect the state economy and welfare.

⇒ Relatively large numbers of adults are teachers from the 56-65 and 66-75 cohorts, and depression among teachers is not conducive to positive development among children their care. The symptoms of depression interfere precisely with neural circuitry necessary to engage in the behaviors described by experts as necessary for effective teaching. Teachers have a higher risk of depression than the general population,[275] because of the social conditions that can create depression are rampant in schools (e.g., feeling like you are helpless to change things because they are in the

control of others, feeling attacked, stressed, or burned out). And these trends have not escaped Wyoming. One larger school district spends more money on antidepressant medications than any other prescription.[276]

⇒ Women who are depressed and men who are aggressive or depressed choose each other as mates, potentially increasing the chances that genetics of substance abuse and multi-problem behavior increase.[277] This is called non-random mate selection.

There are other examples of cohort effects in the last few years that merit attention. Consider in the 1980s,for example, Eron and Heussman published their landmark longitudinal study on tracing the effects of TV viewing on antisocial behavior. The scientists reported that criminal behavior at age 30 could be predicted in part from the amount of TV watched as an 8-year old, 22 years earlier. What is important to note is that TV programs in question would have happened in the late 1950s, a far cry from the content of programs in 1990s. TV viewing would have had no impact persons born in the 1940s and earlier. It is quite possible that TV is a larger effect on problem behavior for children born after 1990, because of the content of the media and large numbers of children having TVs in the bedrooms—away from any human interaction that would buffer or protect against drugs. More recently, young people have been exposed to computer or video games. The type of games is unique in human history, and has some relationship with expressed aggression—based on current knowledge—although the effect may be modest.[278]

Cohort Study in Wyoming

The rise in serious substance abuse in Wyoming and related multi-problems may well be dramatically related to cohort effects, and those cohort predictors may be getting worse. If this is so, it means that we will have to find more powerful prevention, intervention, and treatment protocols to dramatically manage the adverse effects of multi-problems. Wyoming is an ideal state to conduct what is called an accelerated longitudinal cohort study because of its smaller size of people and relative homogeneity of population.

With the support of the State and other resources, the University of Wyoming, in collaboration with a number of national experts,[ii] national entities such as the National Institute on Drug Abuse, would undertake a bio-social study of Wyoming people, using a randomly selected cross section of the population, consisting of the following age cohorts: newborn, 5 to 21 (as controls for the clinic subjects), 21-25, 26-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85 and older. Our goal would be to follow 150 to 200 males and 150 to 200 females in each age cohort, for a total of approximately 3,100 Wyomingites. These individuals will also be given some of the same assessments given to clinical patients to allow the comparison of bio-social factors in a clinic sample versus a

[ii] Examples include: Dr. David Comings, City of Hope Medical Center; Dr. Tony Biglan, Oregon Research Institute; Dr. Patti Brennan, San Diego, CA.

population sample, for certain disorders. Assessments could include:

FOR ADULTS (18 and older)

⇒ A demographics questionnaire. The instrument will include family history.

⇒ CDIS-IV Computerized Diagnostic Interview Schedule-IV. This interview tests for the DSM-IV criteria based diagnoses.

⇒ Axis II Personality Inventory. The inventory is a self administered Computerized Personality Disorder Interview.

⇒ Addiction Severity Index. The ASI is a semi-structured, clinician-administered interview that collects data from substance abusers in seven problem areas, Computerized Personality Disorder Interview.

⇒ Cloninger Temperament and Character Inventory (TCI). Cloninger and coworkers have developed a seven - factor model of temperament and character. The seven factors are novelty seeking, harm avoidance, reward dependence, persistence, self-directness, cooperativeness, and self-transcendence.

⇒ EO Personality Inventory. This personality test has been used for many years.

⇒ Brown Adult ADHD Score. The instrument was developed an attention-activation disorder scale (BAADS) for the assessment of symptoms of attention deficit disorder in adults. It is a self-administered test with sub-scales specifically relating to attention, memory, impulsivity, and inactivity.

⇒ Buss-Durkee Hostility Scale. This is widely used to assess various aspects of aggression and hostility.

⇒ Moos Family Environment Scale. This measures family environment and cohesion.

⇒ Barratt Impulsiveness Scale or the GO-NO GO Task. Measures of impulsivity are important predictors.

⇒ State-Trait Anger Expression Inventory. Measures chronic state of hostility and expressed anger.

⇒ Assessment of Factors of Aggressiveness. Measures context of aggression.

⇒ Medical health questionnaire. As questionnaire for general medical disorders including, diabetes, osteoarthritis, cancer, chronic fatigue, fibromyalagia, migraine headache, and others.

⇒ Intervention and Treatment History. This would document the types of intervention and treatment individuals might have received.

⇒ Inventory of Social and Community Assets. The structure of this tool is to be decided.

CHILDREN (6 TO 17 years of age)

⇒ NIMH Diagnostic Interview Schedule for Children Version IV (DISC-IV). This is a structured interview for

DMS-IV diagnoses in children and adolescents.

⇒ Child Strengths and Difficulties Questionnaire. Self-report (for 11 and older), parent report, and teacher report.

⇒ Social Communication Questionnaire (SCQ). Autism Screening Questionnaire (40 items)

⇒ Other Assessments. Temperament, frontal lobe, reading problems, substance use and other assessments will be required.

⇒ Intervention and Treatment History. This would document the types of intervention and treatment individuals might have received.

⇒ Inventory of Social and Community Assets. The structure of this tool is to be decided.

CHILDREN (0 to 5 years of age)

⇒ These assessments will have to be reviewed with a panel of appropriate experts.

⇒ Intervention and Treatment History. This would document the types of intervention and treatment individuals might have received.

ALL AGES

⇒ Buccal Smear. A painless swab of the inner cheek, which will allow analysis of DNA and genes.

⇒ Saliva Sample. For chemical tests, such as hormone, lead, and manganese levels can be done on a sample of saliva.

Ideally, the multiple cohorts would be followed initially and then five years later, using various outcome measures including archival data.

Clinic Comparisons

The Cohort Study needs comparisons to special populations such as clinic referrals and criminal populations, so that Wyoming would have a complete profile for the development of norms and possible plans for therapeutic interventions.

Clinical samples**.** An important part of outcome of HB 83 is the development of state funded services where children, adolescents, and adults with disruptive behavioral disorders (ADHD, conduct disorder, oppositional defiant disorder (ODD), substance use disorder, domestic violence, other violence) are referred for evaluation and where appropriate psychological or medical treatment might be prescribed or managed. For the purposes of forming and developing more effective treatment protocols, it will be important to use the same evaluation protocols with a clinic sample as the population sample. We anticipate eventually obtaining samples on approximately 500 people in each of four age groups: 4 to 8, 9 to 12, 12 to 21, and greater than 21 years of age, for a total of approximately 2,000 Wyomingites. This type of sample plus information about the nature of treatment will be invaluable in developing and refining state standards of care, which will assure that Wyoming has one standard of high-quality service. For

example, it is rather clear that there are interactions between individual characteristics (genes, history, and social factors) and the positive or negative effects of medications. Adverse reactions to treatment can result in homicide, assaults, or suicide. The study will help Wyoming elevate the standard of care.

Adult Offenders**.** Since a major purpose of this project is to identify the psychological, environmental, and biological factors contributing to adult antisocial behavior inclusive of substance abuse, it will also require the inclusion of adults with adjudicated histories. An ideal source of adult offenders would be those already in prison. If this is deemed too difficult, individuals released from prison after serving their sentence could be used instead. We anticipate obtaining assessments and samples on 200 to 500 of such individuals. Again, these data would be of considerable help in designing effective treatment standards for our criminal justice population. The study of the criminal justice population could also go a long way towards a better understanding of how to effectively treat offenders, reducing the chances that they might commit major felonies such as murder shortly after release, as happened in August, 2001 after a release from the Men's Prison in Rawlins.

Expected Outcomes

The Accelerated Mutli-Cohort Study in Wyoming is expected to have the following outcomes, which will benefit the state's public health and safety:

⇒ Better understanding of risk and protective factors across generations.

⇒ Types of treatments that may work more effectively with certain age groups.

⇒ Avoidance of violent or harmful side effects as a result of medication or treatment protocols.

⇒ Better understanding of prevention, intervention, and control strategies.

⇒ Objective criteria for setting state standards for the provision of services.

⇒ International recognition for some of the most advanced science in the world for public health and safety issues.

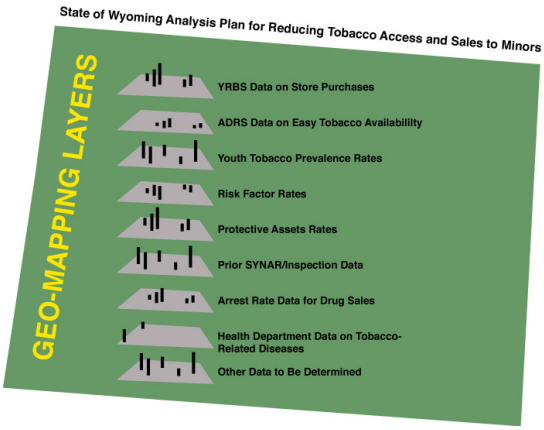
Special Considerations for Monitoring Wyoming Futures

There are some special considerations that need to be voiced for the development of a plan to monitor Wyoming's future. These are lessons learned from other jurisdictions. The lessons and ideas are discussed here.

Geo-Coding of Data

Whenever possible, consideration needs to be made for coding information to be geo-mapped.

Figure 56 : WY Analysis Plan for Reducing Tobacco Access and Sales to Minors

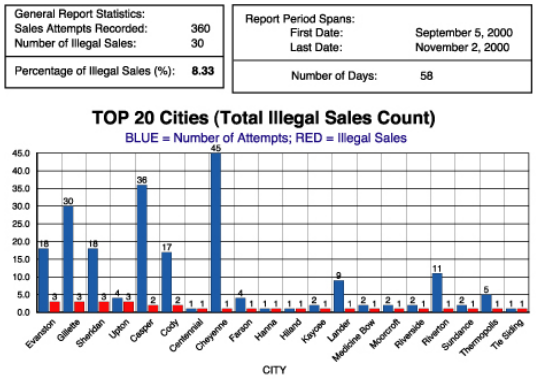


One expert in the field makes this recommendation:[279] "Because definitions of community areas typically have some geographic boundaries, data used for community indicators must be suitable for assignment to geographic units. Administrative agency data, which are often the preferred source for local community indicators, must be obtained with the street addresses intact. The addresses can be geo-coded using the TIGER files (census files containing street addresses) and aggregated to the desired geographic boundaries—for example, block groups, census tracts, resident-defined neighborhoods, wards, catchments areas, school zones, and so on."

