TESTIMONY
COMMISSION ON ALTERNATIVES TO INCARCERATION
Senator, Joel C. Heitkamp, Chairman
November 20, 2007

Chairman Heitkamp and members of the Commission on Alternatives to Incarceration, I am JoAnne Hoesel, Director of the Division of Mental Health and Substance Abuse Services with the North Dakota Department of Human Services. I am here today to provide information on the public substance abuse treatment system, the Matrix model of treatment, the Robinson Recovery Center, other alternatives to incarceration, and the Governor's Council on Drugs and Alcohol.

North Dakota is number one or near the top of the list in recent alcohol use and binge drinking, regardless of age group. Similarly, our state ranks near the very bottom among states in people that perceive great harm associated with this high risk drinking.

The public sector substance abuse treatment delivery system is anchored at the eight regional human service centers. The centers provide multiple levels of substance abuse treatment services and the centers in turn, contract with private providers for additional treatment levels. The levels of service range from residential treatment to outpatient treatment. All clients are assessed for appropriate treatment service levels using the American Society of Addiction Medicine (ASAM) client placement levels.

The primary substance used is recorded for all public sector substance abuse treatment admissions. Alcohol continues to be the primary substance used with marijuana, second and methamphetamine, third. Substance abuse treatment providers use a variety of treatment methods. I will highlight several of the latest additions to the treatment 'toolbox'.

The Matrix Model is a practice shown to be effective for persons who are dependent upon methamphetamine or have brain injuries from other drug/alcohol use. This practice is used at the Robinson Recovery Center and all eight regional human service centers plus several private providers. North Dakota is one of few states that have directly partnered with UCLA for the training to implement this practice. Attachment A provides information on the elements of this model.

Integrated Dual Disorder Treatment (IDDT) is available at Southeast Human Service Center. This practice is designed to serve individuals who are chronically addicted to substances and severely mentally ill. This practice is shown nationally to decrease hospitalizations, crisis response, and increase employment and independence. Exciting and encouraging individual results are occurring as a result of this practice and the first year study report is currently being processed. A workgroup is in place and is analyzing the human service center that will be next to start this program. Attachment B provides information on the IDDT practice.

The Department has developed a process to increase dissemination of information. The research unit has developed numerous documents. Two research project reports to note are entitled, "Trends in Admissions and Primary Substances of Abuse" and "Average Cost of Public Sector Substance Abuse Treatment in North Dakota." I have provided you copies of each document. (Attachments C & D)

The Department revised its electronic clinical record for substance abuse services to enable the system to report national outcomes measures. Preliminary results of this data indicate that of the individuals in public substance abuse treatment, homelessness decreased 26% and

unemployment decreased 16%. Full annual reporting of these results will be available in the near future.

Robinson Recovery Center

The Robinson Recovery Center opened its doors in January 2006 as a result of legislation passed in the 159th Legislative Assembly. Initially, twenty beds were funded and this effort was doubled in the 2007 Legislative Session. The Robinson Recovery Center is one of three residential treatment facilities in the United States specifically focused on methamphetamine. Not counting inpatient treatment, of which few individuals need, residential is the highest level of substance abuse treatment. The Robinson Recovery Center has seen higher incidences of legal involvement, child protection involvement, impulsive thinking and behavior increasing the potential to relapse, dual diagnosis, negative peer associations, and criminal thinking. These all have lead to an increased need for monitoring efforts and additional support for each client than in a mixed group treatment program. This program has the advantage of being able to maintain persons as long as they need this level of care. 193 referrals have been received as of June 30, 2007 with 82.8% of referrals coming from the eastern regions of North Dakota. The average age of those admitted is 28 years old with the oldest being 54 years of age. The average length of stay is 3.15 months with referrals to lower levels of care.

Alternatives to Incarceration

There are five places where mental health and/or substance abuse interventions can take place in the criminal justice process. Attachment E displays the intercept model and identifies those five interventions locations. Alternatives fall into three categories: 1) pre-booking diversion programs, 2) Post-booking diversion programs, and 3) post-adjudication programs. Juvenile Court provides pre-booking models available through their diversion

programs. Robinson Recovery House is both a post-booking and post-adjudication program. Drug courts are considered post-adjudication models.

Research suggests that the different alternative programs tend to target different populations. Post-booking models tend to work with people who are more impaired than pre-booking models.

Research results show that costs are incurred where the person is diverted or where the intervention occurs. In other words, the diverted group will have more community costs whereas the non-diverted group will have higher jail costs. Additional treatment costs will often be higher in the short run but in the long run, the positive outcomes for individuals, systems, and communities will outpace initial costs.

