Dollars and Sense:

The Cost, Cost Benefits and Cost Offsets of Substance Abuse and Mental Illness and Its Treatment

Developed for
the Florida Substance Abuse and Mental Health Corporation
by

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The cost of untreated and mistreated mental illness and addictive disorders to American businesses, governments and families has grown to $113 billion annually
(Rice, Miller 2001)

Treatment Works! A Starting Place

"The tragedy of untreated and mistreated mental illness and addictive disorders, in both human terms and in costs to society, is that treatment works." (Rice, Miller, 2001). The work of the Florida Substance Abuse and Mental Health Corporation begins with this finding, well-documented in the literature of the substance abuse and mental health fields. But the knowledge that treatment works does not fund the services needed to address the need and to marshal the resources necessary to reverse the tide of diminishing resources available in real dollars that can be used for prevention, intervention and treatment service that work. This is a matter of understanding the "dollars and sense" of the political and social environment in which decisions regarding funding priorities and resource allocations is made.

Dollars and Sense: The Numbers Speak

The numbers certainly give us a clear picture of the cost of treatment, and of the cost benefits and cost offsets that can be experienced when individuals can receive accurate and timely diagnosis and treatment.

Cost:

Cost is defined in terms of the cost of treatment, the cost of economic and cost of social supports needed, lost productivity and other related costs of the illness which affect the individual, the family, the workplace and the community.

Examples:

Untreated substance abuse and mental health cost the U.S. economy $205 billion dollars a year- only $92 billion comes from direct treatment costs, 105 billion is due to lost productivity and $8 billion resulting from crime and welfare costs. (Rice, Miller 1998)

Each American paid $277 per year in state taxes to deal with the burden of substance abuse and addictions in social programs and only $10 a year for prevention and treatment.

Cost Benefits:

Cost benefits are defined as the dollar value assigned to the cost-effectiveness of an operation, procedure or program after analysis.

Examples:

The cost benefit ratios for early treatment and prevention programs range from 1:2 to 1:10 meaning that a $1 investment yields a $2 to $10 savings. For example, the cost savings to American communities and businesses by providing early treatment and support for one high-risk youth is between $1.7 and $2.3 million, more than five times the estimated cost of early treatment.

Treatment is very beneficial to taxpayers. The cost benefit averages $7 for every dollar invested (CALDATA, 94-96)

Cost Offsets

Cost offsets are defined as the point at which the costs of treatment are less than the savings to other systems. These include reductions in the costs of general medical care, health and welfare benefits, incarceration costs and other factors. (Source: CALDATA, 94-96)

State and federal governments spent roughly $20 billion per year on cash transfers to poor non-elderly adults and children. They spend roughly the same amount for food stamps for such families. A conservative estimate is that 25 percent of people on welfare are depressed. If half of them could be treated successfully, and of that percentage two-thirds could return to productive work, at least part-time, factoring treatment costs, that could still reduce welfare costs by as much as 8 percent – a savings of roughly 3.5 billion a year.

The result of research provides consistent support for the cost effectiveness of substance abuse treatment. That is, we find support if we define cost effectiveness in terms of treatment's ability to offset its own cost by reducing future health expense. (Holder, 2007)

The Florida Substance Abuse and Mental Health Corporation has committed its resources to the study of the cost, cost benefit, and cost offsets as they relate to substance abuse and mental health and to the treatment of these illnesses. Understanding this economic impact is imperative because cost and treatment effectiveness are powerful drivers in the political and social environment where decision are made regarding resource prioritization and distribution.

From a policy perspective it is important to focus on three facts.

- Treatment does work.

- No treatment or mistreatment has high costs in terms of human suffering, high-end treatment costs and long term usage of economic and social supports.

- There are cost benefits and cost offsets to treatment.

The Literature Reviewed

The Florida Substance Abuse and Mental Health Corporation commissioned a comprehensive literature review in July of 2007. The Capstone Consulting Group, Inc. was chosen to complete this work. The Group reviewed over 300 pieces of research in their work to create an annotated bibliography. This document was used by the Corporation to guide their discussion and recommendations for further study. The review covered the following areas of impact, age groups and types of services.

Subject of Research	Age Group	Type of Service Reviewed
Impact of Child Welfare System	Children 0-5	Prevention Intervention
Impact of Juvenile Justice System	Youth 6-18	Prevention Intervention Treatment
Impact of Work Place and Impact on Criminal Justice System	Adults 18-59	Treatment
Impact on Long Term Care and Other Medical Cost	Older Adults 60+	Prevention Treatment

Common Themes

Intervention is a good investment.

As discussed previously, "the cost-benefit ratios for early treatment and prevention range from 1:2 to 1:10, meaning that a $1 investment yields a $2 to $10 savings. For example, the cost savings to American communities and businesses by providing early treatment and support for one high-risk youth is between $1.7 million and $2.3 million, more than five times the estimated cost of early treatment."

