

## **EXECUTIVE SUMMARY**

### **A. Overview**

The economic cost of drug abuse in 2002 was estimated at \$180.9 billion. This value represents both the use of resources to address health and crime consequences as well as the loss of potential productivity from disability, death and withdrawal from the legitimate workforce. This estimate has incorporated extensive new data, although several major components have been trended forward.

Several trends stand out from this analysis. First, the costs of drug abuse have increased an average of 5.3 percent per year from 1992 through 2002. This rate is very slightly above the 5.1 percent annual growth in the gross domestic product for the entire economy. The most rapid increases in drug abuse costs have been in criminal justice efforts, particularly increased rates of incarceration for drug offenses and drug-related offenses and increased spending on law enforcement and adjudication. There appear to have been more moderate increases in costs associated with health consequences and treatment and prevention initiatives.

This report was developed for The Office of National Drug Control Policy (ONDCP) which asked The Lewin Group to develop more current estimates of the societal cost of drug abuse. In the context of this report, we use the phrase “drug abuse” to refer to consequences of using illicit drugs, as well as societal costs pertaining to the enforcement of drug laws. This study does not address costs related to abuse of or dependence on legal substances that may be termed drugs including alcohol and tobacco.

The most recent comprehensive estimates of drug abuse-related costs in the United States are for 1995 (Harwood et al., 1998). Subsequently, a study was undertaken to develop updated estimates through the year 2000 (Office of National Drug Control Policy, or ONDCP, 2001). The objective of the present study has been to develop more current cost estimates based upon the fundamental approach and data of that prior study. In doing so, this study has compiled current data and estimates for many cost components, and projected other cost components forward based on indices or data series that are believed to reflect expected changes in both the real rate of problems (e.g., incidence, prevalence) as well as costs (inflation). This report indicates how each of the cost components have been updated. It should be noted that this study has not re-examined the literature on the causal relationship of drug abuse and the respective consequences. The same attribution factors developed or used in Harwood et al. (1998) and in ONDCP (2001) have been used in this effort to update the estimates.

The limitations of such an “update” study should be recognized when applying its findings. This study is limited in terms of both the reliability of the estimates presented and the scope of the estimates. First, the methods used in this study yield seemingly very precise values, however they should be treated as approximations, because many of the values were derived by trending estimates from previous years or by simple manipulations of data drawn from secondary sources. A substantial period of time has passed since the calculation of these components was fully revisited and primary data was gathered to re-estimate these costs. The most recent fully re-estimated value for each of the component costs presented here is for 1992.

A second limitation of this study is the scope. As noted, this study follows guidelines developed by the U.S. Public Health Service for cost of illness studies. There are other approaches that could have been used to develop estimates of the cost of drug abuse. Some approaches incorporate different facets of the economic impacts of drug abuse such as the intangible or “quality of life” impacts of drug abuse. In applying the estimates from this or other cost of illness studies, analysts must consider which approach is most appropriate for the particular issue they are assessing. Similarly, the results of this study were not designed to assess the absolute or relative effectiveness of specific policies to control drug abuse or the alternatives of drug prohibition versus legalization. The purpose of this study has been to identify and quantify particular negative consequences of the abuse of illicit drugs. These data are likely to inform the evaluation of particular policies. However, this study has not undertaken specific policy evaluations.

The results of this study are summarized in the following sections. First, we present the overall estimates and trends in the cost of drug abuse for 1992 through 2002. In subsequent sections we examine how the costs in each of the three major cost components (health costs, productivity losses and non-health direct expenditures) changed between 1992 and 2002. All of the three major cost components contain costs related to crime, thus, in the fifth section we extract the crime-related costs from each of the other major cost components and summarize them. In the final section we provide a brief discussion of the study’s results.

## **B. Overall Costs**

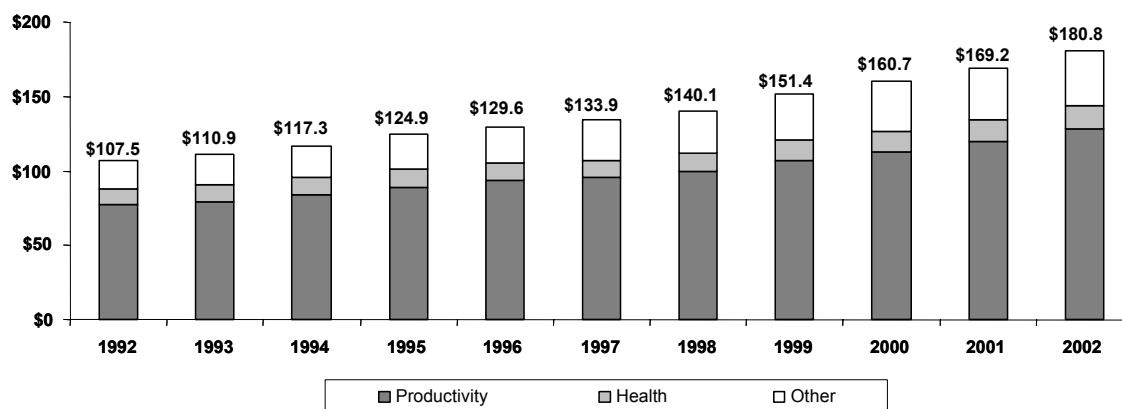
Total costs were \$180.9 billion in 2002, increasing 5.34 percent annually since 1992. Figure 1 displays the estimates for 1992 through 2002 overall and for the three major components into which the report divides the costs. These three components are health care costs, productivity losses, and other costs. Costs in 1992 were \$107.6 billion.<sup>1</sup> The rate of increase in costs was in excess of the combined increase of 3.5 percent for the adult population and consumer price index for all services for this period, however it was only marginally greater than the 5.16 percent annual growth in gross domestic product over this time.