Governor's Prevention Advisory Council on Drugs & Alcohol

The Governor's Prevention Advisory Council on Drugs and Alcohol resulted from the 2007 Legislative session. The Council's charge is to make recommendations to the Governor for purpose of improving the delivery of prevention services and explore the interrelationship between substance abuse prevention, education, and enforcement programs; address traffic safety issues; and develops a plan to access additional funding. Attachment F displays the members of the Council. The Council is currently identifying current best prevention practices across State Departments that are involved in prevention work. The Council plans to survey prevention professionals and youth, collaborate with upcoming statewide prevention efforts, collaborate with the State Epidemiology Outcome Workgroup, and is currently considering funding priorities. As the Governor's prevention Advisory Council Chairperson, I am forwarding an observation and offer from the Council to your Commission. The observation is that is that the two groups have similar goals and the question is to ask that consideration be

given to how the two groups may work together and maximize opportunity and impact.

I am available to answer any of your questions. Thank you.

Attachment A

Department of Human Services-Division Mental Health & Substance Abuse

Matrix Model

A manualized, 16-week, non-residential, psychosocial approach used for the treatment of drug dependence, especially methamphetamine.

Designed to integrate several interventions into a comprehensive approach.

Elements include:

- Individual counseling
- Cognitive behavioral therapy
- Motivational interviewing
- Contingency management
- Family education groups
- Urine testing
- Participation in community support programs

Strategies Used:

- Relies primarily on group therapy
- Therapist functions as a teacher/coach
- A positive, encouraging relationship – not confrontational
- Time planning and scheduling
- Accurate information
- Relapse Prevention
- Family Involvement
- Self Help Involvement
- Urinalysis/Breath Testing

MATRIX Model addresses issues that are key to use of methamphetamine dependence or when drug/alcohol use has caused brain impairment.

These issues are of heightened importance with individuals who use methamphetamine:

- Environmental cues associated with drug/alcohol use
- Severe craving
- Protracted abstinence - "The Wall"
- Stimulant - sex connection
- Boredom

Attachment B

Department of Human Services-Division Mental Health & Substance Abuse

IDDT – Integrated Dual Disorder Treatment

Goal of IDDT:
Help consumers with co-occurring mental and substance abuse disorders reach their recovery goals by reducing and eliminating their substance use and by managing the symptoms of their disorders.

Co-occurring disorders are two distinct yet interacting diseases. Therefore, simultaneous treatment of both helps clients sort out, manage, and master all of their symptoms.

IDDT uses a multidisciplinary team approach and views all activities of life as part of the recovery process. The service team consists of:

- Team leader
- Case manager
- Addiction counselor
- Counselor
- Physician/psychiatrist
- Nurse
- Employment specialist
- Housing specialist
- Criminal justice specialist

IDDT treatment stage model recognizes that consumers experience successes incrementally over time through stages of treatment. Those stages are:

- Engagement
- Persuasion
- Active treatment
- Relapse prevention

IDDT also uses the 'stages of change' model to meet daily living needs while the clients experience successes through stages of personal change. Those stages of personal change are:

- Pre-contemplation
- Contemplation and preparation
- Action
- Maintenance

IDDT is shown to reduce:

- Relapse of substance abuse and mental illness
- Hospitalization
- Arrest
- Incarceration
- Duplication of services
- Service costs per person
- Utilization of high-cost services

IDDT is shown to increase:

- Continuity of care
- Consumer quality of life
- Stable housing
- Employment
- Independent living

IDDT promotes consumer and family involvement in service delivery and stable housing as necessary conditions for recovery and employment as an expectation.

north dakota department of human services

Division of Mental Health and Substance Abuse Services

RESEARCH NOTE 2

December 2006

Trends in Admissions and Primary Substance of Abuse at the Regional Human Service Centers

At the time of admission to a Regional Human Service Center for substance abuse treatment, consumers are asked to identify their primary substance of abuse. This document reports:

1. the number of clients admitted for treatment at a Regional Human Service Center, and
2. the primary substances of abuse.

All clients served or treated within calendar years 2002, 2004, and 2005 are included in the table below. The number of *clients served* is more inclusive of a broader range of services such as information and referral, education, case management and evaluation only. *Clients treated* is a more restrictive count and includes clients receiving treatment for substance abuse addiction only. Any client served within the calendar year is counted. A client admitted again during the same calendar year is counted again.

	2002	2004	2005
Clients served	5,390	5,107	6,262
Clients treated	3,027	3,638	4,008

Table1 and Figure 1 demonstrate the following. Alcohol and marijuana are the top two primary substances of abuse identified in all three years. Alcohol, as the top primary substance continues to increase in number (1,902 in 2002 to 2,170 in 2005). As a percent of total, alcohol has decreased from 63% in 2002 to 55% in 2005. Marijuana, the next top substance of abuse, continues to increase as well. Marijuana is identified as the primary substance of abuse in just over one-third the number of admissions as alcohol. Marijuana increased in number (702 in 2002 to 821 in 2005). But as a percent of total, marijuana use decreased (23% in 2002 to 20% in 2005).

