

# The Corrosive Effects of Alcohol and Drug Misuse on NH's Workforce and Economy

## **SUMMARY REPORT**

**November 2014**

Prepared by:



## *The Corrosive Effects of Alcohol and Drug Misuse on NH's Workforce and Economy*

New Futures Introduction

According to the Center for Behavioral Health Statistics and Quality's *National Survey on Drug Use and Health*, nearly nine percent of individuals age 12 and over in New Hampshire misused alcohol or drugs in 2012. This means that nearly 100,000 New Hampshire residents are dependent on or abuse alcohol and/or drugs every year. Substance misuse is associated with significant losses in worker productivity in the form of reduced workforce participation, reduced worker productivity, and absenteeism that reduce economic growth; increased healthcare and criminal justice costs; and adverse social and family consequences.

In the last several years two seminal national studies were released that examined the economic impact of alcohol and drug misuse:

- Ellen E. Bouchery, et al, *Economic Costs of Excessive Alcohol Consumption*, released by the United States Centers for Disease Control and Prevention and the Lewin Group in 2012, which found that the cost of excessive alcohol consumption in the United States reached 223.5 billion in 2006, of which 72% of the costs were attributed to workplace productivity;
- National Drug Intelligence Center, *The Economic Impact of Illicit Drug Use on American Society*, released by the United States Department of Justice in 2011, which found that the economic impact of illicit drug use was \$193 billion in 2007, of which 62% of the costs were attributed to workplace productivity.

In 2012, New Futures contracted with PolEcon Research to undertake an independent, comprehensive analysis of the costs of excessive alcohol consumption in New Hampshire. The PolEcon report, *The High Cost of Excessive Alcohol Consumption in New Hampshire*, was released in December 2012. Since that time public concern about drug misuse has increased as alarming data about the dramatic increase in opioid (prescription opioids and heroin) and other drug misuse was released. The need to examine the collective economic impact of both alcohol and drug misuse lead New Futures to contract with PolEcon Research for an independent, comprehensive analysis of the impact of alcohol and drug misuse in New Hampshire which would include both an update of its 2012 report on the economic impact of excessive alcohol consumption and an analysis of the economic impact of drug misuse.

As New Hampshire has emerged from the great recession, much public attention and debate has focused on the state of the post-recession New Hampshire economy and the need to identify strategies and public policies that can be put into place to strengthen our economy and spur economic growth. New Futures believes that the analysis of the economic and societal cost of alcohol and drug misuse in New Hampshire will be of critical importance to policy makers and advocates in 2015 as the state seeks as part of the State Fiscal Year 2016/2017 budget process, to wisely invest its limited resources to promote economic growth and the public health and wellbeing of its citizens. To this end, New Futures is pleased to provide the November 2014 PolEcon Report, *The Corrosive Effects of Alcohol and Drug Misuse on NH's Workforce and Economy*.

## SUMMARY REPORT

# *The Corrosive Effects of Alcohol and Drug Misuse on NH's Workforce and Economy*

PolEcon Research

November 2014

### **Purpose**

The PolEcon Research Report ("Report") uses valid and reliable sources of New Hampshire data and appropriate analytical methods and tools to estimate the economic costs of alcohol and drug misuse in New Hampshire in 2012, the most recent year for which data was available. As used in the Report "alcohol and drug misuse" is used interchangeably with "substance misuse", with the term "misuse" indicating either "abuse" of or "dependence" on the substance. In addition "drug misuse" includes the abuse of, or dependence upon illegal drugs as well as the non-medical use of use or prescription drugs.

The Report estimates the costs of alcohol and drug misuse in four broad areas:

- Productivity
- Healthcare
- Public Safety and Criminal Justice
- Other Costs Including Motor Vehicle Accidents

The Report also discusses the policy implications of its findings.

The Report concludes that alcohol and drug misuse costs New Hampshire more than \$1.84 billion in 2012 in lost productivity and earnings, increased expenditures for healthcare, and public safety costs. This \$1.84 billion represents 2.8 % of the state's gross state product or \$1,393 for every person in the state. Not included in this total is an additional \$392.5 million in discounted lifetime earnings lost each year by the 552 individuals who died prematurely in 2012 in New Hampshire as the result of alcohol and drug misuse. By far the greatest cost of substance misuse in New Hampshire is the lost productivity of individuals who are dependent on or abuse alcohol or drugs which amounted to \$1.15 billion in 2012.