Intervention is also important for older adults. "Cost offsets have also been demonstrated for mental health interventions with older adults. These studies suggest that excess disability and expensive hospital or nursing home days can be reduced by targeted prevention and early intervention."(Strain, Lyons, Hammer et al, 1991)

Another study showed a dramatic savings by providing mental health treatment that allowed individuals to delay entry into a nursing home. These results are illustrated below and have been updated to show the 2006 cost of a nursing home bed in Florida: (Mittleman, Ferris, Shulman and Levin, 1991)

Intervention vs. Non-Intervention

Cost Savings from Reduction of Days of Public Nursing Home Care.

Description of Intervention	Individual and Group Education and Problem Solving Sessions
	24 Hour/Day Support Service and Caregiver Support Intervention

Group	Average Number of Days w/out Nursing Home Care	Cost per day	Average Amount of Savings	Average Cost of Nursing Home Care Per Year
Non Intervention	0	$182	$0.00	$66,430.00
Intervention	329	$182	$59,878.00	$6,552.00
Average Savings Per Year w/Intervention				**$59,878.00**

Mittelmam Ms, Ferris SH, Shulman E. Steinberg, Levin B, 1996
Updated using the cost per day of a Florida nursing home in 2006.(Genworth Financial)

These are three examples of evidence-based support for something that makes good sense. Prevention and intervention services do work and they save money in both the short- term and the long-term. This is particularly clear with children and youth, but the research in this area of cost-benefit is scarce. It makes "sense" that the annual cost savings create dramatic cost benefits when spread across a lifetime.

Reduction in overall health costs if individual with mental illness or substance abuse receives accurate and timely diagnosis and treatment.

Research shows that "there is a reduction in overall health care costs if individuals with mental illness receive accurate and timely diagnosis and treatment". (Momford et al, 2002) This is also true in the area of substance abuse. Holder in 1998 concluded, "The results of research provide consistent support for the cost benefits of substance abuse treatment. From a health policy perspective, such results are promising if the objective is to demonstrate that treatment investment pays for all or part of its associated costs through reduction in other health care costs."

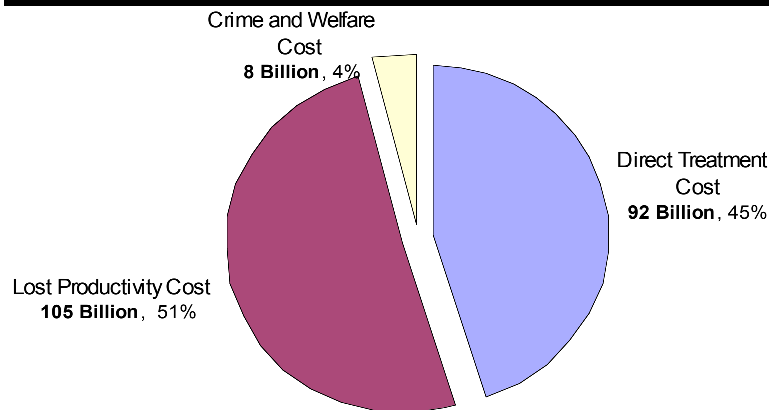
Cost of treatment must be compared to cost of no treatment.

"The vast majority of individuals with mental illness and addictive disorders do not receive adequate care. The Surgeon General reported that less than a third of adults and even fewer children receive any mental health services. According to a 2001 NMHA public opinion survey, fewer than one out of five individuals reporting the symptoms of depression and anxiety disorder seek treatment"

Rice and Miller in their on-going work on this subject reflected that "The adverse negative economic impact of this lack of treatment is evidenced in a number of studies. Either because of better data collection or because of increasing problems, cost estimates during the past ten years of untreated and mistreated mental illness in America nearly tripled". It is estimated "The total yearly cost for mental illness in both the private and

public sections in the U.S. is $205 billion". The chart below delineates the areas of cost which include: direct treatment costs, loss productivity costs and the cost of related crime and welfare costs. (NHMA article, p.20)

Cost of Untreated Substance Abuse and Mental Health to US Economy Per Year	
Direct Treatment Cost	92 billion
Lost Productivity	105 billion
Crime and Welfare Cost	8 billion
Total Cost	205 billion