The number of admissions for methamphetamine (meth) (See Glossary) use increased by 88% (272 in 2002 to 511 in 2005). As a percent of total, admissions for meth use increased from 9% in 2002 to 13% in 2005. The number of admissions from amphetamines (See Glossary) increased by 227% (52 in 2002 to 170 in 2005). As a percent of total, admissions from amphetamine use increased from 2% in 2002 to 4% in 2005. The number of admissions for cocaine use increased slightly from 36 in 2002 to 40 in 2005. As a percent of total, admissions for cocaine (See Glossary) use remained the same (1%). Admissions for other drug use increase from 62 in 2002 to 296 in 2005. As a percent of total, admissions for other drug use increased from 2% in 2002 to 7% in 2005.

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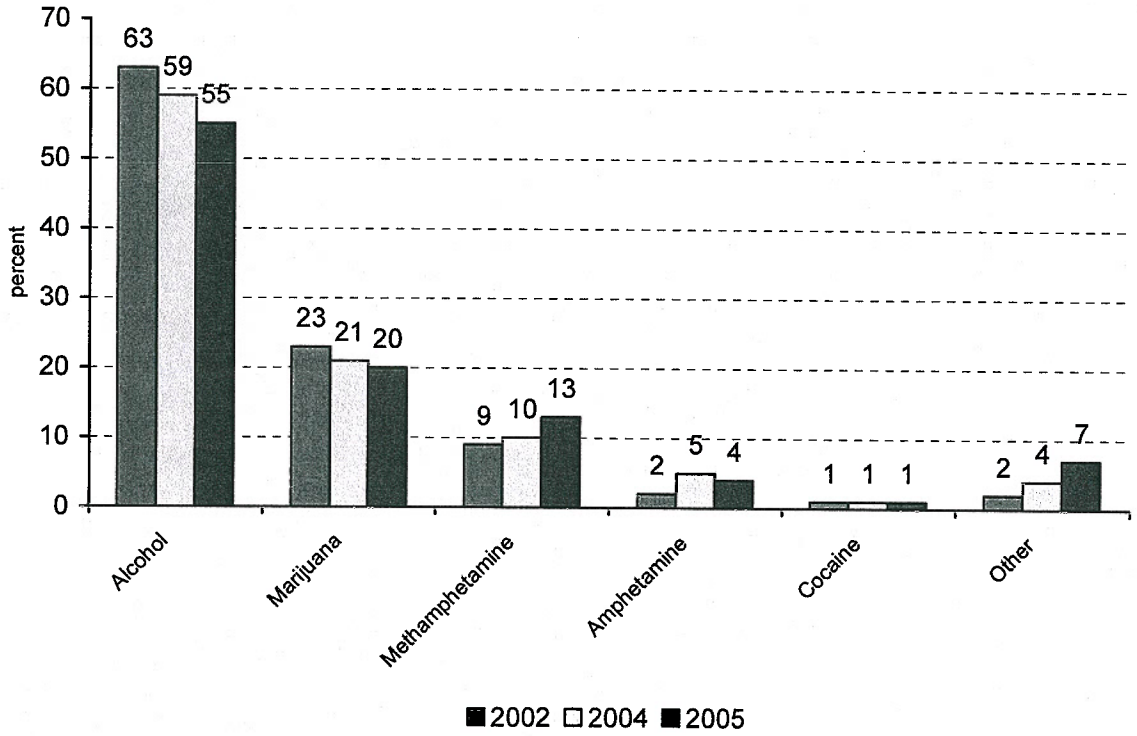
Division of Mental Health & Substance Abuse Services 1237 West Divide Avenue, Suite 1C, Bismarck, ND 58501
Phone: 701-328-8920 Fax: 701-328-8969 TTY 701-328-8968 E-mail: dhsmhsas@nd.gov
Research Team: Dr. Mariah Tenamoc, Sue Tohm, Elizabeth Cunningham, Myrna Bala, Maria Gokim, Colleen Kummet, Thomas Morth, Michaela Schirado

Table 1. Total Number and Percent of Each Primary Substance

	2002		2004		2005	
	#	%	#	%	#	%
Alcohol	1902	63%	2136	59%	2170	55%
Marijuana	702	23%	747	21%	821	20%
Methamphetamine	272	9%	387	10%	511	13%
Amphetamine	53	2%	174	5%	170	4%
Cocaine	36	1%	38	1%	40	1%
Other	62	2%	156	4%	296	7%
TOTAL	3027	100%	3638	100%	4008	100%

Figure 1. Top Five Primary Substances of Abuse by Admissions, CY 2002, 2004 and 2005



The 'route of use' is presented for meth, amphetamine and cocaine (Table 2 and Figures 2, 3, and 4). Federal law requires that that Providers give preference to injection drug users in accessing treatment services. Injection drug use places one at a greater risk for HIV and Hepatitis infections.