The various state agencies will need to be instructed by the Legislature to standardize procedures of geo-coding, since there is likely to be variability in ways records are kept or changed.

The Geo-Coding will enable reports for communities such as on the access of tobacco products by minors.

Figure 57:Attempts & Illegal Tobacco Sales to Minors by Top 20 Cities



Reporting Error and Biases

Error and bias issues must be addressed in this Wyoming effort, because problems are particularly troubling at the local community level. Local community indicators rely heavily on administrative agency data, and they are thus beset by the reporting bias and error in those data sources. Several actions will need to be undertaken to reduce problems of error and bias:

⇒ Efforts will need to be made to validate indicators based on administrative records against other data sources. Specially designed community surveys would be useful for establishing the validity of indicators derived from administrative agencies or other sources, as a mechanism of convergent validity. For example, legal records for delinquency acts are notorious for poor reliability.

⇒ Community indicators are often reported as rates in which the area's population is used as the denominator. Rates may be reported per 100, 1,000, or 100,000 persons. Unfortunately,

population estimates are not universally available at the block-group or census-tract level between censuses, so rates in non-census years will be less valid. While established methods of population estimation are used at state and county levels, their application to areas as small as block groups, census tracts, or neighborhoods has not been widespread.[280] The sources of data needed to perform these population estimates can generally be obtained for community areas through geo-coding. The housing unit method of population estimates, for instance, can use building and demolition permits, utility hookups and disconnections, or county assessor tax records to update housing unit counts post census. The component-cohort method relies on birth and death certificates. While estimating small-sized areas results in greater error, there is evidence that useful estimates are possible.

⇒ Small units of analysis haunt Wyoming. It will be necessary to use rolling averages for several years together in some cases, otherwise the percentages, ranks, or other comparisons will be too volatile.

Feedback and Recognition for Citizen and Community Efforts

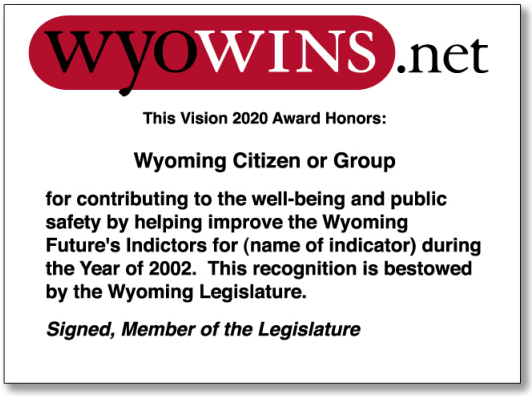
The data from "Monitoring Wyoming's Future" must be presented in a timely way so that citizens and local units of government may act to sustain positive activities, devise new strategies, and decrease harmful events. The presentation of state-level data will not be sufficient, based on the experience of other States such as Vermont. Several things will need to be in place as a result of this effort:

⇒ Data will need to be frequently reported for local units of government—meaning cities, counties, school districts, and even school feeder patterns.

⇒ We recommend that some community data (not necessarily school level data) be reported by school feeder pattern. Local schools are the smallest unit of public actions undertaken for common benefit. Thus, if assaults are up in a school feeder pattern, or adult substance abuse is, then the residents are far more likely to come together in a sort of Town Hall type function to take action in their own behalf. Just county or state level data for some things will tend to foster denial or blame ("It's those people over there.")

⇒ We further recommend that every member of the Legislature be provided indices of positive changes in his or her district (e.g., the number of low-weight births are down, the number of students of young people having no or little use of drugs is up) so that he or she can commend and recognize local citizens or organizations for their positive efforts, via special certificates and press-releases. Such recognition and attention improves community empowerment. An example certificate is shown below.

Figure 58: Example community recognition



Changing the Dialogue in Wyoming

In the course of the preparation of this report, one of the authors was involved in preparing recommendations for various federal agencies at national level, as a sort of consensus statement of desirable practices to prevent such problems as substance abuse.

Asking Everyone About Their Efforts

The panel of experts assembled for this task at Stanford University heard about a practice in Vermont, which is probably applicable for Wyoming—since both states share a strong streak of independent spirit. At Legislative hearings, every state - supported agency is asked to comment on what they have done to improve the type of health and safety indicators mentioned earlier in this section. Both the Executive and Legislative branches of the Vermont State government have agreed to ask two basic questions at virtually every hearing to foster a dynamic process of movement toward a better state environment of all citizens. The questions are framed in the box below, suitable for Wyoming:

Testimony Question 1:

What have you (agency or group) done to improve the Wyoming Future's Indicators this past year?

Testimony Question 2:

What will you (agency or group) do next year to improve the Wyoming Future's Indicators?

Making Wyoming Future Indicators Part of Doing Business with the State of Wyoming

Government cannot solve the problem of substance abuse and other multi-problems alone. That is an essential principle laid out at the onset of this study.

The authors of this study recommend that the Legislature make this principle clear with those who would do business with the State of Wyoming in a very straightforward way, which raises awareness and increases the dialogue with friends and neighbors all throughout our state. In most States, contractors may have to fill out environmental impact statements, pledge not to discriminate on the basis of age, handicapping condition, etc. All governments in this country have been formed to benefit the public safety, the health, welfare, and happiness of their citizens. It would not be unreasonable for the state to have two simple directives in contracts, as appendices, above a certain amount:

1. If you received funds for this contract in the past year, please explain below how your organization or entity helped improve Wyoming Future's Indicators during the last contract period.
2. For the period in which this contract will run, please explain how your entity will improve Wyoming's Future's Indicators during the contract period.

The **wyowins.net** website would maintain examples of what entities had done or proposed to do. In addition, a portion of the social marketing campaign for Wyoming would strongly promote individual and collective practices that could be undertaken to improve Wyoming Futures Indicators, and be tied to the Wyoming Community Toolbox. The Governor and Legislature might regularly honor businesses in Wyoming—small and large—who had undertaken noteworthy actions to improve these indicators.

Appointment of Citizens and State Employees for a Special Fellowship

Wyoming has immense reserves of talent. Unfortunately, our under-staffed environment means that many people work very hard on pressing matters, and never really have time to see the future of the state in a bigger way, to examine our own activities or resources so that they might be better used to improve the Future of the State.

This plan, itself, is unique in the United States. As far as we can tell, no state has actually undertaken such a comprehensive review of the single issue of substance abuse, despite the horrible toll being inflected on the Western democracies by this problem. This plan has happened, because the State actually set aside the resources (people, time, and money) for it—beyond the normal course of taking care of the State's everyday business. The study resembles the strategy of Commonwealth countries like New Zealand, Australia, and Canada that regularly appoint world-class experts to work with their citizens who are on a "secondment" (a special assignment) on a sustained basis (a year) to come up with powerful solutions to concerns of the governments. The Commonwealth countries have prodigious productivity compared to their size. Indeed, some of the best ideas and solutions for Wyoming have come from Commonwealth countries—precisely because they do not have the number of people, the dollars, or other resources that some other larger political entities might have.

A small state or country simply cannot "throw money" at a problem. A small state must think, do, and be far more creative and bold with its smaller number of human and financial resources. A small state or country must be smarter, and certainly not just copycat.

A small state cannot pretend that the events that happen in a big country or state will not affect them either. Our northern neighbor, Canada, gets a financial cold when the United States stock market sneezes, for example, The people of Cheyenne, Wyoming, have a hard time paying their electricity bill when the state

of California has rolling blackout—even though we are the "BTU Capital of the World."

We propose that Wyoming "think smarter" about its future and its most rarest of natural resources, its people. This idea has been set in motion in part by the data collection system being proposed herein. No state will have what we will have, and knowledge is power in the modern world. Knowledge can allow us to see the hazards and harms as well as bold opportunities—provided there are Wyoming people to see, think about, and use the information. Without an alert crew in the aircraft making the approach into Jackson Hole, the information from the instruments will be useless—as in a defining metaphor in the opening of this section.

How might Wyoming leaders and citizens think smarter in the long-term? We propose a possibility, where knowledge and real-world know-how might come together for the benefit of our future:

1. The Governor, based on nominations proposed by the Wyoming Legislature, would appoint Wyoming civil servants or citizens annually to serve as a Wyoming Citizen in Residence at the Wyoming Futures Project housed at the University of Wyoming for a period of one year, when such nominees would conduct collaborative projects and studies that further improve Wyoming Future Indicators.
2. The Governor, upon the advice of Cabinet, would appoint one or more distinguished individuals from any state or country to serve as Visiting Advisors, whose knowledge, skill or expertise might significantly enhance the capacity of Wyoming to achieve its vision of dramatic improvement of the Wyoming Indicators by the Year 2020.
3. The Department of Health should work with the University of Wyoming to develop appropriate screening criteria and standards of appoint for both citizen fellows and senior research fellows.

Do we have evidence that such activities might benefit Wyoming and not just be some sort of paid leave? Yes, we do. In February of 2000, The Governor's Advisory Board on Substance Abuse invited 10 major scientists to spend time together with our state's 2nd and 3rd tier civil servants. Out of that experience came the Reward and Reminder Campaign for reducing sales of tobacco to minors. Many states have spent far more money and time to solve that problem, and Wyoming set a national record by thinking, acting, and being smarter.

What kinds of projects could people assigned to the project conduct over a year's time? We outline a few examples:

⇒ Does a brief, cognitive behavioral intervention for depression delivered as a part of Wyoming Workforce Development reduce the symptoms of depression and increase measures of employability?

⇒ Evidence from the cognitive behavioral literature suggests that it might well, but no literature exists in the context of Workforce Development—despite the well documented fact that depression prevalence is very high among people who are seeking to re-enter or enter the workplace.[281] In theory, a brief, science-based cognitive behavioral approach to depression could save the state considerable funds and move a person toward self-sufficiency more quickly.[282]

⇒ Does a brief parenting intervention using a science-based program delivered by videotape reduce youth problem behavior in Wyoming rural communities?

⇒ Emerging research suggests that videotaped or Internet delivery of parenting practices using behavioral methods can improve the behavior of children and teens.[283] It is not known whether such interventions could be sustained by via Internet or mail using video training in the Wyoming context. If so, the positive benefit for Wyoming families would be very high and the cost low for the State.