National Center of Addictions and Substance Abuse (CASA), 1998

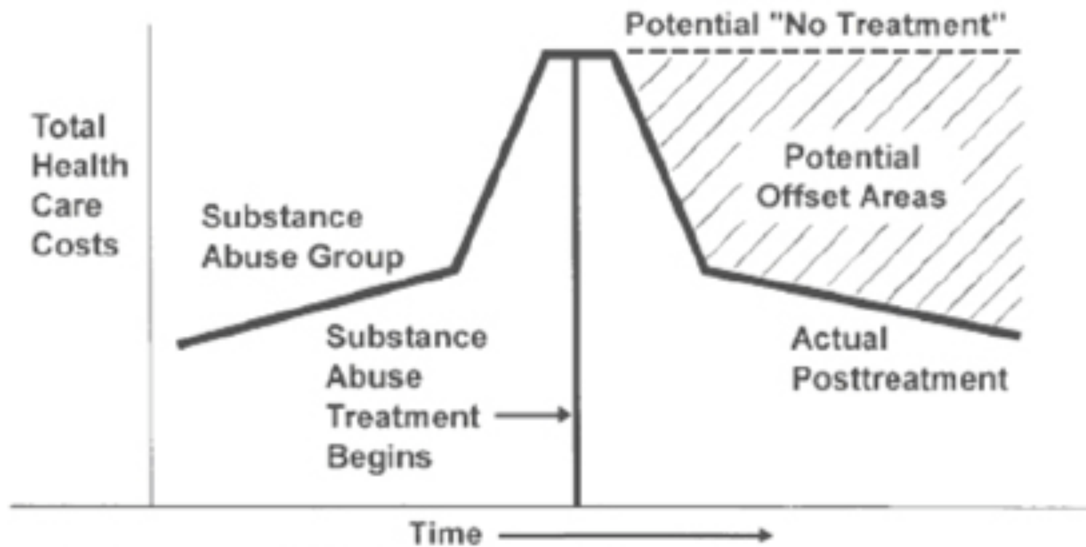
Cost of treatment is offset by reductions in all other associated costs

The impact of offsets is very significant. Consider these experiences:

> The impact of offsets is most significant when an individual is involved in systems that involved residential care including nursing homes and the criminal justice system. Because of the impact of crime on the community – treatment of individuals in the criminal justice system and the juvenile justice system evidence large savings.
>
> As an example, the Institute for Research, Education and Training in Addictions created a fact sheet in 1998 identifying evidence-based facts about the cost-benefits of addiction treatment. One of these facts focused on the cost benefit of treatment to taxpayers. It concluded that the cost benefit averages $7 for every dollar invested. They cited a study that tracked 150,000 individuals. The cost of treatment reported in 1992 was $200 million. The benefits received during treatment in the first year afterwards totaled approximately 1.5 billion in savings. But they noted, "The largest

savings were due to reductions in crime. Finally, significant improvements in health and corresponding reductions in hospitalizations were found during and after treatment. Emergency room admissions, for example, were reduced by one-third following treatment."

Holder has studied offsets extensively.



An Illustration of "offset" savings resulting from substance abuse treatment

A Closer Look

Economic Impact of the Cost of Substance Abuse and Mental Illness and Its Treatment: A General Review of the Literature Available

The research available that examines substance abuse and mental health costs, cost benefits and cost offsets is heavily weighted to the substance abuse population. The results of the studies done which focus on each specific population are very similar and support the premise that treatment works and is a solid investment.

Certainly the dollar figures for the cost offsets of individuals in prevention and early intervention programs, of individuals in the criminal justice system, and of older individuals who are being diverted from expensive hospital care or nursing care would by necessity be similar, since the factors used to determine the offsets, cost of a day in jail, cost of a day in a nursing home, etc. is the same whether the individual who is being studied suffers from an addictive disorder or a mental illness.

This similarity does not hold true for the literature which focuses on the cost benefit of a particular treatment modality. The cost and location of treatment of substance abuse or mental illness is also a factor that is often distinct to the illness.

There is also a great deal of information in the literature reviewed that focused on the economics of managed care and the cost benefits of managed care in the treatment of substance abuse and in mental health populations. This specific strategy was not the focus of this review.

Specific Impacts Related to Targeted Groups, Environments and Systems

For the adult population, the Group reviewed the specific impact of treatment costs and cost benefits to older adults, to the workplace, and to the criminal justice system. These categories were selected because of the priorities of the Corporation and their importance to the overall economic impact substance abuse and mental health has on the US economy, on communities and on individuals and their families.

Impact of Illness and Treatment Provision - Older Adults

Older adults are a particularly vulnerable population. "Increased disability associated with substance abuse and mental health problems among older adults were associated with increased utilization and costs of health care services. The cost of alcohol abuse and dependence are estimated to be over $100 billion a year, due in part to increased mortality, significant social costs and health consequences. (Holder, Blose, 1992)

The health consequences for older adults is a significant issue. "Untreated substance abuse is associated with significantly heightened general medical expenditures: untreated alcohol or drug dependent persons use health care and incur costs at a rate about twice that of their age and gender cohorts. (Gerson, Boex et al, 2001) An example of the tie between untreated mental illness and health care utilization is expressed by data that indicates "older depressed outpatients have 38 percent more outpatient visits and 61 percent higher outpatient expenses than older adults without a depressive episode. (Callahan, Hui et al, 1994)

The economic impact of serving this group is dramatic. This is due, in large part, to the potential to divert elders from using expensive hospital and nursing home beds. In Florida, the average cost of a single day in a nursing home is $182 ("Genworth Financial 2006 Cost of Care Survey", 2006).