The main route of use for meth (Table 2) is smoking, increasing by almost 200% (114 in 2002 to 341 in 2005). As a percent of total for route of use, smoking meth increased from 42% in 2002 to 63% in 2005 (Figure 2). Injection is the second most common route of use for meth, decreasing from 38% among all meth users in 2002 to 29% in 2005. Inhalation is the third most common route of use, decreasing from 17% in 2002 to 6% in 2005.

The main 'route of use' for amphetamines (Table 2) increased from 18 in 2002 to 102 in 2005 Injection, the second most common route of use for amphetamine, decreased from 28% among all amphetamine users in 2002 to 12% in 2005 (Figure 3). As a percent of total route of use, smoking amphetamines went from 34% in 2002 to 59% in 2005. While intravenous use of amphetamine increased in number from 15 in 2002 to 40 in 2005, as a percent of total for route of use, intravenous use decreased from 28% in 2002 to 24% in 2005.

The 'route of use' for cocaine (Table 2 4) most frequently identified is also smoking (12 in 2002 to 23 in 2005). Among all cocaine users and route of use, smoking cocaine went from 33% in 2002 to 58% in 2005 (Figure 4). Injection as route of use of cocaine decreased from 28% in 2002 to 12% in 2005.

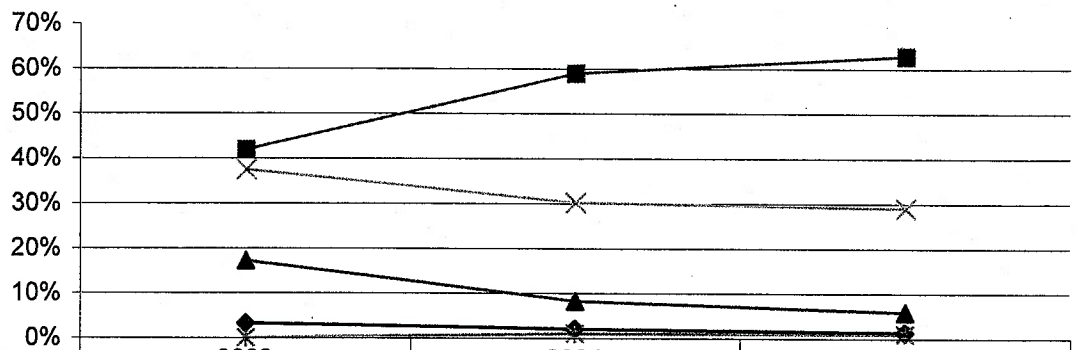
Table 2. Route of Use for Meth, Amphetamine, and Cocaine

	Meth					
	2002		2004		2005	
	#	%	#	%	#	%
Oral	9	3%	8	2%	7	1%
Smoking	114	42%	226	59%	321	63%
Inhalation	47	17%	32	8%	30	6%
Injection	102	38%	117	30%	148	29%
Other	0	0%	4	1%	5	1%
TOTAL	272	100%	387	100%	511	100%

	Amphetamine					
	2002		2004		2005	
	#	%	#	%	#	%
Oral	9	17%	7	4%	5	3%
Smoking	18	34%	101	58%	102	59%
Inhalation	9	17%	23	13%	15	9%
Injection	15	28%	39	22%	40	24%
Other	2	4%	4	3%	8	5%
TOTAL	53	100%	174	100%	170	100%

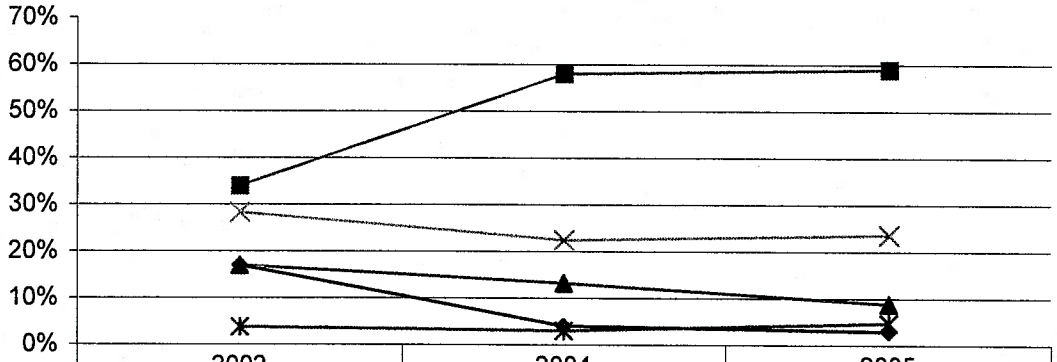
	Cocaine					
	2002		2004		2005	
	#	%	#	%	#	%
Oral	1	3%	1	3%	0	0%
Smoking	12	33%	15	39%	23	58%
Inhalation	13	36%	11	29%	10	25%
Injection	10	28%	10	26%	5	12%
Other	0	0%	1	3%	2	5%
TOTAL	36	100%	38	100%	40	100%