⇒ Do phone calls and visits to Wyoming Clinicians Improve the Effectiveness of Therapists When Providing Feedback on Therapy Outcomes?

⇒ Increasingly there is evidence of emerging "best practice" to improve both health and mental health outcomes. Generally speaking, there is a serious question about the impact of standard professional development as related to improved treatment outcomes.[284] Some studies suggest that long training is required, which is difficult in the Wyoming context.[285] Historically, there is evidence that personal, on site visits where feedback on outcomes, coaching, and demonstration happen might improve the compliance of therapists or professional delivery agents.[286] This practice has not been tested in a rural context, and Wyoming's issue of accountability for funds spent on mental health and substance abuse treatment would be served if such strategy worked.

Issues to Be Further Studied

During the preparation of this report, we became aware of populations of people for which we have little or no information. These groups or situations represent groups with known elevated risk for substance abuse. During the next year, these populations need further study, for the development of strategies responsive to the public health and safety issues presented:

⇒ Detained Youth. Presently 19 counties are tracking admissions to detention centers and jails in Wyoming of juveniles. This has only been happening for 1 year, and needs to continue. Having said that, Wyoming needs to expand this assessment to include mental health and substance abuse treatment needs of these youth, since they categorically pose an elevated risk of multi-problems inclusive of antisocial behavior, substance abuse, suicide, and misuse

or abuse of substances. Better treatment and response to such youth may dramatically improve their outcomes and those of the children which they are more likely to have than non-incarcerated youth.

⇒ Homeless Youth Or Youth-On-Their-Own – There are approximately 100-200 young people who are homeless or on their own in Cheyenne, according to interviews with local providers. Historically, such young people have much higher risk for substance abuse, serious sexually transmitted diseases, and criminal activities. We have no estimate of the numbers of such young people in Wyoming, where they are located and the severity of their problems compared to other jurisdictions. During the next two years, the Department of Health, the Department of Education, the Department of Family Services, and others need to undertake: 1) a field trial of intervention services, and 2) a census of such youth, inclusive of their difficulties.

⇒ Youth in Alternative School Settings – Historically, there have not been any data collected on substance use and misuse among alternative education school students. In general, national data suggest that such youth have very high misuse and abuse rates.[287] We strongly recommend data be collected from such sites in Wyoming, which is just starting by the Substance Abuse Division and that open trials of interventions begin in such settings to expand our knowledge and the larger public health. Limited science presently exists for treatment services in such context, but does provide some insight for intervention.[288]

⇒ Transient Adults — Community providers and some community informants have argued during the course of this review that significant numbers of the users of scarce treatment resources are transient individuals, some of whom make a circuit during winter and summer to different locations. We have no objective data on such individuals, their numbers, or information about possible effective treatment strategies to report at this juncture. We urge that some research project be undertaken to assess this issue.

⇒ Medicaid Services and Prescriptions — Significant substance abuse, which is sometimes intentional and sometimes the result of medication interactions, happens in the older population receiving Medicaid. Late in the preparation of this report, the authors learned that Wyoming is one of the few states to have purchased the decision software that would allow it to analyze the patterns of prescriptions to look for abuse of prescriptions or for interactions that could be fatal or have serious consequences. Medicaid is interesting, because substance abuse and mental health services increase with the age of the patient according an examination of the records of 10 states.[289] Payments for mental health and substance abuse may account for as much as 28% of the expenditures, based on the 10-state study.

⇒ The authors recommend that this system be examined in greater detail as mechanisms of providing higher quality services, a unified system of care, and improve the public health and safety of Wyoming during the next two years. There was not sufficient time to explore this technology during the study. This new system, if fully utilized, could enable the state to do many things:

⇒ Estimate the expenditures attributable to substance abuse, using standardized decision trees. A national study estimates that $8,000,000,000 is the direct result of substance abuse complications for Medicaid sponsored services.[290]

⇒ Estimate the savings from better substance abuse treatment, as was done in the State of Washington, which appeared to be around $5,000,000 for the chronically mentally ill who were also abusing substances.[291]

⇒ Review of drug sensitivities and avoidance of possible fatal consequences (Adverse Drug Reactions), which have been noted for some time but had little possibility of being dealt with until the types of computer programs were developed that Wyoming now has.[292] For example many prescriptions involve the use of drugs for older people that severally affect liver function sensitivity to alcohol or other drugs. Medicare claims could spot high risk patient profiles.[293] These Adverse Drug Reactions (ADRs) are not a trivial problem medically, socially or legally. For example, Canada has studied such adverse drug reactions involving selective serotonin reuptake inhibitors (SSRIs are the single most common prescription cost for most health care plans presently). ADR reports in the SSRI database for Canada, there were 1011 cases, with severe ADRs (n = 295) involving all types of SSRIs, drug-drug interactions (n = 312), deaths (n = 87), or intentional overdoses (n = 79).[294] (Please note that the adverse reactions to SSRIs are small by comparison to other medications).

⇒ A way to reduce prescription fraud, as has been done recently in Florida, which also purchased the system.[295]

⇒ Help reduce the adverse impact of rapid cycling bi-polar disorder.[296]

Summary for Monitoring Wyoming's Future

Wyoming has always been a future oriented society. We were the first state to embrace the right of women to vote. We were the first to have a woman Governor. This section of the plan as requested by the State Legislature will enable Wyoming to use sound data collection and public policy to help us chart our course into the future, rather than being the simply the passengers onboard.

Prudent business people follow trends and project into the future. Prudent business people want to maximize future

return. A state is no different in managing its most precious resources, its people. What will be different about the Monitoring the Future efforts in Wyoming is that we will not be looking at the past to find blame. We will look at our past to help us chart a future. The way reports, dialogue, and even the statistical analyses will be set up will be future focused, not past focused: What do we need to sustain? What do we need to contain? What do we need leave behind? What do we need to do differently?

This section of the comprehensive plan commissioned by the State Legislature will call for the following enabling actions:

1. Passage of the Vision 2020 Act of 2001.
2. Adoption of the practice of asking witnesses from agencies to report on how they have improved Wyoming's Future Indicators.
3. Participation by each legislator in honoring local constituents whose actions have improved Wyoming's Future Indicators.

Wyoming Wins—Public Education and Marketing to Reduce Substance Abuse

The Wyoming Legislature instructs and authorizes the Department of Health to initiate a comprehensive marketing campaign to reduce the risk factors associated with substance abuse and increase protective factors associated with lower prevalence rates of substance abuse at its predictors.

The Department shall incorporate the principles of the Substance Abuse Control Blueprint incorporated by reference herein.

Models of Marketing to Improve Healthy Habits

Imagine a major soft-drink company developed a marketing campaign like most public-health efforts. The eager advertising agency executive pitches the campaign to the board of directors of *ZAP!* Cola:

> ***We are going to depend on messages broadcast during the times when nobody watches. We will ask TV and radio stations to give us free ad space, which will be of course between 1 am and 6 am. This will save us tons of money.***
>
> ***Our ads will not feature the benefits of ZAP! Cola. Instead, our ads will simply show the dangers of the lack of hydration. Our ads will say something like, "This is your brain on dehydration." The image will be of a dried up sponge. Then, we will have a tag line with a voice over, "Scientists have established that dehydration is a leading cause of death and disease in Wyoming. Please talk to your doctor about the dangers of dehydration. Or, visit your local health department for an informational pamphlet."***

If the dehydration campaign were launched, *ZAP!* Cola would surely experience a marked decline in market share—resulting in forced resignation of the CEO and the firing of the ad agency. The new management and ad agency would quickly seek out proven strategies to restore sales and the balance sheet of *ZAP!* Cola.

The imaginary dehydration campaign violated almost every known principle proven over the last few decades of marketing research, and public-service type campaigns (PSA) based on the same paradigm for substance or other problem behaviors have little or no impact.[297] Another approach exists, and this is social marketing.

Social Marketing: A Parallel to Product Marketing

Substantial research now shows that young people may engage in antisocial or substance abusing behavior as a result of exposure to television or other electronic media *(see recent Surgeon General's report on violence and other reviews)*.[298] Media can also be effectively used to increase behaviors related to the prevention of violence, substance abuse, or other health promotion topics for children.[299] [300] When media are used to change health related behaviors, the general concept is referred to as social marketing. Social Marketing makes use of the "Four Ps of Marketing."

The modern approach to marketing revolves around four Ps: *product, performance, price, place, and promotion.* Commercial marketers make sure that their *product* is appealing to consumers and has a catchy name that is easy to remember. They make clear what the customer must do to achieve the advertised result. They sell it at a *price* consumers are willing to pay. They make the product readily available in easily accessible places. They use *promotion* and advertising [we are talking about advertising and its fundamentals] to familiarize consumers with the product and persuade them to buy it [alt: they use promotions and discounts to reduce the burden of trying the product]. These same elements can be seen in successful social marketing campaigns. The *product* may be a change in behavior or support for a new program or policy or the use of a service. The *price* may be breaking with tradition, or giving up a comfortable belief or habit, or using time differently, or even a purchase. *Performance* embraces the actions that a person does to yield the result of the product. The *place* is where people can embrace a program or pursue a new course of conduct. *Promotion* is the means used to communicate messages and images justifying the change and making appealing, and promotions create the infrastructure to allow easy participation in pro-social alternatives (or something to that effect)]. Social marketing borrows the methodology of commercial marketing but adapts it to health advocacy and other large-scale efforts for positive social change.

National Examples of Social Marketing

Scientists have started to review the impact of media campaigns on substance abuse and other multi-problem behaviors.[301] Some of the best examples show social marketing can change even long-standing habits, when full social marketing principles are used in communities.