Prevention and early intervention is usually a strategy that is associated with children and youth, but the literature suggested that it is also an important cost-saving strategy in dealing with older adults. "Cost offsets have been demonstrated for mental health intervention in older people. These studies suggest that excess disability and expensive hospital or nursing days can be reduced by targeted prevention and early intervention. (Strain, Hammer, et al, 1991)

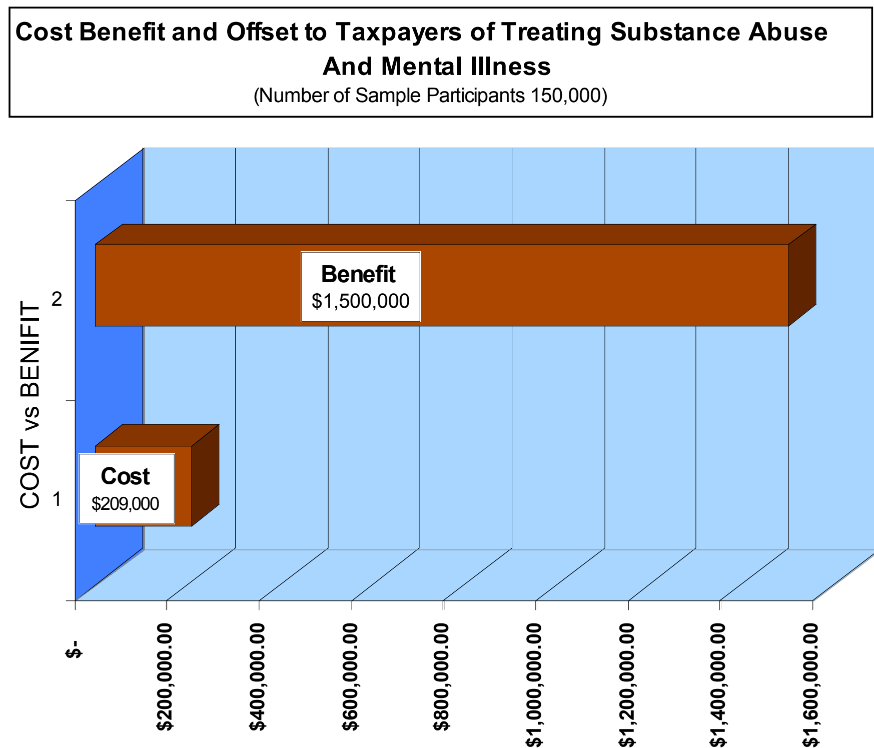
Research has shown that by providing individualized and group education and problem solving session, coupled with a 24 hour support service, this caregiver support intervention delayed nursing home placement by an average of 329 days. Based on average nursing home care cost for publicly run facilities of $132 per day, the intervention is likely to reduce nursing home costs by $43,4298 (see chart, p.

Impact of Illness and Treatment Provision – Criminal Justice

The cost of crime and the cost of incarceration make the impact of treating individuals who are engaged in the criminal justice system very cost beneficial. The National Center on Addictions and Substance abuse (CASA) reported "Since an average addict commits at least 100 crimes a year for each 10,000 substance-abusing ex-inmates that are successfully treated, we can expect a reduction of 1,000,000 in property and violent crimes per year.

The successful treatment of individuals again has significant economic impact. It is reported that "The successful treatment of one prisoner would realize benefits of approximately $68,800 during the first year after release, greater than 10 times the initial cost of treatment (The National Center for Addictions and Substance Abuse, 1998).

The National Institute of Health considers that conservatively every dollar invested in addictions treatment yields a return between $4 and $7 in reduced drug-related crime, criminal justice costs, and theft alone. When savings related to health care are included, total savings can exceed the costs by a ratio of 12:1.



While these studies and references focus on substance abuse, the relationship between costs of incarceration, lost productivity and the costs of treatment for individuals with mental illness are also significant.

Impact of Illness and Treatment Provision – Workplace

It is estimated that $105 billion dollar can be attributed to the lost productivity of individuals with mental illness. (Rice, Miller 1998) The National Mental Health Association reports that "More than 90 percent of employees agree that their mental health and personal problems spill over into their professional lives, and have a direct impact on their performance. Mental Health conditions are actually the second leading cause of absenteeism. The U.S. National Comorbidity Survey in 1997 determined that in the civilian workforce there was a total of one billion lost days of productivity due to mental illness.

Substance abuse also has a dramatic effect on the workplace. "The 2005 Hazelden "Making Recovery America's Business: Survey Also found that 57 percent of employees dealing with addiction in their family said they had missed a deadline or had their attendance suffer as a result; 46 percent said they had made errors in judgment they would not have otherwise made, and 14 percent said they had been so distracted that they forgot safety or security procedures at work.".

Again, it can be noted that treatment works. The National Mental Health Association reported in their 2007 work," Gaining a Competitive Edge" that "Three out of four employees who seek care for workplace issues or mental health problems see substantial improvement in work performance after treatment."