***"Alcohol and drug misuse cost New Hampshire more than \$1.84 billion annually in lost productivity and earnings, increased expenditures for healthcare, and public safety costs."***

The Report uses the terms "costs" and "losses" interchangeably to represent the monetized impacts of alcohol and drug misuse. Costs occur in the form of direct expenditures, as in the case when substance misuse adversely affects health, resulting in increased healthcare and human services expenditures. Economic impact also occurs in the form of reductions (losses) in economic productivity and wage and salary earnings when labor force participation and earnings are reduced as the result substance misuse.

### **The Effects of Alcohol and Drug Misuse on NH's Workforce and Economy**

Alcohol and drug misuse affects both the number of individuals participating in the workforce and the earnings of those individuals who do participate in the workforce. The impact of substance misuse on the size and productivity of the New Hampshire workforce reduces the output of New Hampshire business, lowers the overall performance of the New Hampshire economy and accounts for two thirds (62.5%) of the annual cost of substance misuse, an estimated \$1.15 billion in 2012.

Individuals who work less, produce less, and earn less because of substance misuse represent a waste of human resources. Human resources, especially individuals with education, training, and initiative, are the most valuable resource in the 21<sup>st</sup> Century economy. Because both population growth and in migration in New Hampshire have slowed, human resources are becoming scarcer in New Hampshire. By reducing the number of individuals in New Hampshire's workforce and decreasing the skills and productivity of individuals who are in the workforce, substance misuse exacerbates key demographic and human resource issues that contribute to slower economic growth in the state. New Hampshire cannot afford to waste human resources if it wants to maximize the performance of its economy.

***“Productivity losses attributable to substance misuse cost the state about \$1.15 billion in 2012. The productivity impact of drug and alcohol misuse is so significant that the problem must be considered in the context of the impact it has on the long term impacts for the NH economy.”***

The Report notes that because several studies have failed to find statistical impacts on work force participation and earnings for women who misuse alcohol, the Report includes the impact of alcohol misuse on the workforce participation and earnings only on males age 18 – 64. The Report does include the workforce participation and earnings for both men and women who misuse drugs. Because of the exclusion of workforce data related to women who misuse alcohol, the Report states that its productivity numbers likely underestimate the impact of substance misuse.

### **Key Findings**

- **Workforce Productivity**
  - *Reduced Labor Force Participation and Reduced Productivity of Workers in the Workforce Due to Alcohol and Drug Misuse Cost the New Hampshire Economy a total of \$1.84 billion in 2012.*
    - Alcohol Misuse.
      - ✓ Workforce Participation. Alcohol misuse resulted in an estimated 9,237 fewer male workers in New Hampshire's workforce in 2012, and overall reduction in the workforce of 1.2%, with an associated loss of earnings in the New Hampshire economy of \$583.4 million in 2012.
      - ✓ Workforce Productivity. The alcohol impaired productivity of workers in the New Hampshire workforce costs the state and estimated \$324.5 million in reduced earnings, with an annual mean earnings reduction of \$4,777 per alcohol misusing worker.
    - Drug Misuse. The combined impacts of lower labor force participation and reduced earnings among misusers of drugs in New Hampshire resulted in drug-attributable productivity losses of \$176.45 million in 2012.
  - *Absenteeism:*
    - Almost 75 percent of adults who misuse alcohol work and 74% of adults who meet the diagnostic criteria for drug misuse work. Employees with substance misuse problems miss significantly more workdays per month than other employees.
    - Over \$32 million in alcohol-attributed absenteeism costs are incurred by New Hampshire businesses because of alcohol misuse and another \$34 million of costs are incurred because of drug misuse.
    - The output (the value of goods and services) of industries was reduced by more than \$187 million in 2012 because of substance misuse attributable absenteeism.