Summary of US Research

Recently, Derzon highlighted some results:

Flay[302] concluded that media campaigns work best when they are accompanied by interpersonal or community support components. One of the most highly cited examples of a successful media intervention is the Stanford Three Community Study, which tested the impact of a two-year campaign to reduce cardiovascular disease among adults living in a small California city.[303] The first community in this study was exposed to television and radio spots, newspaper columns and advertisements, billboards, posters, and mailed materials to create problem awareness and teach cardiovascular risk reduction techniques. A second, similar community received all of the above plus face-to-face instruction for a subset of high-risk individuals. A third community served as a control. The general finding was that the media campaign was effective at stimulating health related behaviors, such as better diet, which were based on new knowledge[304], but alteration of ingrained behaviors such as smoking or sedentary lifestyle occurred only when the media messages were supplemented with more intensive instruction.[305]

What kind of effects could a reasonably constructed media campaign alone do for substance? Derzon estimates that a media campaign alone can reduce substance abuse by 1% to 2%, which is in line with incremental changes produced by many media campaigns for commercial products.[306]

Is it possible to produce even better effects using more advanced knowledge of marketing and characteristics of the science of substance abuse? Yes. Researchers have demonstrated that a media campaign designed for and targeted to specific teen personality-types can significantly reduce their marijuana use. In a study published in the February 2001 issue of the *American Journal of Public Health*, researchers report that special media with an anti-marijuana use message resulted in at least a 26.7 percent drop in the use of that drug among the targeted teen population. [cite, see accompanying note] The campaign was designed to appeal to the 50 percent of teens who tested high (above the median) on sensation seeking. Teens with this personality trait are much more at risk for using drugs, and for using drugs at an earlier age, than are adolescents who test low as sensation seekers. The campaign had no effect on teens characterized as low sensation seekers, a group that already exhibited low levels of marijuana use. [Note: the campaign used substantial paid placements and recruited donated space]. This study is noteworthy, but requires replication because of some statistical and methodological issues.

Canadian Findings

In examining results and practices, data were examined from the Canadian Context. There are several reasons for this. First, much of Canada is rural—like Wyoming. Second, Canadians have a spirited sense of independence from the US Federal Government—something shared by many in Wyoming. Third, Canada is impacted by the Hollywood

culture and cultural trends beyond its control—just like Wyoming, Canada has had to find ways to address those trends. Fourth, exciting research has happened in Canada that could be applied in Wyoming.

Canada, for example, has had an extensive program of social marketing for substance abuse prevention since the mid-1980s, and their youth substance abuse trends have been far better than the rest of North America. Their campaign resembles suggestions for Wyoming:

⇒ Event marketing/corporate sponsorship

⇒ Special promotions

⇒ Information, communications, and skills development

⇒ Advertising

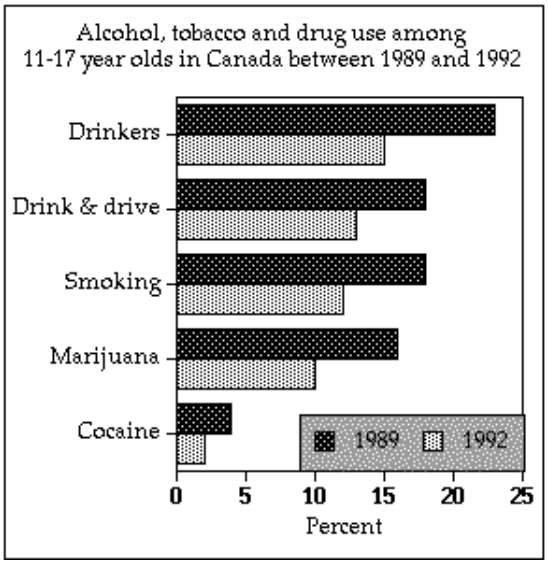
⇒ Direct marketing

⇒ Public health/media relationships

Such social marketing campaigns have been used in Canada since 1985/6. The impact has been monitored and the report from Statistics Canada gives information up to 1992. The data are experimentally controlled. The Figure below shows the report data.[307]

The reductions reported in Canadian youth prevalence would represent savings in hundreds of millions of dollars over time as well as countless improvements in public safety and welfare.

Figure 59: Canadian Youth Substance Abuse Rates



Context of Private Sector Marketing

In the public and non-profit sectors of the society, few realize how much money is spent in advertising and marketing of products. Consider the example of the American Pharmaceutical industry,[308] that provides a useful comparison because it focuses on health issues, is a major cost to the state and society, and the cost of pharmaceuticals could, in theory, be substantially reduced if the treatment, prevention and control strategies in this proposal were adopted by Wyoming citizens.

A study of drug advertising conducted by Scott Neslin, a marketing professor, released in the Association of Medical Publications (reported in the *Wall Street Journal*, May 22, 2001), compared the return on investment for the four marketing tactics most often used by drug companies. According to the study, in the

year 2000, drug companies spent the following:

⇒ $4.5 billion to advertise drugs directly to consumers via TV, magazines and other media;

⇒ $6.2 billion to reach doctors through one-on-one office visits, free samples and small group meetings;

⇒ $1.9 billion on various and sundry medical events and meetings; and

⇒ $527.1 million on medical-journal advertising aimed at medical professionals.

In total, the drug companies spent $13.1 billion in a single year for marketing. This is the equivalent of approximately $50 dollar for every man, woman, and child in the United States. It is worth noting that the pharmaceutical industry has maintained its standing as the most profitable legitimate business sector of the US economy.[309]

Figure 60: Health Canada logo

Could effective social marketing strategies change the substance abuse and health behavior of Wyoming citizens—if approached as Derzon discusses, as carried out in Canada, by following the approaches used by the pharmaceutical companies? The answer is yes.

Wyoming Examples of Social Marketing

The State of Wyoming recently initiated one of the better examples of the kind of social marketing (media and community-based interventions) to affect substance abuse related behaviors.[310] After the state had confronted nearly a decade of very high rates (as much as 55%) the Wyoming Substance Abuse Division implemented a researched-based protocol to reduce sales of tobacco products to minors. The strategy launched by the state included:

⇒ TV ads designed to encourage a specific behavior.

⇒ Paid placement of ads when the target audience was likely to see them.

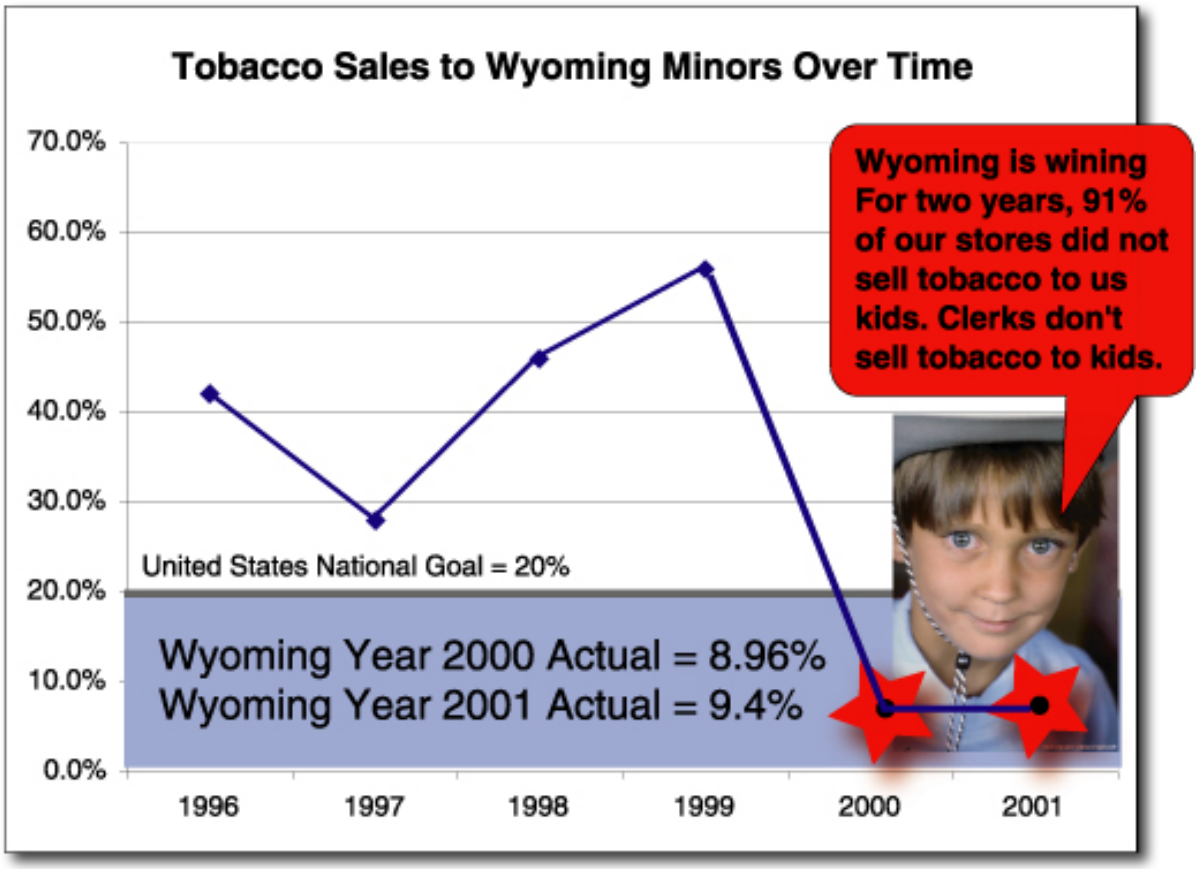
⇒ Multiple community-based interventions designed to reinforce and strengthen the media campaign.

⇒ One-to-one interventions in high-risk situations for youth at higher risk

⇒ Careful attention to the 4 Ps of product, performance, price, place, and promotion.

This campaign was associated with the largest recorded drop in sales of tobacco sales in the United States, according to federal officials in charge of Synar enforcement. If the state is able to maintain these reduced sales to minors, a reduction in youth tobacco use is likely.[311] Such a reduction could have a profound impact on the state expenditures for health and other related costs. The immediate impact of the Wyoming campaign is shown in the figure below.

Figure 61: Impact of Wyoming Social Marketing Campaign



Guidelines for a Wyoming Social Marketing Campaign

Since the advent of satellite and cable TV plus the conglomeration of media companies, Wyoming's citizens have been the influenced by media from larger markets. Over the past 25 years the norms of Wyoming communities have been supplanted by the norms of the mass media. This fact alone is probably one of the factors that has increased the abuse of substances and the rate of physical assaults by younger people in Wyoming, based on reviews by various scientists (see Villani).

Amplifying Wyoming Norms

During the HB 83 study process (interviews, public hearings, and review of the available data), many people voiced the belief that Wyomingites are supportive of alcohol, tobacco, and other drugs. This perception is harmful, and it is a fallacy that adolescents typically make about substance use by their peers. Teens often believe that "Everybody is doing it."