Figure 2. Third Primary Substance of Abuse and Route of Use – Methamphetamine by Admissions (n=272 in 2002, n=387 in 2004, n=511 in 2005)



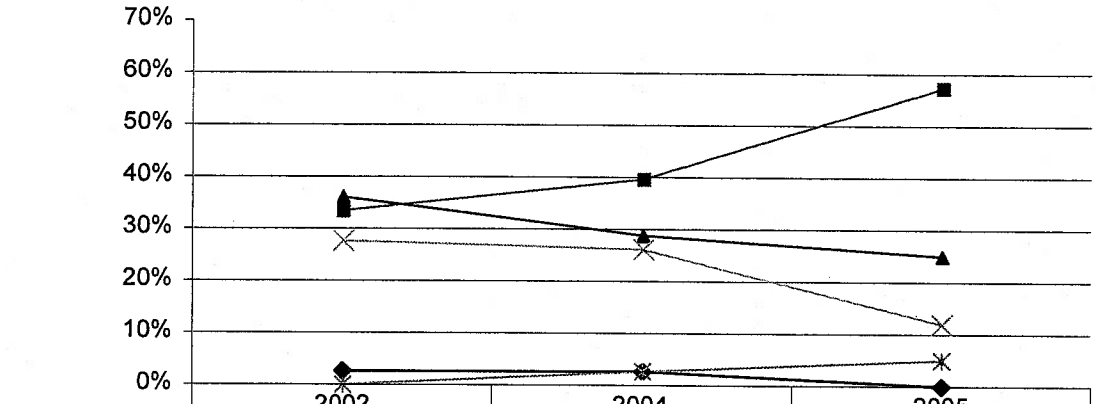
	2002	2004	2005
Oral	3%	2%	1%
Smoking	42%	59%	63%
Inhalation	17%	8%	6%
Injection	38%	30%	29%
Other	0%	1%	1%

Figure 3. Fourth Primary Substance of Abuse and Route of Use – Amphetamine by Admissions (n=53 in 2002, n=174 in 2004, n=170 in 2005)



	2002	2004	2005
Oral	17%	4%	3%
Smoking	34%	58%	59%
Inhalation	17%	13%	9%
Injection	28%	22%	24%
Other	4%	3%	5%

Figure 4. Fifth Primary Substance of Abuse and Route of Use – Cocaine by Admissions (n=36 in 2002, n=38 in 2004, n=40 in 2005)



	2002	2004	2005
Oral	3%	3%	0%
Smoking	33%	39%	58%
Inhalation	36%	29%	25%
Injection	28%	26%	12%
Other	0%	3%	5%

GLOSSARY

Methamphetamine

A stimulant drug chemically related to amphetamine but with stronger effects on the central nervous system. Street names for the drug include "speed," "meth," and "crank." The drug produces euphoria, decreased appetite, insomnia, and other side effects.

Amphetamine

Stimulant drugs whose effects are very similar to cocaine. They increase the activity of certain chemicals in the brain. Street names for amphetamines include uppers, go fast, zip, whizz.

Cocaine

A powerful short-acting stimulant, similar to amphetamines. Its effects include euphoria, restlessness, excitement, and a feeling of well-being. Slang names include "coke," "flake," "star dust," and "snow." Freebasing, a process of converting cocaine into a form that can be smoked (usually called crack), involves heating with either lighter fluid or other solvents.

Division of Mental Health and Substance Abuse Services

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RESEARCH NOTE 1

December 2006

What are the Average Costs of Substance Abuse Treatment in the Public Sector in North Dakota?

Objective: To examine the average costs associated with substance abuse treatment at the Regional Human Service Centers in North Dakota and the average degree to which the State benefits.

Data Sources:

1) Primary and administrative data, taken from the ND Department of Human Services' Regional Office Automated Program (ROAP) electronic record, on consumer services and agency costs from seven regional human service centers. Northwest Human Service Center was not licensed to provide substance abuse treatment.
2) Review of current literature on the benefits associated with substance abuse treatment in the United States (See references). The review of multiple sources demonstrates the advantages of substance abuse treatment that produce benefits to a state that, on average, equal to seven times the cost of treatment.