<u>The Impact of Child and Adolescent Behavioral and Substance Abuse Disorders on Violence and Crime</u>

Research shows that the younger the child is when they first try substances, the greater the likelihood that they will abuse substances at some point in their lifetime; and, with continual use, it is more likely that they will have an accident or develop a fatal disease. Of adults using illicit drugs, more than 62% started using these drugs at age 14 or younger. For youth who start drinking before age 15, 40% became dependent upon alcohol compared to 10 % of those who began drinking at age 21 (Center on Aging Society, 2002). Persons who develop substance abuse disorders experience numerous adverse life conditions, such as increased illnesses, loss of productivity, and criminal activity that not only is costly to the individual, but also imposes an enormous economic burden on society as a whole (Office of National Drug Control Policy, 2004). Childhood and adolescence, then, offers an important opportunity to prevent and treat substance abuse disorders. Unfortunately, adequate services are not available, resulting in costs in other areas that are greater than the cost of providing those adequate services.

The National Center on Addiction and Substance Abuse (CASA) estimated in their 2004 study that substance abuse results in a $14.4 billion annual cost to the juvenile justice system. Unfortunately, only 1% of this cost is for treatment. The remaining 99% is spent on law enforcement and incarceration. Nationally one year of commitment for a juvenile offender costs about $43,000. Yet, CASA estimated that if states invested in juvenile substance abuse and treatment for those with juvenile arrests and just 12% of those would not commit adult crimes, $18 million could be saved in criminal justice and health costs.

The potential positive impact of effective substance abuse prevention and treatment on the quality of life and long term costs is staggering.

In a 2001 study, CASA estimated that substance abuse disorders cost educational systems $16.5 billion annually, with an additional annual cost of $5.3 billion for child welfare services. The report concludes that effective substance abuse prevention can reduce Medicaid and welfare costs, as well as curb child abuse, teen pregnancy, and domestic violence. CASA's research revealed that states spend 113 times as much to "clean up the devastation substance abuse and addiction visit on children as they do to prevent and treat it" (p. ii).

Another devastating impact of alcohol abuse and dependency is prenatal exposure to alcohol, which can result in Fetal Alcohol Syndrome (FAS), the leading cause of mental retardation. Other Fetal Alcohol Effects (FAE) can result in lifelong disruptions in cognitive, behavioral, linguistic, and social development. The economic burden of FAS is immense, estimated to be $2.8 billion in 1998. Costs include care for low birth weight babies, surgical corrections of related birth defects, heart defects, auditory defects, behavioral disorders, and moderate to severe mental retardation. Cost factors cited for children with FAS include crime and involvement with the juvenile justice system (Florida State University Center for Prevention and Early Intervention, 2003).

Children at the greatest risk for substance abuse and participating in delinquent behavior are those who show oppositional defiant disorder (ODD) or conduct disorder (CD) at a young age. Children with a temperament that is more impulsive, hyperactive, or quick to anger are at a greater risk for developing these disorders. Webster-Stratton and Taylor report (2001) that, "after studying the development of aggression for 30 years, Eron (1990) found that without intervention, aggressive tendencies crystallize around 8 years of age" (p. 168), making interventions more difficult. Evidence shows offering early intervention can result in more positive changes in school and at home behavior. These researchers believe that violent adolescents can be identified at a 50% reliability as early as six years of age.

Children whose delinquent behavior begins before age 13 have a greater risk of becoming serious, violent, and chronic juvenile offenders. This probability, however, can be reduced by identifying children before they commit crimes or in the early stages of criminal behavior, and providing treatment programs to them and their families. A study group for child delinquents found that if early interventions are successful, children are less likely to become chronic delinquents even if they are exposed to additional risk factors in adolescence (Burns et al., 2003).

Treatment approaches have been proven effective for children and youth with oppositional defiant disorders and conduct disorders. There is strong evidence for several effective treatments, including parent-child treatment, programs for pre-school age children, problem solving skills development, and anger-coping therapy (Burns et al., 2003; Lipsey and Wilson, 1998; and Brestan and Eyberg, 1998).

Effective treatment can offset the costs of criminal behavior. Burns et al. (2003) provides an overview of the costs of un-addressed criminal behavior and the associated cost benefits of treatment. Below is a brief summary of their findings:

A criminal career from juvenile years through adulthood costs society between $1.3 and $1.5 million dollars per criminal.
Cost-benefit analyses show that, during one year, 15 high risk families who received no intervention used $40,000 more in public resources than the treatment group of families who participated in programs to reduce child delinquency.
Mutisystemic therapy saves from $31,661 to $131,918 per participant in costs to taxpayers and victims.
Treatment foster care has reduced felonies committed by participants by 37% and saved taxpayers and victims about $21,836 to $87,622 per child served.
Functional Family Therapy reduced felonies by 27 percent and saved $14,149 to $59,067 per person served.
One research project showed that the cost-benefits of treatment resulted from reduced welfare costs balanced by increased wages resulting in tax revenues. About 23% of the total benefits came from employment related gains, with 20% from criminal justice.