The truth is that a majority of Wyomingites, old and young, do not use or support the use of alcohol, tobacco, or other drugs. For example, in 1999, the majority of teens surveyed on the American Drug and Alcohol Survey (ADAS) in Wyoming had no or negligible involvement of drugs, as published in a report by the Wyoming Department of Health.

In 1999, the majority of Wyoming teens surveyed on the American Drug and Alcohol Survey (ADAS) had no or negligible involvement of drugs.

These and other positive norms must be amplified in Wyoming to reduce substance abuse and its consequences. For example, during the Reward and Reminder campaign on tobacco sales to minors, all of the media (TV, radio, print, and public relations) amplified the norm that *"In Wyoming, we don't sell tobacco to kids."* This campaign set a national record for reduced tobacco sales to minors.

Making Wyomingites Heroes

The majority of Wyoming youth do not use drugs, but we have a higher proportion of kids, teens, and young adults with a high degree of drug involvement as compared to many states. It would be unwise to amplify the percentage of youth with substance abuse problems in the mass media. What might we do instead? We must show Wyoming children, youth, families, teachers, and community members as heroes engaged in actions that can be copied by others to reduce the problem and create a better life in our state. It's part of our heritage. The west and New World were not settled by wimps. They took bold action. Chief Washakie fought and advocated for his people and the future. Esther Hobart Morris sought and won equity for

women in Wyoming. The early Mormon's pushed their carts across the high plains.

Many poorly conceived and ineffective health promotion efforts focus exclusively on the illness, disease, or problem—often showing only the negative outcomes (e.g., child abuse, shootings, drug death, injury) with some version of "ain't it awful." Our Wyoming social marketing campaign must use an extremely well validated principle of making the symbolic models of the social marketing campaign (children, youth, parents, teachers, civic leaders, etc.) heroes using coping strategies (not 100% actions) that result in benefit for self and larger community. The symbolic models of Wyomingites (e.g., TV or print representations) will be presented in such a way that the viewer or listener has a reasonable chance of copying the action in a short period of time successfully, because of the availability and promotion of easy to access resources or tools (e.g. "log on now to www.wyowins.net.

Minding the 4Ps in Wyoming

A Wyoming Social Marketing Campaign to reduce substance abuse and its precursors must utilize the four Ps: product, price, place, and promotion.

Product

The campaign must appeal to the groups we wish affect, using catchy names and slogans that support positive change (not just amplify the negative). These attributes can and should be tested properly and be based on solid science, such as the "risk-taking" appeal to high-risk youth who are likely to use marijuana as described in the National Institute on Drug Abuse Study earlier in this section.

In terms of a catchy name, this report recommends the ideas that grew out of the VISION 2020 idea, which has been shorted to "wyowins.net" in Figure 57 below.

Figure 62: Wyoming Wins Logo

wyowins .net

"Products" for the Wyoming campaign might include the following:

⇒ Information packets or strategies distributed at no cost at grocery stores to improve parent-child relationships that buffer against substance abuse;

⇒ Curriculums to reduce the aggressive, disruptive behavior of students in school available by overnight express to teachers;

⇒ Services to quit or reduce tobacco use;

⇒ Screening tools for professionals, agencies, and others to help identify people who might benefit by some simple interventions to reduce substance use.

⇒ Increasing natural community supervision through faith-based or community-facilitated clubs for

youth, to reduce access to alcohol, tobacco, and other drugs;

⇒ Involving young people in promoting tobacco-free pregnancies of Wyoming women.

⇒ Reward and reminder programs for clerks and stores to not sell tobacco or alcohol to minors.

In summary, the Wyoming Wins "products" for a social marketing must not be simple ads that say, "Don't do drugs." They must be carefully chosen strategies that mesh with key scientific findings and unique conditions of Wyoming.

Performance

Big changes are generally the result of several small changes over time. For example, the children of parents using contingent praise regularly and avoiding constant negative comments typically show better outcomes—not only immediately but also many years later in terms of reduced criminality and substance abuse.[312] Teachers who use many small behaviors [such as smooth instruction, group altering, fast transitions and pace and many more]on a daily basis have students who achieve more, disrupt less, and have many fewer behavior problems including substance abuse. Thus, the Wyoming Wins campaign must select high power, simple acts of performance that can be promoted extensively to reduce substance abuse.

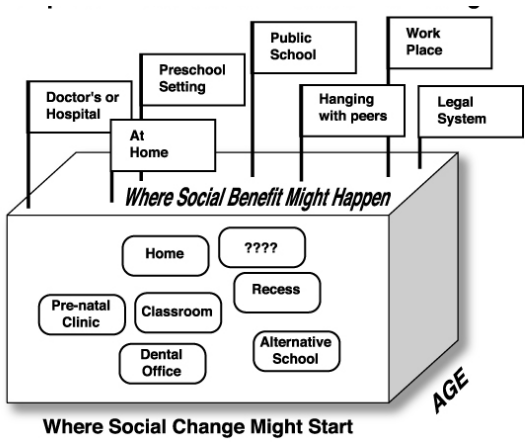
Price

What something costs is not just dollars. It may cost time. It may cost you other opportunities or create a loss such as a relative or significant other who no longer wants to be with you. It may involve some pain or increased threat.

The Wyoming Wins campaign must pay particular attention to the perceived costs of strategies promoted to maximize participation rates of Wyoming citizens in strategies that will reduce harm from substance abuse. The "price" or cost issues are affected by perceived ease of accessibility, and this issue must be accounted for in any social marketing campaign for Wyoming. The list of considerations for cost or price include:

- Fee or money for purchase.
- Time required to get, use or maintain.
- Losses in social relationships.
- Time away from other preferred activities.
- Lost opportunities.
- Perceived loss of status.
- Savings in money, time, personal losses, opportunities, status, or other cost-benefits.

Figure 63: Example of Place Issues in Social Marketing



Place

Place is where meaningful change or benefit is to take place, in the context social marketing. (See Figure 58 above) The world has another implied meaning in the context of Wyoming Wins—the life stage of the person (e.g., prenatal, infancy, early childhood, school age, teenager, young adult, etc.). In social marketing, place exists also at two levels—where the change might be started and where the benefit might be visible. Making the clear distinctions of the three levels of "place" are important for constructing an effective social marketing campaign to reduce the effects of substance abuse in Wyoming.

Promotion

Promotion must be carefully considered when constructing the Wyoming Wins social marketing campaign to reducing substance abuse—especially to counter-act the negative effects of the media conglomerates, industries heavily vested in alcohol or tobacco sales, and other powerful cultural forces. Promotion is the "sizzle" or zap.

Classically, most successful campaigns work at one or more levels to increase the sizzle or zap, involving basic human reinforcement:

⇒ Increased status.

⇒ Increased fun, thrill, or relief from boredom.

⇒ Removal or reduction of pain.

⇒ More money, resources, or tools to acquire the same.

⇒ Belonging to something good, being a part of a great event, or achieving a sense of personal identity.

⇒ Sex appeal or ability to find a sexual partner.

⇒ Removal or reduction of a threat to self, property, or loved ones.

⇒ Immediate relief from something noxious.

The above list may seem obvious, especially given the pervasive influence of marketing and advertising in modern life. Satellite TV offers 500 ways to instantly reduce boredom. [Viagra promises relief from dysfunction and a return to normal behavior.] Advertisements for tobacco and alcohol promise instant friends and status. The new action movie delivers instant thrill.

An effective Wyoming Wins campaign will show Wyoming people of all ages how they can have more status,

enjoy all of life's pleasures more, gain more security and wealth, and be a part of something big through "buying" some behavior or action. Simply telling people drugs are bad or dangerous for them or Wyoming is not likely to be an effective promotion. When effective promotional strategies are used in social marketing, significant effects can happen:

⇒ Phone calls and admissions for mental-health treatment by vulnerable people can double.[313]

⇒ Family participation in an early-childhood prevention program can affect the majority of the target population.[314]

⇒ Parenting skills and other adult behaviors related to substance abuse prevention improve.[315]

⇒ Depression symptoms can decline.[316]

⇒ Smoking cessation programs show increased participation can be increased, with results lasting over several years.[317]

⇒ HIV infection rates are reduced.[318]

⇒ Substance abuse among high-school students is reduced.[319]

⇒ Marijuana use in high-risk youth declines.[320]

Leveraging Resources

When a new "blockbuster movie" comes out, all sorts of strategic alliances are formed for cross-promotion and leveraging marketing resources. The same is true for *successful* social marketing. Each member of the alliance undertakes in the cause of the current project. The members of this strategic alliance minimally includes:

1) broadcast partners such as radio or TV;
2) mainstream print publications;
3) media targeting important populations or "marketing segments" such as teenagers;
4) governmental entities that will benefit if the social marketing efforts work (e.g., local law enforcement, parks and recreation);
5) voluntary associations that would have a benefit for members if the social marketing effort worked (e.g., teachers' associations or unions);
6) civic groups or associations who have a pre-existing commitment to the behavioral outcomes of the social marketing; and
7) local businesses that could receive direct or indirect sales benefit by participation in the campaign (e.g., a fast-food chain, a supermarket chain, a realty company).

The Strategic Alliance allows for such efforts as cross promotions, "product placement," and increased exposure to the message or behavioral change tools in ways far more cost effective than simple placement purchase for airtime or display space.

With Wyoming Wins, the entire campaign must utilize leveraged resources and strategic alliances to produce the maximum benefits for reducing substance abuse and related problems.

Data-Driven Results-Tracking

All successful marketing campaigns carefully track results. For example, some TV campaigns actually track when the 1-800-number was dialed based on the timing of commercials. Results tracking allows for the campaign to be improved, based on feedback. Results-tracking will involve one or more of the following:

1) direct observation of the use of promoted strategy (e.g., use of the games),

2) pickup or "purchase" of items at local strategic partners,

3) household surveys.

The results of key Wyoming Wins campaign segments must be experimentally tested via a time-series design and the results of these evaluations must be incorporated into future campaigns. The Wyoming Wins social marketing component must have the same accountability to the Legislature as all other components of the recommendations made in this report.

Enabling Actions by the Legislature

To enable the intent of the social marketing campaign, Wyoming Wins, the Legislature must enable the Department of Health to enter into collaborative agreements for sponsorships of events, services or products that further consistent with reductions in substance abuse or harm from substance abuse. The enabling legislation would also permit the Department of Health to engage in cooperative promotional efforts with the private sector.