Study Design: The estimated direct cost of treatment is determined from human service center administrative data entered into the ROAP system. The cost of the consumer's substance abuse treatment episode is estimated for 'all treatment,' 'outpatient,' and 'residential' categories. Benefits of treatment are substantiated in a social planning perspective review of current literature.

Data Collection: Episode of Care treatment cost data were counted for the period January 1, 2005 to September 30, 2006. Those episodes of care with no events and non-substance abuse events were deleted, leaving a balance of 3,465 episodes of care. Of those, 3,256 received outpatient services and 946 received residential services.

Principle Findings: The average cost of substance abuse treatment per episode of care for the combined all treatment category is $2,850 and is associated with a monetary per episode of care net benefit to society of $17,100. This represents a greater than 7:1 ratio of benefits to costs. For 3,465 episodes of care, the net benefits to North Dakota is estimated at $59,251,500.

Conclusions: Allocating taxpayer dollars to substance abuse treatment directly influences consumer improved health and quality of life, and additionally benefits society in lowering social and economic costs resulting from abuse and dependence on alcohol and other drugs.

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Phone: 701-328-8920 Fax: 701-328-8969 TTY 701-328-8968 E-mail: dhsmhsas@nd.gov
Research Team: Dr. Mariah Tenamoc, Sue Tohm, Elizabeth Cunningham, Myrna Bala, Maria Gokim, Colleen Kummet, Thomas Morth, Michaela Schirado

Average Costs Per Substance Abuse Treatment Episode of Care (EOC), Including AOD Evaluations, at the Regional Human Service Centers in North Dakota

'Episode of Care' (EOC) is the term that measure the time from an admission date to treatment to discharge. Data were compiled from the Regional Office Automated Program (ROAP) system and represent all substance abuse treatment EOCs calculated using the Regional Human Service Center rate structure for the period studied. Substance abuse treatment episodes of care at seven regional human service centers totaled 3,465 from January 1, 2005 through September 30, 2006.

Results Based on per Substance Abuse Treatment Episode of Care

Table 1. Average Costs, Average Benefits, and Net Benefits per Substance Abuse Treatment Episode of Care (01/01/05 – 09/30/06)

	All Treatment (n=3,465)	Outpatient Treatment (n=3,256)	Residential Treatment (n=946)
Average cost per substance abuse treatment episode of care	$2,850	$2,100	$3,300
Average benefits per substance abuse treatment episode of care	$19,950	$23,100	$19,800
Net benefits	$17,100	$21,000	$16,500
Cost-benefit ratio	7:1	11:1	6:1

Average Cost per Episode of Care	X	Cost-Benefit Ratio	=	Average Benefits per Episode of Care
Average Benefits per Episode of Care	-	Average Cost per Episode of Care	=	Net Benefits

All Treatment costs per episode of care were calculated by counting unduplicated EOCs. The average cost per substance abuse treatment EOC ($2,850) was determined by adding standard fees ($9,875,250) and dividing by the unduplicated EOC count (3,465).

Average Outpatient costs per episode of care ($2,100) were calculated by adding standard fees for all outpatient services including individual therapy, family therapy, group therapy, and nursing services ($6,837,600) and dividing by the unduplicated outpatient EOC count (3,256). Group therapy may include day treatment, aftercare, intensive outpatient, or relapse prevention. Nursing services may include nursing assessment, monitoring vital signs, setting up medication, medication training and

support, setting up medication trays, and monitoring side effects and effectiveness of medications.

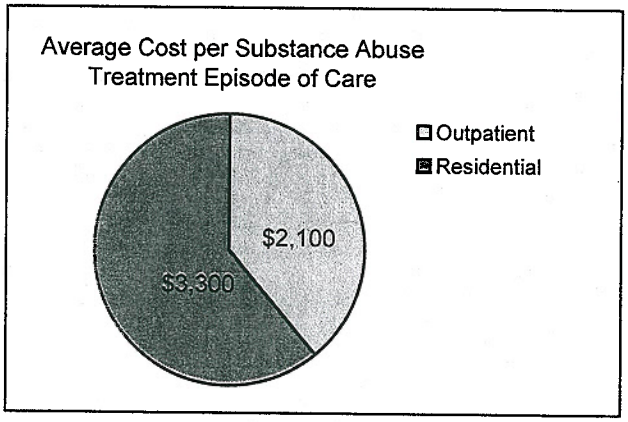
Average Residential costs per episode of care ($3,300) were calculated by adding standard fees for social detoxification, residential room and board, residential therapeutic, crisis residential room and board, and crisis residential therapeutic ($3,121,800) and dividing by the unduplicated residential EOC count (946). The $3,300 average per residential episode of care is conservative because of the way the services were recorded during this period.