Therefore, research shows that effective treatment is available to prevent delinquency and substance abuse, which can result in millions of dollars in savings. Several existing resources provide a guide to evidence based prevention and treatment that could result in significant cost savings. Osher, Quinn, Poirier, and Rutherford (2003) provided a review of the evidence based practices and cost effectiveness for various treatment modalities. The earlier interventions are provided, the more likely they are to be successful and achieve the desired cost offsets. Substance abuse treatment and attention to early behavioral disorders in children can significantly reduce criminal behavior and result in staggering cost savings.

The Cost Benefit of Providing Substance Abuse and Mental Health Treatment to Children and Youth

General Impact of Serious Emotional Disturbance in Children and Youth

The estimated prevalence of a diagnosable mental health condition in children and youth is between 14% and 20%. The disorder may have a lifelong impact on the developmental trajectory and productivity of the individual. The economic burden of child and adolescent mental disorders includes poor educational attainment, future loss of wages, use of public benefits, and other long-term consequences. About 10% of children and youth have a disorder that causes some form of functional impairments, with 5% to 7% having a serious emotional disturbance severe enough to cause extreme functional impairments. Although mental disorders are a serious issue for adolescents, only about 22.5% receive treatment (Finch and Phillips, 2005).

The greatest economic burden is experienced by those children and youth with the most severe form of emotional disorders, those with serious emotional disturbances. Half of all lifetime cases of mental illness begin by age 14, with 75% by the age of 24. These youth and young adults are facing the onset of a possible lifelong and chronic condition. For example, anxiety disorders often begin in late childhood, and mood disorders in late adolescence. This developmental period of onset has serious economic ramifications, since this is the period of life when young people are preparing for employment and lifelong roles (National Institute of Mental Health, 2005).

Effective treatment programs for emotional disturbance are well established. Evidence based practices have been researched and discussed repeatedly in the literature. Mental illness is a treatable condition, but access to effective programs is often difficult. Without treatment, mental illness can become a lifelong disability or result in death. The Center for Disease Control (CDC) has reported that suicide rates for youth have increased dramatically since 2003 (Nordqvist, 2007). Many children and youth who commit suicide have a mental health or substance abuse disorder. The chart, below, highlights this sharp increase, since suicide rates in each of these three groups had been gradually coming down prior to 2003.

Suicide Rates per 100,000			
	1990	**2004**	**Increase**
Girls, ages 10 – 14	0.54	0.95	76%
Girls, ages 15 – 19	2.66	3.52	32%
Boys, ages 15 - 19	11.61	12.62	9%

According to the National Institute of Mental Health (2004), child and adolescent programs have the potential to reduce the economic burden of mental illness through the reduction of need for mental health and other related services throughout life and by improving the potential benefits of positive developmental outcomes, resulting in societal savings.

Research on overall economic benefits of early child and adolescent prevention programs and interventions is limited. However, there a few sources of information that document cost-benefit for specific disorders and/or treatment modalities.

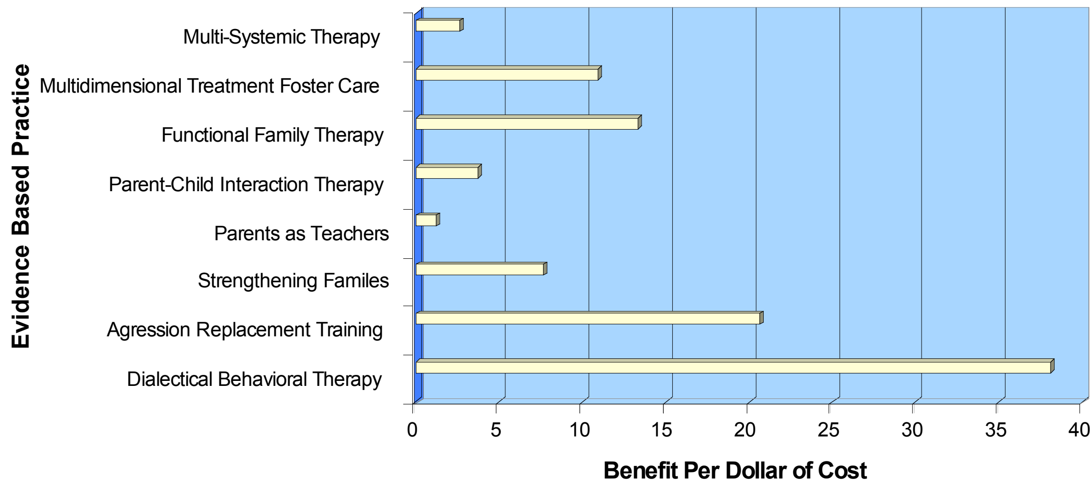
In 2004, the Washington State Institute for Public Policy prepared a study entitled "Benefits and Costs of Prevention and Early Intervention Programs for Youth". This study examined the costs and benefits of research-based prevention and intervention programs using a model that assigned monetary values to observed changes in education, crime, substance abuse, child abuse and neglect, teen pregnancy, and public assistance outcomes. The authors concluded that "there is credible evidence that certain well-implemented programs can achieve significantly more benefits than costs. Taxpayers will be better off if investments are made in these successful research-based programs"

Below are some of the most significant findings supporting the provision of mental health and substance abuse services for children and adolescents. The chart shows the amount

of cost savings achieved by the provision of the service for evidence based practices that have been extensively documented in professional journals and literature. For example, for every dollar spent on Parent-Child Interaction Therapy, society saves $3.64 in lifelong costs.