Wyoming Wins Campaign Recommendations

The objectives of a social marketing campaign to reduce substance abuse or reduce harm caused by the use of substances must be carefully thought out, just like any other marketing campaign. This section highlights key components of a social marketing campaign that the Department of Health ought to undertake. The table on the next page summarizes the recommendations for the marketing campaign.

The Wyoming Wins Campaign will cover all age groups, using multiple types of media, and focus on strategies that might yield a powerful benefit.

The table on the next page shows the scope of the Wyowins.net effort for the next few years.

Other pieces of the puzzle

The Wyoming Legislature recognizes that the solution to Wyoming's substance abuse crisis will not be found in any one "magic bullet," but rather in a comprehensive effort to employ a wide variety of measures that have proved to have positive impacts.

Reward and reminder for alcohol

In the mid-90s, Congress passed the so-called Synar Amendment. In short, the law requires the states to enact and enforce laws prohibiting the sale of tobacco products to minors. States are required to conduct inspections and meet a federally mandated compliance rate or face the loss of millions of dollars in substance abuse treatment grants.

The first Wyoming survey was conducted in 1996, and disclosed 46% of Wyoming retailers willing to sell to minors, far above the allowed rate of 20%. The rate fell to 33.4% in 1997, and rebounded to more than 45% the following year. The 1999 inspections disclosed an even worse violation rate, when sales were made by 55.8% of the retailers inspected.

During each of the above inspections, the Department of Health was precluded from using minors to conduct the checks. However, in 2000, the Legislature agreed to change the law to allow for the use of minors under very heavy restrictions. Later that year, faced with the potential loss of millions of dollars in needed substance abuse treatment funds, the Department developed a plan to bring Wyoming into compliance.

The plan was based on solid science and research. It relied on rewarding clerks who complied with the law and reminding those who did not. The Department conducted an intentional campaign using underage customers. The young people entered an establishment and asked for cigarettes. If the clerk denied the sale, he or she was rewarded with a small gift such as a certificate for a meal at Taco John's. On the other hand, those clerks who agreed to the sale were given a reminder that such sales are a violation of Wyoming

law and could expose them to severe fines. It is important to note, the minors were instructed that they were not to complete the sale under any circumstances.

This "reward and reminder" campaign was carried out together with a major public relations campaign and mailings to clerks. The Department worked with retailers to train clerks.

Later that year the annual Synar inspection was conducted. **The result was the most significant one-year improvement of any state in the nation.** The violation rate that had been 55% in 1999, dropped to under 9% after the "reward and reminder" campaign.

Based on the overwhelming success of this program, we believe the Legislature should extend the authority to use minors for reward and reminder efforts aimed at reducing the sale of alcohol to minors.

Fines for tobacco use by minors

Do fines for tobacco use by minors help reduce substance use? The answer is yes, based on some recent reviews. Small fines, consistently used, appear to be more effective than community service, which often involves putting together youth who use—even smoking during the community service project. The scientific finding fits the general research on behavior analysis.

One Florida study demonstrated that the process of being cited and making a court appearance resulted in significantly less tobacco use among underage youth. (*The Monitor on Psychology*, *Vol. 32*, No. 59 at p. 59, 2001)

Under the current law, the court may either fine the young person or order community service. Because tobacco retailers successfully argued that minors purchasing tobacco should be exposed to the same fines as retailers who sell the tobacco, the fine structure is the same. Therefore a young smoker can be fined up to $50 for a first offense, $250 for a second, and as much as $750 for a third or subsequent violation. The statute allows community service to be imposed as an alternative.

We believe the alternative is ineffective. Most communities do not have sufficient infrastructure to adequately supervise community service. During this study young people told us they were seldom cited for a violation even when it was witnessed by a law enforcement officer and, that when cited, they were given community service. Some said they were never again contacted to serve that "sentence." Some told us that while doing their community service they were-unbelievably-given smoke breaks!

All of the young people to whom we spoke said that had they been given a monetary penalty, which would have really caught their attention. Young persons who have money to purchase cigarettes also have money to pay the fines. With good research showing the imposition of small fines to be an effective deterrent, we believe judges

should be encouraged to use them, and the Legislature should repeal the community service option, or in the alternative, allow only a portion of the sentence to be worked off in community service.

Tobacco free schools

We surveyed 48 Wyoming school districts regarding smoking policies. All 48 prohibit smoking in school buildings. However, smoking policies on school grounds and at school events varies.

Thirty-six of the 48 districts prohibit smoking by anyone on school grounds and at school events. Of the others, some allow teachers and staff to smoke but prohibit students. Others allow visitors to smoke. A few choose to allow smoking outside but not inside buildings.

We believe the state should establish a uniform policy prohibiting all smoking by anyone in school buildings, on school property, and at school events. The dangers of teen smoking have been clearly established. Setting an example for kids is important and sending the message that smoking is not a healthy habit is something the schools should do. It is hypocritical for a district to say to students that they may not smoke while permitting teachers and other adults to do so in their presence. We recognize there may be political difficulties at the local level in imposing "no smoking" rules. Accordingly, we encourage the Legislature to adopt a uniform statewide policy.

These reforms should be accompanied with smoking cessation programs and others means of helping those addicted to nicotine. The science-based programs to achieve those goals are outlined in the Tobacco Blueprint.

Tax strategies

The legislature should consider tax strategies designed to both reduce consumption and to pay the costs of the abuse of alcohol and the use of tobacco. Wyoming should consider whether "user" fees are appropriate. Those who use tobacco and abuse alcohol inflict the taxpayers of this state with enormous costs for healthcare, crime, corrections, and treatment among other significant financial impacts.

They are not paying for what they cause. Perhaps they should.

The report avoids establishing specific recommendations for tax increases in tobacco and alcohol. Yet it seems the legislature should consider these sources of revenue when determining how to pay for this comprehensive plan.

Insurance Parity

During our study numerous providers asked that this plan recommend insurance parity, i.e. a requirement that substance abuse treatment be covered under insurance policies at the same level as other benefits. At the outset of this discussion, the authors want to disclose a conflict of interest. Rodger McDaniel, one of the

two primary writers of this report, has represented insurance interests as a lobbyist in the Wyoming legislature since 1981. Clearly, some of the conclusions contained herein are colored by that experience. Nonetheless, this is an issue that needs to be addressed in the report.

We have chosen to view the issue more broadly than to simply recommend an amendment to the insurance code. To do so would be counterproductive. The Wyoming insurance code applies only to the private insurance market and not to self-funded or ERISA programs. Approximately 60% of those who are insured are covered under the latter. Accordingly, attempting to "solve" this problem by simply mandating private insurance coverage will fall short. Such an effort would not even impact the state employees' plan that provides very little coverage for substance abuse treatment.

Second, while studies show that mandated substance abuse coverage will raise rates only 3-5%, that increase will come on top of recent increases that average over 20% and have resulted in companies leaving the Wyoming market and employers dropping their coverage altogether. According to the Wyoming Insurance Department, there has been a 25% reduction in small group insurers in the last two years. In that same period, 7 companies have left this market while 2 others have merged. The companies have told the Department they simply could not make a profit in this state. We should be cautious about reaching for seeming easy solutions that cause unintended problems.

Already there are declining numbers of employers providing coverage for either the employee or dependents. Only 2/3rds of employers offer health coverage to fulltime employees and the number drops to 58% for dependents. Part time employees are covered by fewer than 14% of employers. Any increase in rates will adversely impact those numbers.

It is also important to note that most of the people needing treatment are not likely insured in any event. Reports from treatment providers show that 33% of those coming for treatment earned less than $10,000 last year. Twenty-three per cent had incomes between $10,000 and $19,999. More than two-thirds earned less than $30,000. Requiring insurance coverage would not impact most of them.

The goal of policymakers should be to find a broader plan to create funding streams to expand access to treatment. We are not opposed to insurance parity but believe it would be a mistake to look to insurance parity alone. It may be a part of the mix, but done in isolation will likely cause more problems than it solves.

First, if the Legislature is to mandate insurance coverage, it should begin with the state employees plan. Before the state mandates coverage for others, it should be willing to accept the responsibility for its own employees. Under the state plan, residential care is limited to two episodes in a lifetime, one for a maximum of 20 days and the other for 10 days. Limited outpatient coverage is so low it would preclude participation

in an intensive outpatient program. Coverage is restricted to 50 visits in a calendar year and 420 in a lifetime. Nearly all private-market policies provide better coverage already. Perhaps the state plan should be the standard for "parity."

Next, the state must find a way to extend the requirement to the self-funded plans. Unless they are brought in, all of the upward pressure on premiums will fall on the private-market insured resulting in more people being uninsured.

Third, the state needs to deal with the fact that most people who need these services are uninsured. Insurance coverage will not significantly affect the ability of substance abuser to obtain treatment. Accordingly, a parity strategy must include broadening the availability of Medicaid and more liberal qualification standards for the children's health insurance program.

Any effort to expand insurance coverage should be preceded by a commitment to create an accountable system with clearly defined standards and outcome measurements.

.08 BAC

Under the provisions of the FY 2001 US Department of transportation Appropriations Act, the Congress is requiring the states to enact statutes establishing .08-blood alcohol content as the national standard. States that do not comply will lose certain highway construction funds.

We regret that the Congress determined to do this in the manner they frequently choose, i.e. under threat. We believe the .08 BAC proposal is worthy and would have been better considered on its own merits rather than in the context of federal mandates and threats. Nonetheless, Congress has chosen this route and the states are required to make a choice between passing the law and losing funds, when the choice should have been a simple policy matter based on considering whether lowering the blood alcohol content is a good idea. We believe it is and urge the Legislature to enact it as a part of this plan.

In the context of this plan, we think it is critical that the Legislature send a message that alcohol is the number one drug problem in Wyoming. By every measure including public health/crime statistics and the impact on children and families, abuse of alcohol causes more problems than do illegal drugs.

According to the National Highway Transportation Safety Administration (NHTSA), the risk of being involved in a highway crash increases substantially at the .08 level. Research by the Insurance Institute for Highway Safety indicates that the relative risk of being killed in a single-vehicle crash at .08 BAC is eleven times higher than for drivers at .00 BAC. California reported a 12% reduction in alcohol-related traffic fatalities the first year after an administrative license revocation law established a .08 standard.