The largest proportion of costs is from lost potential productivity, followed by non-health “other” costs and health-related costs. Figure 2 displays the proportion of the societal costs that were represented by each of the three major components in 2002. The share of the costs represented by each of these components remained fairly constant between 1992 and 2002. The share of costs represented by health care and productivity losses declined from 9.9 to 8.7 percent and 72 to 71 percent, respectively, while the share from “other” effects increased from 18 to 20 percent.

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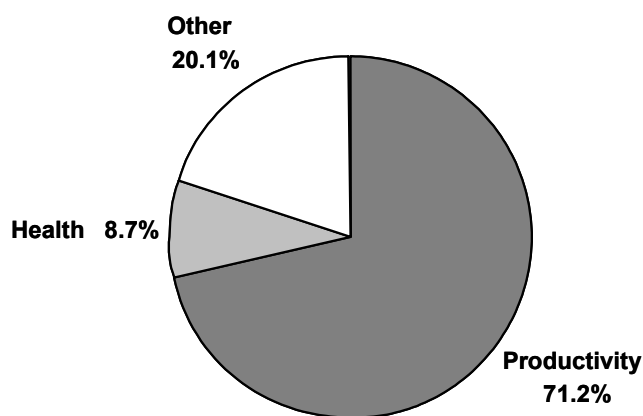
<sup>1</sup> We have re-estimated the 1992 cost of drug abuse originally developed by Harwood et al (1998) based on more recent data. The revised estimate is \$102.2 billion. This estimate is 4.6 percent higher than the previous Harwood et al. (1998) estimate of \$97.7 billion.

**Figure 1**  
**Overall Cost of Drug Abuse, 1992-1998**  
**(in billions of dollars)**



The estimates for 1992 through 2000 were generally developed based on detailed observed data on the component costs or of the projection factors. This was possible to a lesser extent for the 2001 and 2002 estimates, since progressively less observed data was available upon which to base the estimates for these years. Therefore, these estimates (and the several components that are projections of the 1992 values) should be used with caution until they can be re-estimated more accurately based on observed data.

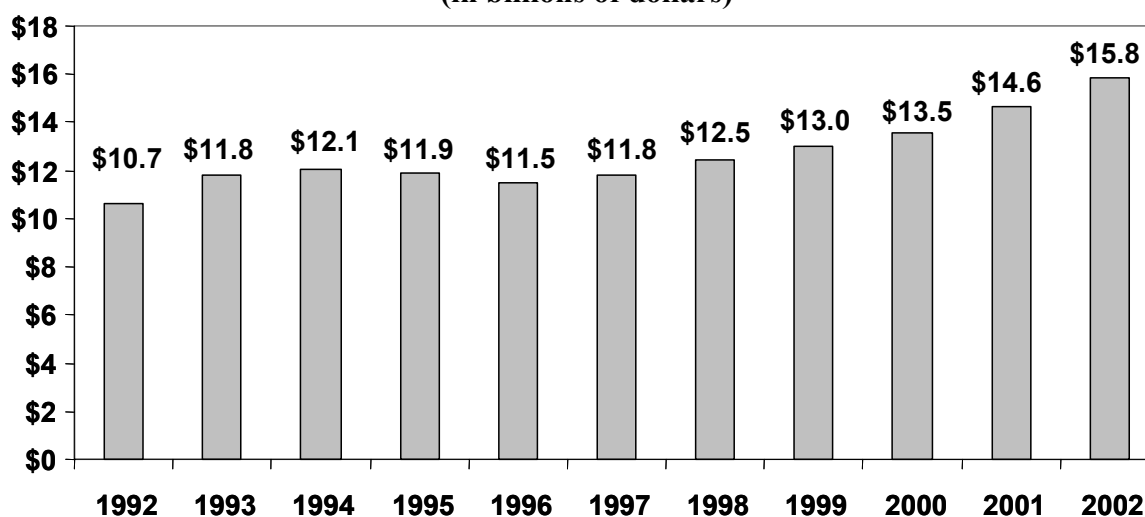
**Figure 2**  
**Distribution of Cost of Drug Abuse, 2002**  
**By Major Cost Components**