Program	Benefit per Dollar of Cost
Parent-Child Interaction Therapy	$ 3.64
Parents as Teachers	$ 1.23
Strengthening Families	$ 7.62
Dialectical Behavioral Therapy	$38.05
Multidimensional Treatment Foster Care	$10.88
Functional Family Therapy	$ 7.69
Multi-System Therapy	$ 2.64
Aggression Replacement Training	$20.56

Evidence Based Practices Benefit per Dollar of Cost



Osher, Quinn, Poirier, and Rutherford (2003) found that the following treatments have the highest benefit-to-cost ratio: aggression replacement training, multidimensional treatment foster care, family functional therapy, multi-systemic therapy, and the Perry Preschool Program. Their findings support some of those reported by the Washington State Institute for Public Policy.

States and researchers have compiled information regarding the effectiveness of other evidence based treatments (Hawaii Evidence Based Services Committee, 2004;

Washington Children's Evidence Based Practices Expert Panel, 2006; Butler, Chapman, Forman, and Beck, 2006; Burns, Hoagwood, and Mrazek, 1999; Farmer, Compton, Burns, and Robertson, 2002; Haby, Tonge, Littlefield, Carter, and Vos, 2004; Jensen, et al. 2005; Lehman, Goldman, Dixon, and Churchill, 2004; and Weisz, Hawley, and Doss, 2004) These researchers have documented treatments that are effective for certain diagnoses. To the list of evidence based practices discussed above, they add other treatments such as pharmacological interventions, cognitive behavioral therapy, applied behavioral analysis, brief strategic family therapy, and parent-child interaction therapy.

The total of current expenditures for providing mental health treatment for children and youth has been estimated at $11.75 billion dollars. These expenditures, though, represent treatment for less than a quarter of the youth in need of intervention services. Providing evidence based services to the remaining population with mental illness has the potential to significantly reduce the long-term costs associated with lifelong mental illness.

Impact of Substance Abuse and Mental Health on Child Welfare Service Systems

The consequences of child abuse and neglect can be profound and lifelong. Research has documented that the effects of maltreatment in childhood can result in negative outcomes in health, intellectual and cognitive development, and emotional and behavioral stability. Over the last decade, research has shown that early neurobiological development is a significant factor in the emergence of physical, cognitive, social, and emotional difficulties. Chronic physical abuse, sexual abuse, neglect, and the stress the child experiences as a result of such maltreatment can negatively impact their neurobiological development. Children who have experienced abuse and neglect have higher rates of depression and anxiety, post-traumatic stress disorder, attachment disorders, eating disorders, and suicide attempts. Studies have also shown that children who have experienced maltreatment are at least 25% more likely to encounter adolescent problems, such as delinquency, teen pregnancy, drug use, low academic achievement, and mental health disorders (Goldman, Salus, Wolcott, and Kennedy, 2003).

Prevent Child Abuse America estimated the national cost of child abuse and neglect to be $94 billion annually. These costs include $24 million in direct costs and $69 million in indirect costs. Child welfare services constitute the highest direct costs, while adult criminality, mental health and health care, and juvenile delinquency make the largest contribution to the indirect costs. Substance abuse plays a serious role in child abuse and neglect and, therefore, contributes to this economic burden. A 1999 national survey found that parental substance abuse contributed to the maltreatment in 80% of the cases. For those cases with recurrence of child abuse and neglect, substance abuse is the major factor (Kelly, 2002).

The failure to treat parental substance abuse contributes to more children being in the child welfare system. The social and financial cost to children and the economic burden to society are in large measure preventable. There are numerous studies that show substance abuse treatment works. Treatment completion rates in Florida are now at 77 percent, and survey results show that 82 percent of adults who completed treatment were abstinent from substance use for at least 12 months following completion of treatment (Mental Health Program Office, 2007). To be effective, however, treatment must be

available. According to the latest available data, only 45% of the parents involved with the child welfare system who needed substance abuse treatment were served (Florida Department of Children and Families, 2005).

Mental health disorders also significantly impact child welfare services. Recent studies have shown that parents who are diagnosed with a mental illness often lose custody of their children, either to another party or through the child protection agency. Parents with mental illness often try unsuccessfully to navigate the confusing child welfare legal system (Brunt, 2004). Many mental health role recovery programs do not have a parenting component. Loss of custody of their children can involve parents in long-term grief.