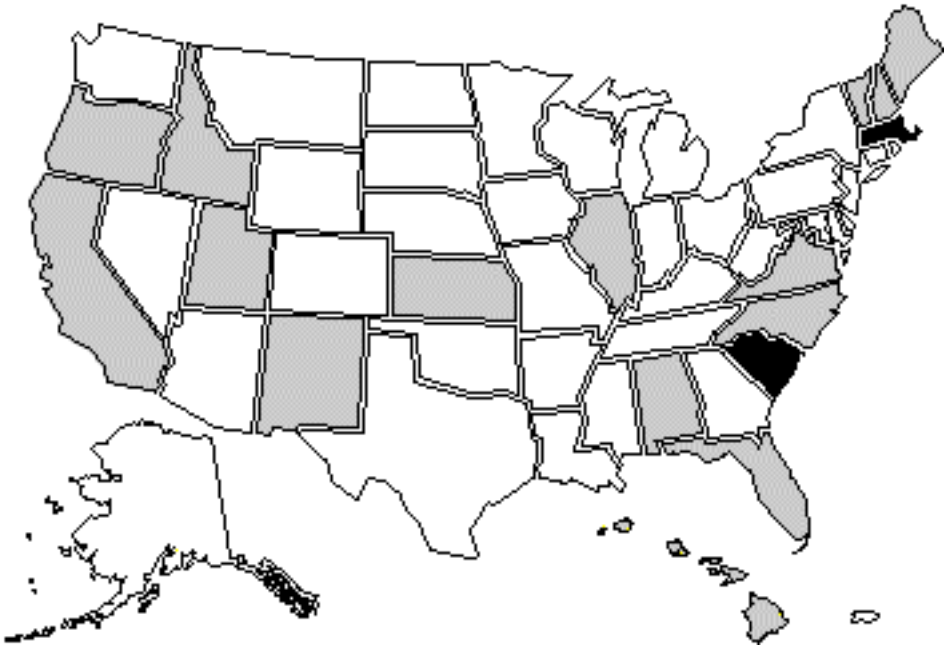
Another study concluded a nationwide .08 standard could reduce

highway fatalities by 1200 deaths per year, primarily among younger drivers. (*Journal of Policy Analysis and Management 2001*, Vol. 20 Issue 1, pp 111-128)

A .08 BAC level is not reached, as some claim, with only "a couple of beers" or an after dinner glass of wine. Studies show the average 170-pound male drinker would have to consume more than four drinks in an hour on an empty stomach to reach .08. A woman weighing 137 pounds would likely require three drinks on an empty stomach. Typically, the female driver would need four drinks over two hours to get to .08 while a male would need five drinks. That is sufficient to protect the "social drinker" from prosecution under this law.

Most states have a "per se" statute that establishes a BAC standard above which a driver is presumed guilty. The question is simply at what level should that standard be set? Who do we seek to protect by lowering the level to .08? Who do we protect by refusing to do so? More importantly, in the overall context of this plan, agreeing to enact the lower .08 standard will send a very important message that policymakers understand that it is the abuse of alcohol that poses the most serious substance abuse risk to the people of Wyoming. It makes no sense to permit people to drink more before they drive a vehicle.

Figure 64: States with .08 BAC



Shaded States=.08 BAC Per Se Law
White=.10 BAC Per Se Law
Black=No Per Se Law*

* Arizona now has a .08 BAC per se law

While we do not encourage the Legislature to enact this law because of the threat of the loss of highway construction funds, the report would be incomplete without mentioning the possibility. States failing to lower the BAC standard by FY 2004, will face the loss of 2% of certain funding. The penalty increases by 2% each year thereafter until FY 2007, when it reaches and remains at 8%. States adopting the standard by FY 2007, would have withheld funds returned. To avoid sanctions, the state must have a law in effect by October 1, 2003.

Assuming a 2% loss in the first year of the penalty, lost funds for Wyoming would total $3,127,670, increasing incrementally as described to over $12.5 million in the event an 8% penalty is imposed.

It is encouraging to note that significant members of the alcohol industry have agreed to support the .08 BAC. The president of the Beer Institute, the brewing industry's Washington, DC trade association, has indicated that while the Institute does not necessarily endorse the idea, neither will it oppose it. The nation's largest brewer, Anheuser-Busch did not oppose the bill when it was enacted in the Corporation's home state of Missouri.

Prescription drug reforms

The brief time available to do this study has not provided the Division with the amount of time it would have liked to have devoted to this subject. It is clear, however, that prescription drug abuse is a growing problem in Wyoming and around the country.

Many of us have read the numerous articles covering the controversies about drugs like oxycontin. Florida has placed limit on the number of capsules that one person may obtain. Vermont has stopped paying for the medicine under certain welfare programs. In Virginia, police provide fingerprint kits to pharmacists who keep the prints of those who obtain the drug. Many pharmacies around the country have refused to stock oxycontin because it has become such a target for burglars and robbers.

While it is a drug that currently receives the publicity, it is not the only prescription drug being abused. Ritalin has long been abused along with others such as Zoloft and Xanax. As Wyoming moves to meet the challenge of substance abuse, this issue deserves attention.

During public meetings we conducted in the course of this work, we were told anecdotally that the abuse of prescription drugs is "common"—some accidental and some intentional. UW professor Michael Loos, an expert in this area, estimates that as many as 25% of the elderly have substance abuse problems and that a significant share is related to the use of prescription drugs. He indicates some of these problems are caused by doctors who unintentionally over-prescribe. Often one doctor does not know the patient is receiving prescriptions from another.

We were told that lax rules in Wyoming facilitate prescription fraud. Prescriptions may be phoned in allowing

an abuser to obtain drugs by pretending to be an employee of a doctor calling in a prescription. The paper on which prescriptions are written is not tamper proof, permitting patient's to copy the form and obtain the same prescription from multiple outlets.

We believe this is an area that requires some action and some continued study. The action we recommend is that the Legislature direct the Pharmacy Board to adopt rules requiring the use of tamper-resistant paper for the filling of prescriptions and other rules the Board may deem helpful to assure that only those entitled to receive prescription medicines do in fact receive them.

We further believe the state should create a statewide, computer database that would permit doctors, pharmacists and, in certain cases, law enforcement agents to quickly identify those who are fraudulently obtaining prescription medicines.

The latter proposal should be a part of an interim study of this issue.

800 Number

We recommend there be established a well-publicized 800 number where Wyoming citizens may obtain the latest information about substances, prevention, and treatment. When parents, teachers, employers, or others are confronted with the problem, they need a clearly defined and well-informed person from whom they can receive reliable information and referrals. Daily the Substance Abuse Division receives telephone calls from distraught persons trying to determine whether a child may be "on drugs" or from a loved one seeking to find treatment for someone in their family. The timely availability of good information may be the difference between getting help for a substance abuser and losing them.

As a part of the social marketing plan we propose, it is important to give citizens a place to go, a person in Wyoming to whom they can talk and from whom they can learn about Wyoming programs.

Surcharges on drug and alcohol convictions

Consistent with the overall goals of this plan to hold people personally responsible, we believe the offenders should pay for part of the increased funding for the treatment system. Offenders will be required to contribute financially to their own treatment. In addition, we recommend the Legislature authorize courts to impose surcharges on fines levied against certain offenders.

The precedent for this proposal is established by the Crime Victim's Compensation Act (WS 1-40-101 et. Seq.). Section 119 of that act allows the court to impose a surcharge in addition to any other fine or penalty imposed against those convicted of certain crimes. The funds are deposited in an earmarked revenue account and used for specified victims' compensation.

Those who commit crimes that are directly or indirectly related to the use of drugs and/or alcohol should be required to contribute to the system the taxpayers

otherwise fund to provide treatment. The legislature may choose to earmark these funds for drug courts or for the overall treatment needs of the state. Regardless of that policy choice, we believe these offenders should help pay the bill and that requiring them to do so is not only helpful to the taxpayer, but may also help convince abusers they need to get treatment.

Drug and alcohol abuse by pregnant women

Among the most troubling of the Wyoming statistics are those exposing the severity of the problem of drug, alcohol, and tobacco use by pregnant mothers. It is easy to say these women should be allowed to make their own choices, but that ignores the fact that their choices impact a child who has no say in the matter. Their choices also impact the rest of us who have to pay the bills and otherwise deal with the severe problems encounters by the children who are born addicted because of mom's drug use or experience the long-term devastation of fetal alcohol syndrome.

The problem is more than academic in Wyoming and demands immediate action. The following is a section from the 2000 WY KIDS COUNT Factbook.

> ***Wyoming continues to exceed the national average of low birth-weight babies. In 1998, 8.9% of Wyoming's babies were born at weights under five and one-half pounds. This compares to 7.6 per cent nationally. The rate of low birth-weight babies in Wyoming is alarming and has steadily increased between the years 1991 through 1997 with only a small decline of .1 per cent in 1998. Low birth-weight infants are at greater risk to experience long-term disabilities or to die during the first year of life than are babies of normal birth weight. Prevention of low birth-weight is dependent upon comprehensive prenatal care, smoking cessation, adequate nutrition, and adequate maternal weight gain. ****The risk can be reduced by keeping all prenatal appointments [and] avoiding tobacco and recreational drugs…."***[321]

One Cheyenne family practitioner reports it is common that fetal alcohol syndrome or drug babies can cost the taxpayers $1-2 million in the first months of life. Thereafter, for those children who survive, the costs continue to mount over a lifetime.

If we are willing to intervene in a meaningful way while these mothers are pregnant, we could avert millions of dollars in costs and motivate healthier families.

The connection between drug and alcohol use during pregnancy and adverse impacts on the infants born to those mothers is unquestioned. Policymakers have frequently been far too hesitant to take steps necessary to assure the safety of unborn children. The result is that children born to drug, alcohol, or tobacco abusing mothers are at high risk to have their own substance problems. These kids also cost taxpayers extraordinary amounts of money

during the first months of life and thereafter, if they survive.

In 1996, *The Journal of Substance Abuse Treatment* put first year costs for low birth-weight babies at an average of $50,000 above "usual" births.[322] Wyoming doctors will tell you stories of infants that have cost the state in excess of $1 million.

A 1999 Wyoming study raised red flags. Wyoming women arriving at health clinics for prenatal services were surveyed. Two-thirds were found to be using tobacco, alcohol, and/or illegal drugs during their pregnancy. More than one in ten were using all three![323]

A January 2000, report from the national Conference of State legislatures reviews alternative approaches tried by several states. They range from criminal prosecutions of mothers to civil interventions by child welfare agencies and public health initiatives designed to educate. Some states have used drug court strategies to coerce pregnant women into treatment.[324]

Some of what we propose here will be quite controversial. However, during the study, many legislators and other members of the public continually reminded us that there is a need to make parents responsible for their children. We agree and we hope policymakers will be courageous enough to require parents to assume that responsibility before the birth of the child.