- Healthcare. Healthcare costs associated with alcohol and drug misuse include the costs of providing substance misuse treatment services (inpatient residential services, outpatient programs, and detoxification services) to persons who misuse substances. In addition, substance misuse can increase the risk of illness or injury and thereby increase the use and cost of medical services for alcohol or drug misuse attributable medical services including hospital costs (inpatient, outpatient, and emergency room services), physician charges, prescription drugs, and the cost of nursing home care.
    - *Substance Misuse Treatment Services:*
      - Of the 100,000 New Hampshire residents estimated to need treatment for substance misuse, only 6% or 5900 individuals received services for substance misuse at substance treatment facilities in New Hampshire in 2012, at an estimated cost of \$15.6 million. The estimate weighted mean cost per individual treated was \$2,632.
      - In New Hampshire a much higher percentage of all substance misuse treatment costs are paid for out-of-pocket (52.5%) than are paid for out-of-pocket in the US (17%)
      - In only one state (Texas) is an individual in need of treatment for substance abuse (primarily alcohol) less likely to receive treatment than in New Hampshire.
    - *Medical Services:*
      - Healthcare payments attributable to substance misuse, hospital and provider payments, prescription drugs, and other costs) are estimated at \$230.76 million in 2012, an amount equal to about 2% of total medical expenditures in the state.
      - Hospital payments accounted for the largest share of substance misuse – attributable medical costs. Hospital payments for substance misuse - attributable first diagnoses were an estimated \$109.94 million.
      - Insurance administration costs associated with substance misuse -attributable medical services are estimated to add an additional \$19.6 million in substance misuse-related costs.
- “In only one state (Texas) is an individual in need of treatment for substance abuse services (primarily alcohol) less likely to receive treatment than in New Hampshire.”***
- Public Safety and Criminal Justice. Research has shown a strong link between alcohol and drug use and abuse and crime. The Report estimated the costs for police protection, the judicial system, and state and county correctional systems resulting from alcohol and drug misuse. The costs total \$284.08 million in 2012.
    - Alcohol-attributable offenses account for about 31% of all arrests and about 12.8% of all crimes committed in New Hampshire.
    - Drug –attributable offenses account for 26% of all arrests in New Hampshire in 2012
    - Policing and public safety costs related to substance misuse total \$139.9 million in New Hampshire, of which \$108.7 million are borne by local government.
    - Judicial costs attributable to substance misuse cost \$27.7 million annually.
    - Substance-attributable incarcerations increase corrections costs by \$100.6 million annually.
    - The cost to victims of substance misuse attributable crime (excluding medical and productivity costs) was \$11.7 million in 2012.

- Other Costs. Other costs included in the Report are those related to motor vehicle accidents and to reductions in state and local government tax revenue.
  - *Motor Vehicle Accidents:*
    - After subtracting medical and productivity costs associated with alcohol-attributable motor vehicle crashes from total costs (to avoid double counting), the estimated annual costs of alcohol-attributable motor vehicle crashes was \$67.2 million in 2012.
    - The cost of drug attributable motor vehicle crashes is estimated at \$6.17 million in 2012.
  - *State and Local Government Revenue Loss:* Reduced labor force participation, lower average earnings, and greater worker absenteeism due to alcohol and drug misuse and the income losses from substance misuse -related premature deaths combine to reduce state and local revenues in New Hampshire by an estimated \$61 million in 2012.

**Table 1**  
**Summary of NH Costs of Substance Misuse in 2012 (\$ Millions)**

	Annual Costs	Lifetime Costs Related to Annual Impacts
<b>Productivity</b>		
Impaired Productivity	\$1,084.36	
Absenteeism	<u>\$66.40</u>	
<b>Subtotal</b>	<b>\$1,150.76</b>	
<b>Premature Death*</b>		<b><u>\$392.9</u></b>
<b>Health Care</b>		
Substance Misuse Treatment	\$15.60	
Medical Care	\$230.76	
<u>Insurance Administration</u>	\$19.61	
<b>Subtotal</b>	<b>\$265.98</b>	
<b>Criminal Justice</b>		
Police Protection	\$139.92	
Judicial System	\$27.64	
Corrections	\$100.06	
Cost to Crime Victims	\$11.69	
<u>Victim Productivity Loss</u>	<u>\$4.77</u>	
<b>Subtotal</b>	<b>\$284.08</b>	
<b>Other Costs</b>		
Motor Vehicle Crashes	\$73.88	
State and Local Tax <u>Revenue</u>	<u>\$61.04</u>	
<b>Subtotal</b>	<b>\$134.92</b>	
<b>Grand Total</b>	<b>\$1,835.74</b>	<b>\$2,228.62</b>
NH Gross State Product \$ Millions (2012)	\$66,111	\$66,111
Substance Misuse Costs as a % of GSP	2.8%	3.4%