Cost/benefits ratios result from complex analysis on many levels (see References). Benefits may be seen through decreases in

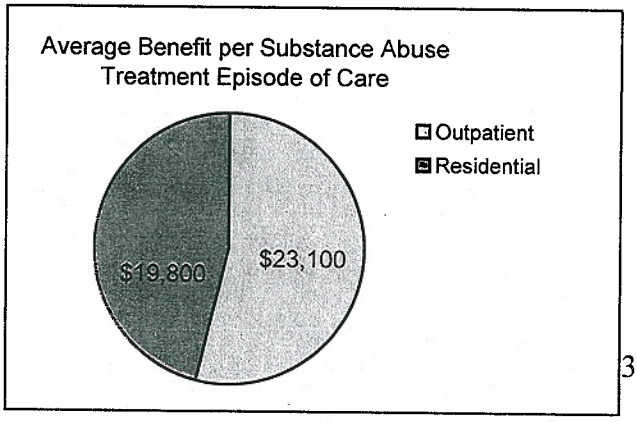
- visits to the emergency room
- number of nights in a hospital
- days missed at work
- dependence on illegal drugs
- the affects of serious mental illness
- depression
- smoking
- problems with law enforcement
- driving under the influence of alcohol or drugs
- causing domestic violence
- victims of domestic violence

A large body of scientific research (See References), which includes meta-analysis of multiple complex studies, supports the cost/benefit relationships identified in this report (7:1 for all treatment, 11:1 for outpatient, and 6:1 for residential). It would be cost prohibitive for North Dakota to conduct its own research simply to replicate and verify existing research. As one studies the data, they have an appearance of being 'reasonable.' This is important when applying the results of meta-analysis beyond the scope of individual studies.

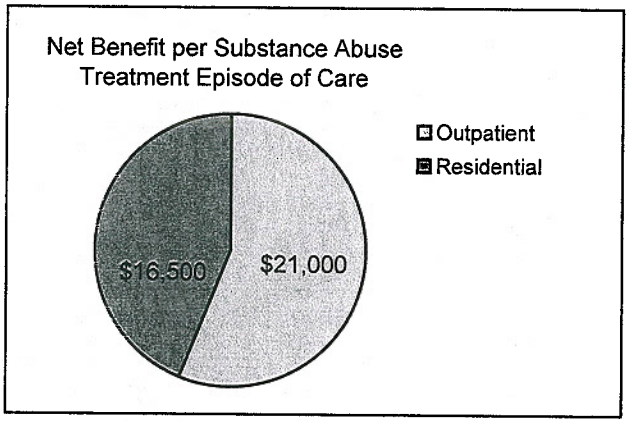
The average residential cost per substance abuse treatment episode of care is one-third (37%) more than that of outpatient episode of care.



The average benefit of the lower cost outpatient treatment is more than 16% higher than the benefit of residential care.



Subtracting average cost from average benefit results in net benefits. <u>Outpatient treatment results in about 27% more net benefits than residential treatment.</u>



Results Based on the Cumulative Costs of All Substance Abuse Treatment Episodes of Care

In the following table, cumulative costs are displayed which demonstrate net benefits to the State as a result of 3,465 episodes of care. Multiplying the average cost per substance abuse treatment EOC for all treatment ($2,850) times 3,465 episodes of care equals $9,875,250. Multiplying by a factor of seven yields benefits of $69,126,750. Subtracting the cost of substance abuse treatment ($9,875,250) results in net benefits to the State of $59,251,500.

Table 2. Accumulated Costs and Benefits of Substance Abuse Treatment

	All Treatment (n=3,465)	Outpatient Treatment (n=3,256)	Residential Treatment (n=946)
Cost of substance abuse treatment	$9,875,250	$6,837,600	$3,121,800
Benefits of substance abuse treatment	$69,126,750	$75,213,600	$18,730,800
Net benefits	**$59,251,500**	$68,376,000	$15,609,000
Cost-benefit ratio	7:1	11:1	6:1

Average Cost per Episode of Care	X	n	=	Cost of Substance Abuse Treatment
Cost of Substance Abuse Treatment	X	Cost-Benefit Ratio	=	Benefits of Substance Abuse Treatment
Benefits of Substance Abuse Treatment	-	Cost of Substance Abuse Treatment	=	Net Benefits

Cost/Benefit for Mutual Clients of Department of Corrections and Rehabilitation (DOCR) and DHS Human Service Centers (HSC) Identified on June 26, 2006 Who Received Substance Abuse Treatment at the HSC

On June 26, 2006, 1,211 consumers were mutual clients of the Department of Human Services Regional Human Service Centers (DHS HSC)and the Department of Corrections (DOCR). This is a subset of the n=3,465 (Table 1). The average cost per client remains the same at $2,850 with a net benefit of $17,100 (7:1). Cumulatively, the 1,211 mutual clients would yield a net benefit to the state of $20,708,100. This is about 35% of the total net benefit to the state of all consumers receiving substance abuse treatment at HSCs.