We believe the legislature should continue to encourage public education efforts targeting these mothers. While attempting to open more doors to treatment, public education efforts should include efforts to "stigmatize" those who drink, smoke, or use drugs while pregnant. Wyoming should send a clear message that using substances while carrying a child is unacceptable behavior. At the same time, the state policy must recognize the addictive nature of these dangerous substances and provide mothers with treatment.

We do not encourage the prosecution of women for the act of using while pregnant. Such a punitive policy would be counterproductive in terms of the need to provide prenatal and other medical care. However, when a pregnant woman appears before a criminal court on an alcohol or drug charge, the court should be required to take action necessary to protect the unborn child. These mothers should receive sentences that require them to participate in treatment and these sentences must be adequately supervised in order to make certain they are followed. Women unable to comply with treatment options should be incarcerated for the course of their pregnancy within the maximum sentence applicable to the offense for which they have been found guilty.

We recommend that retail establishments selling alcohol and tobacco be required to post warning signs encouraging pregnant women to refrain from purchasing those products. While recognizing the difficulties such a statute would pose, we ask the Legislature to consider prohibiting the sale of alcohol or tobacco to obviously pregnant women. This kind of measure is bold and we can readily see that it will take considerable effort to draft a workable law. However,

we believe these children are worth that effort. Even though such a statute may prove difficult to enforce, it would provide a major deterrent to women who continue to comfortably drink and smoke while ignoring the impact of their conduct on their child.

Finally, we recommend Wyoming adopt a statute passed in Wisconsin in 1998. The statute recognized "unborn child abuse" permitting the detention of mothers endangering the health or life of an unborn child. The statute invokes significant protections through DFS if a mother endangers her unborn infant. Likewise, the Ohio Supreme Court recently upheld a statute defining "child abuse" to include using illicit drugs during pregnancy.

The state must find a better way to balance the interests of the mother and the unborn child. Under current law, the child has little protection. If the mother is using drugs or alcohol, so is the child and while the mother may make that choice for herself, the child has no say. The legislature and the courts must speak for them.

Blueprint Management Issues

A plan is only as good as follow up actions. This section sketches some of the management of the plan emerging from the Substance Abuse Blueprint. This is only an outline, not the final management plan. Such a management plan must be constructed based on what is actually adopted by the Legislature. This section simply outlines some of the management plan issues that will need to be developed, after the Legislature approves the basic plan.

Selecting First Steps

The number of tasks to undertake with this plan is daunting. The reason is simple: Over time, the problem has become very large in Wyoming, and the need is pressing. The temptation, under the circumstances, is either to delay or deny everything or be overconfident. Neither serves the public.

Criteria for First Steps

The authors suggest that the department and staff charged with implementing this plan divide the projects implicated in the plan into several basic groups:

⇒ *Begin With Baselines.* Monitoring and accountability systems will be required to show progress of effort. Without these systems in place early on, it will be impossible to demonstrate to the people of Wyoming whether or not the activities are making a difference. System accountability must not be an afterthought. It must be an extremely high priority.

⇒ *Pick the Low-Hanging Fruit.* Selection of strategies that will quickly produce perceived positive gain. Early victories are important to sustain the haul. A temptation may be to neglect the simple, beneficial strategies, because some problems are so terrible and painful. The paradox is that early victories aid the emotional and political support for the long haul. Additionally, the early

victories will nourish the agency staff that must carry out the Herculean efforts outlined in this blueprint. These short-term goals are things that might mature as

benefits for the state within 6 months or so from implementation.

⇒

⇒ *Show Impact on Some "Big Deals."* Select some strategies that will produce measurable benefit within 6 to 18 months. These are mid-term benefits that will show that we can, in fact, achieve some harder goals. The selection of these strategies must have a solid basis in prior research that show results could be achieved in the time period. What might be examples? Trying to implement a residential treatment program would be unlikely to achieve such mid-term results. Based on prior research, a smoking cessation protocol promoted in specific areas could, so too, might a protocol to reduce alcohol or tobacco use during pregnancy. Another strategy would be to reduce sales of alcohol to minors or reduce intoxication at bars where there is a history of serious car crashes from people driving home.

⇒ *Initiate Some Projects With a Huge Payback 3-5 Years Out.* Some strategies can produce some positive benefits in 3-5 years that will greatly impact the safety and public health of the state. Projects like Multi-Systemic Therapy can produce major savings in the treatment of teens with multi-problems; however, the protocols will take about 18 months to set up and at least another 18 months to systemically show measurable benefit for the state. These 3-5 year projects will need the short-term successes, in part, to reduce the need for such services. Otherwise, the more intensive services will become overwhelmed over time.

Recommended First Steps

Some key things to undertake in the first few years of the implementation of this plan and to produce short-term, medium-term and longer-term benefits include these examples:

⇒ Social marketing protocols to mobilize communities and normative changes and diffuse strategies that can be quickly adopted by stakeholders

⇒ Standards for treatment, intervention, and prevention, which will have long-term impact

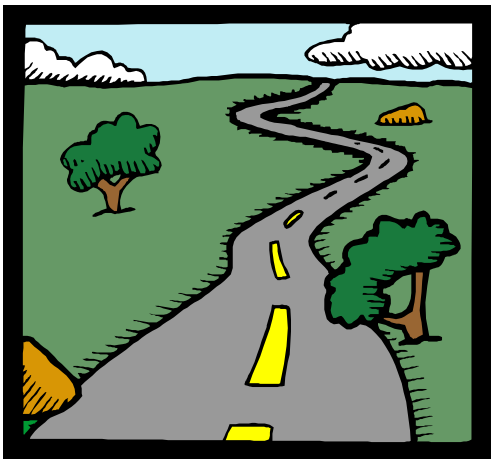
⇒ Powerful strategies that will reduce perceived access to tobacco, alcohol, and other drugs among teens and children

⇒ Potent strategies (e.g., brief interventions and therapies) that reduce use of tobacco, alcohol, and other drugs during pregnancy; brief strategies that reduce substance misuse among adults; control strategies for prescription medications; behavioral protocols for schools that reduce aggressive behaviors related to substance abuse; gene and genogram screening for co-factors predicting adverse reactions for individuals in state care, and more

⇒ Powerful strategies to reduce serious behaviors through proven protocols such as Multi-Systemic Therapy, Intensive Supervision, Relapse Prevention, and more

The Longer Journey Timeline

Not everything important for the Substance Abuse Blueprint can be achieved quickly. Some activities will take more time in a longer journey.



Criteria for Longer-Term Steps

This blueprint proposes some simple criteria for the selection of longer-term strategies in the initial phases:

⇒ The longer-term strategies chosen for early implementation would have high probability of being implemented effectively.

⇒ The longer-term strategies effectiveness could be leveraged by the success of some short-term strategies.

⇒ The initial longer-term strategies are not construction dependent.

Some Recommended Initial-Focus Activities for Longer-Term Benefit

Some of the immediate longer-term strategies that will have a major impact include:

⇒ State standards for effective treatment, intervention, and prevention

⇒ Data collection and monitoring systems

⇒ Regional or Mobile Teams

⇒ Implementation of research-based therapies such as Multi-Systemic Therapy

⇒ Enhancement of the Olds Program and other near birth interventions

⇒ Brief therapies for cession, depression, and other mental illnesses

⇒ Contracts for services by Department of Family Services or Department of Corrections

⇒ Intensive Supervision Protocols for adults and youth

Matrix of Responsibilities

During the interim between submission of this report and the 2002 Legislative Session, a major task to be developed will be a matrix of the responsibilities by each participant or entity in Wyoming: each state agency, local governments, mental-health and substance abuse centers, institutions, private practitioners, school districts, etc.

This matrix needs to be created in a consultative process with these entities, after they have some time read, discuss, and interact with the Substance Abuse Division.

Infrastructure Development

Wyoming must strengthen its infrastructure to carry out this plan. The problem has grown so large, and we have few historical resources for these issues. In some instances, various policies may have even impaired our response to the growing problems with substance abuse.

Government Infrastructure

A plan must be developed in the context of the Department of Health, Department of Family Services, Department of Corrections, Department of Workforce Development and others entities. Some of the tasks to be completed in the development of the management plan include:

⇒ Review existing memorandum of understandings (MOU) that will assist the implementation of the Blueprint

⇒ Review the need for new memorandum of understandings (MOUs) that may be required

⇒ Revise existing rules and regulations that may need some amendment

⇒ Review existing Executive Orders to see if new ones might benefit the implementation of the Blueprint

Provider Development

The management plan will require figuring out the micro-details of developing support training of providers

to implement elements of this plan. This includes:

⇒ State Supported Providers

⇒ Private Sector Providers

⇒ Community Infrastructure Related to Providers

⇒ Volunteer Recruitment and Management

⇒ Operations of Local Units of Government

⇒ Family Support and Advocacy Entities

⇒ Provider Associations

Scientific, Knowledge, and Practical Infrastructure

The management plan will require extensive development of the talents and skills of our scientific and professional communities to implement this Blueprint. Some areas of development include:

⇒ University of Wyoming

⇒ Community Colleges

⇒ Non-Profit and For-Profit Organizations

Leveraging Funds

The Blueprint cannot depend on only one source of funds for overall success. In creating this plan, it was envisioned that a number of sources might be leveraged for success, which include:

⇒ Federal Funds (Medicaid, Block Funds and Federal Grants)

⇒ Foundation Grants

⇒ Tobacco Settlement (This plan has been well integrated with the Tobacco Blueprint so that the two will work together)

⇒ Private Sector (in-kind, collaborative projects and direct efforts)

Keeping the Infrastructure Nimble

This plan must be a living Blueprint. It cannot be locked, because the nature of the problems will change based on new events and data. The authors of the study recommend that supplements be created and adjustments be annually reviewed based on the various monitoring data reported to the Legislature.

Monitoring and Reporting Progress

This plan depends extensively on quality data and frequent reporting, which has been covered in another section. This report and Blueprint presumes accountability for funds and results.

Budget

The budget for the Blueprint is being prepared in consultation with Governor's Office and Legislature, based on the actions of the Legislature.

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