\*Included in separate total because of difference in accounting

## Who Bears the Cost of Excessive Alcohol Consumption

Costs related to alcohol and drug misuse are borne by many others in addition to those who misuse substances and their families and include business, government, and the broader economy. The lower productivity and reduced earnings of an employee who misuses substances also implies a reduction in the productivity of business in which he/she is employed. An individual who needs medical services as the result of substance misuse may bear some of the costs in terms of lost earnings and medical expenses, but businesses or governments will also bear a cost if they are the primary payers (by providing medical insurance) for a worker's medical treatment.

### Policy Implications

- Benefits of Increased Substance Misuse Treatment Rates
  - Summary of Critical Report Estimates.
    - 100,000 New Hampshire residents are estimated to need treatment for alcohol and drug misuse, but only 5,900 (6% of the total) receive treatment for substance misuse. The estimated annual per person cost for treatment is \$2,632.
    - The total public and private economic cost of alcohol and drug misuse in New Hampshire is \$1.84 billion. Dividing the documented annual costs (excluding mortality) of substance misuse by the number of individuals in the state who misuse alcohol or drugs indicates that the annual cost for every individual that misuse alcohol or drugs is \$19,063, suggesting that reducing substance misuse would have a benefit-cost ratio of 7:2.
  - Analysis. The Report finds that the current substance misuse treatment rate (6% of those who need treatment receive it or 5900 individuals) produces net benefits of between \$ 43 million and \$101 million. Doubling the treatment rate from 6% to 12%, or 11,800 individuals) would reduce the cost of substance misuse by \$227 million and result in net benefits to the state of as much as \$196 million annually. Not all benefits would be realized immediately but labor force participation, impaired productivity of impaired workers, absenteeism and motor vehicle accidents would begin responding immediately and quickly produce benefits.
  - The net benefits to New Hampshire's productivity and the New Hampshire economy that accrue from increased treatment make a strong benefit to cost rationale for expanding substance misuse treatment programs and increasing New Hampshire's very low treatment rates. When the increases in earnings and productivity and the reductions in private and public sector costs are included in the net benefits of increasing alcohol treatment, the economic and fiscal benefits of increasing alcohol treatment rates are compelling.
- Reauthorization of the New Hampshire Health Protection Program. In 2012, 52.5% of all substance misuse treatment costs in New Hampshire were paid for "out-of-pocket" – significantly higher than the national rate of 17%. The Report finds it likely that this fact has been a major contributor to the low rates of substance misuse treatment in New Hampshire. Of

***Doubling the treatment rate from 6% to 12%, or 11,800 individual, would reduce the cost of substance misuse by \$227 million and result in net benefits to the state of as much as \$196 million annually.***



the approximately 50,000 non-disabled New Hampshire residents whose household incomes are less than 138% of the federal poverty level and are therefore eligible for the New Hampshire Health Protection Program (as of this date 23,000 have enrolled), it is estimated that as many as 7000 are in need treatment for substance misuse. Increased access to substance misuse treatment through the provisions of the New Hampshire Health Protection Program will provide significant economic benefits to New Hampshire at minimal cost to the state because the vast majority of the costs of the New Hampshire Health Protection Program are paid for the federal government.

- The Importance of Prevention. The Report notes that while programs aimed at preventing substance misuse were not examined, it stated that “The potential for these programs to have benefit – to – cost ratios as high or higher than those for substance misuse treatment ... seems clear.”

***“...reducing substance misuse would produce substantial benefits for the New Hampshire economy. So much so that... the issue of substance misuse prevention, treatment, and recovery support should be fully integrated into the workforce development and economic development strategies adopted by the state of New Hampshire, its communities, and businesses.”***