Literature substantiates that there is a cost/benefit ratio yielding between $1.91 and $2.69 benefit for every $1.00 spent on substance abuse treatment while in prison. Without knowing the cost of treatment while in prison, we cannot calculate cumulative benefits, but it is reasonable to believe that the costs would be substantially higher resulting in much lower net benefits.

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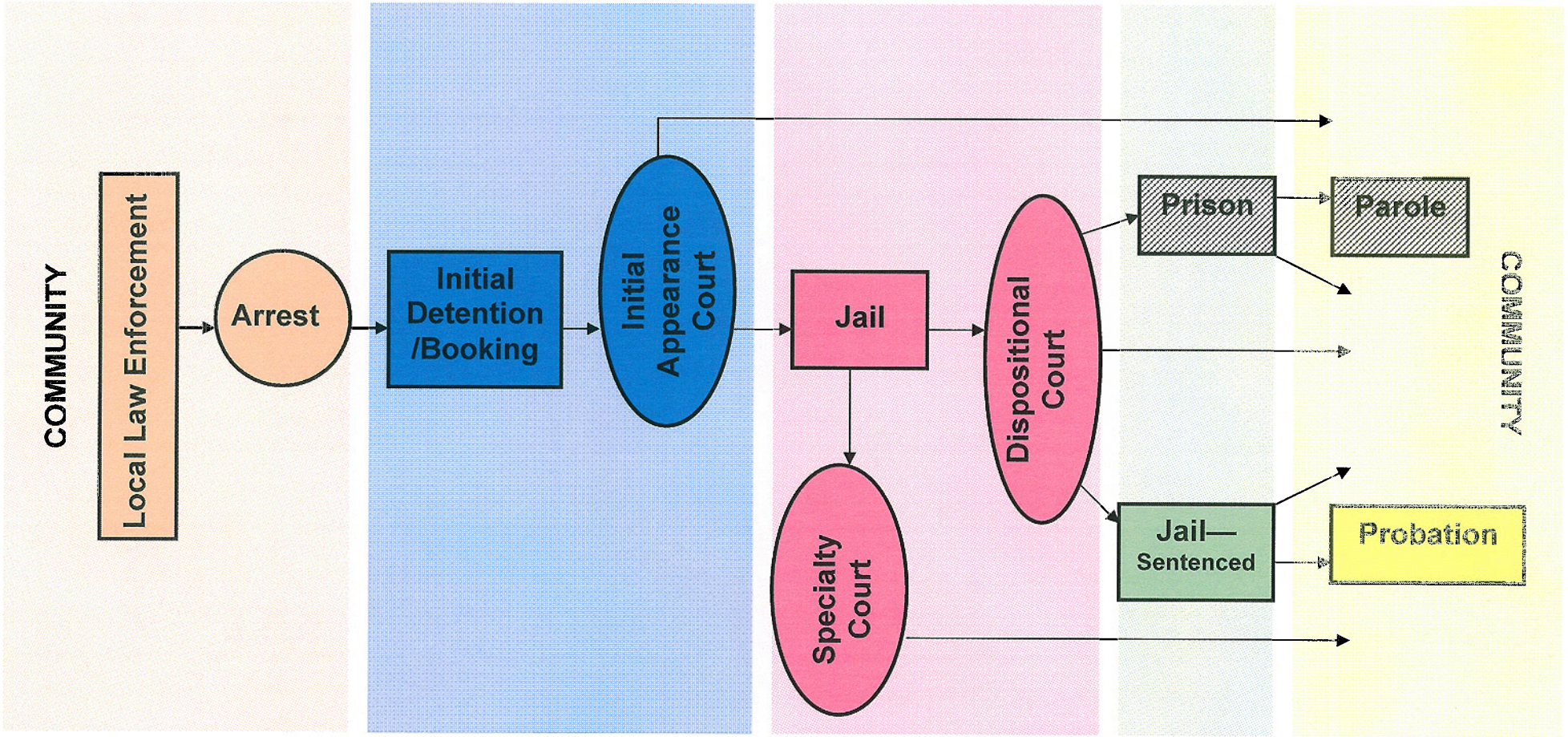
Mental Health and Substance Abuse Intercepts in the Criminal Justice Process: A Broad Overview



Intercept 1

Law enforcement/ emergency services

Intercept 2

Booking/ Initial Appearance

Intercept 3

Jails, courts

Intercept 4

Jail re-entry

Intercept 5

Community corrections/ community support