Children in the child welfare system also have a relatively high level of need for services. In their 2000 report, Berson and Armstrong summarized the research on the utilization of mental health services by children in the child welfare system. They found that prevalence ranged from 30% to 80% depending on the definition of mental health disorder. The research also shows that services for children who have experienced abuse and neglect should be specialized to meet their needs. Services should include prevention, treatment, and ongoing support (Armstrong and Berson, 2000). The long-term consequences of no or ineffective treatment include failure to finish school, engagement in delinquent acts, risky sexual behaviors, suicidal/self-mutilating behaviors, and violent acts, all of which result in tremendous financial costs to society as a whole (Leslie, et al., 2005).

Young children coming into the child welfare system are of particular concern because the abuse and neglect has occurred during the critical first years of development. National data shows that children under the age of five make up at least 30% of the child welfare population. Studies have shown that 60% of the children exhibit some level of developmental delay, and 25% to 40% of those entering out of home care have significant behavioral problems. The financial costs of developmental and behavioral problems among children in foster care are staggering. Developmental and behavioral problems amenable to early intervention, but which go untreated, result in costs of at least $100,000 per child. Additionally, because children with behavioral problems remain longer in care and have more adverse long-term outcomes, they represent one of the most costly subgroups of children and youth in care (Leslie, et al. 2005).

Although there are numerous evidence based practices that show cost benefit for substance abuse and mental health disorders, there are only a few documented in the literature specifically for children and parents in the child welfare system. One study conducted in Florida showed that parents and young children who received infant mental health services showed no additional abuse reports for families who had completed the treatment during the three years of the project. Also, the results showed improved health and developmental status of the infants and toddlers. Improvements were also shown in parental depression and parent-child relationships (Osofsky, et al., 2007). A benefit cost analysis of this project estimated a benefit-to-cost ratio of $6.37 (Lynch and Harrington, 2003).

Other studies have shown Parent-Child Interaction and Multidimensional Treatment Foster Care to yield cost benefits as described earlier in this paper (Washington Children's Evidence Based Practices Expert Panel, 2006). Other practices recommended for use with the child welfare population did not have cost benefit information readily available, but deserve mention. These include the Nurturing Program for Parents of Children Birth to Five Years Old, motivational interviewing, trauma focused-cognitive behavioral therapy, abuse focused cognitive behavioral therapy, and parent child interaction therapy (California Evidence-Based Clearinghouse for Child Welfare, 2006; National Leadership Conference on Child Welfare Issues, 2006).

Clearly, substance abuse and mental health treatment for both children and their parents are a necessary component of child abuse prevention programs and child welfare services. The long-term personal and financial costs of child abuse are astronomical. Mental illness and substance abuse are both contributing factors to child maltreatment and can become long-term consequences of the child abuse and neglect. Substance abuse and mental health treatment have been proven to be effective. If families and children received the necessary treatment, the immediate occurrences of child abuse and neglect could be reduced, as well as the long-term consequences for the children who experience the maltreatment. Due to the time constraints on achieving permanency in the child welfare system, mental health and substance abuse services must be immediately available for children and families.

Recommendations

Core Assumptions

The recommendations are based on the following core assumptions.

Treatment Works.

- There is a cost to inaction and failure to provide treatment to individuals with substance abuse and mental illnesses.
- There is a cost benefit to providing evidence based treatment that is in large part realized by the cost offsets – saving a day in a nursing home, helping individuals avoid incarceration, keeping breadwinners at home providing for their families.
- The bottom line is $113 billion dollars is too high a price pay when the evidence suggests that the public investment in treatment has a significant, sometimes dramatic return on investment.

A Role for the Substance Abuse and Mental Health Corporation

The Substance Abuse and Mental Health Corporation has taken an important first step in addressing the need for a new approach to the economics of substance abuse and mental health treatment. The information presented in this report and available in the bibliography developed by the Capstone Group can be used to assist individuals, local

and state elected officials and employers of the need for a new way of thinking about the funding of substance abuse and mental health treatment services.

The Corporation has taken a leadership role in the state and has engaged state agencies outside the traditional human services and treatment communities, including the Florida Department of Corrections, the Florida Department of Juvenile Justice and the Florida Department of Elder Affairs. Each of these non-traditional partners has an important stake in this discussion and also has an important role to play in helping the public and the legislators to understand the potential cost savings of using our common sense. In this case the right thing is the most cost beneficial to the state and the most helpful to individuals with substance abuse and mental illnesses.

Specific Recommendations to Be Considered

1. Continue to collect and present evidence-based information that highlights the effectiveness of treatment and its cost benefits.

2. Work with other partners to secure funding for a state specific study that could provide a comprehensive and Florida-specific identification of the cost benefits and cost offsets to be experienced by investing in treatment for children, youth and adults.

3. Initiate a study that would focus on the long term impact of child abuse and neglect. The current review found scarce evidence based work focusing on this important group.

4. Continue working with State and Federal elected officials to initiate greater investment in the treatment of substance abuse and mental health illnesses.

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