### C. Health Care Costs

Health-related costs are projected to total \$16 billion in 2002. Figure 3 displays the health care related cost of drug abuse for each year between 1992 and 2002.<sup>2</sup> Substance abuse-related health care costs are projected to have risen 4.1 percent annually between 1992 and 2002. This rate of increase is less than the combined rate of increase of population growth and medical inflation as measured by the consumer price index for medical services (CPI-M). During this period the population grew at one percent annually and the CPI-M grew at 4.1 percent annually for a combined annual increase of 5.1 percent. Furthermore, data from the Centers for Medicare and Medicaid Services show that total health care spending grew by 6.5 percent per year between 1992 and 2002. Thus, substance abuse-related health care spending lagged somewhat behind what might have been expected.

**Figure 3**  
**Health Care Costs, 1992-2002**  
**(in billions of dollars)**



Note: 1998 through 2002 values are primarily projections

The rate of growth in this component was moderated by declines in spending for HIV/AIDS care. In 1992 the second largest component of the health care costs related to drug abuse was spending to care for HIV/AIDS patients. Because of new treatments, the cost of caring for HIV/AIDS patients is estimated to have declined from \$3.5 to \$2.5 billion between 1992 and 1997 but is projected to have increased since that time due to increases in the number of HIV/AIDS patients. Table 1 lists the components of the health care related costs of drug abuse. Meanwhile, spending for community-based specialty treatment is estimated to have risen from

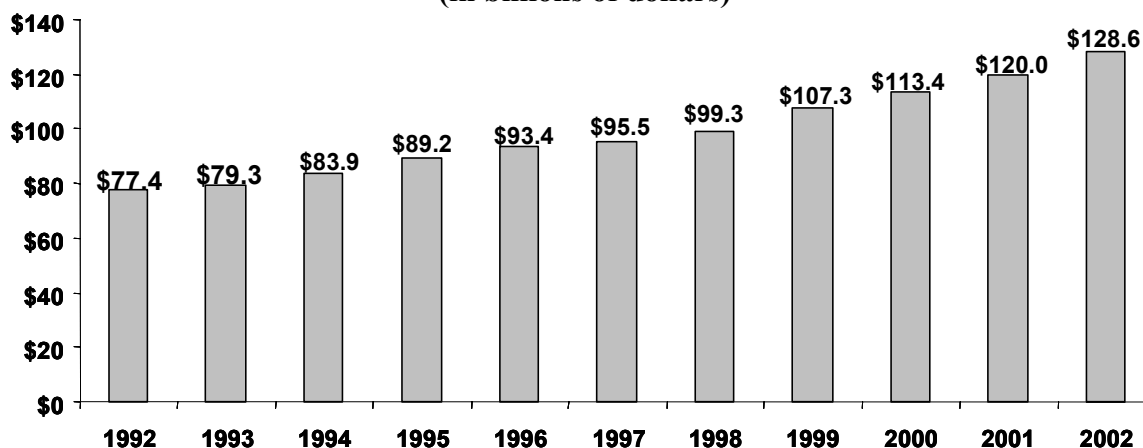
<sup>2</sup> We have re-estimated the 1992 cost of drug abuse originally estimated in Harwood et al. (1998) based on more recent data. The revised estimate for health care related costs is \$10.7 billion. The 1992 estimate is 9 percent higher than the previous Harwood et al. (1998) estimate. The largest source of this increase is a revised estimate of spending on drug abuse for community-based specialty treatment. The original estimate for this component was \$2.8 billion. The revised estimate is \$3.8 billion. The revised estimate is based on a study by Mark et al. (1999) that was more comprehensive than the original study.

\$3.8 to \$6.0 billion between 1992 and 2002, a 4.75 percent annual growth rate, which is less than the combined increase in population growth and medical inflation.

#### D. Productivity Losses

By far the largest component of cost is from loss of productivity, at \$128.6 billion. In contrast to the other costs of drug abuse (which involve direct expenditures for goods and services), this value reflects a loss of potential resources. Productivity losses represent work in the labor market and in household production that was never performed, but could reasonably be expected to have been performed absent the impact of drug abuse. Figure 4 displays the productivity related cost of drug abuse for each year between 1992 and 2002. The estimated productivity loss in 1992 was \$69.4 billion. By 2002, we estimate that this cost had risen to \$128.6 billion, a 5.2 percent annual increase. This rate of increase is somewhat higher than the combined increase in the population (about one percent annually) and in wage rates (about 3.1 percent annually) of 4.1 percent during this period, although it is virtually identical to the 5.1 percent annual increase of total economic activity (termed gross domestic product) in the United States.

**Figure 4**  
**Productivity Losses, 1992-2002**  
**(in billions of dollars)**



The greatest share of productivity loss is from criminal activities, including losses because 660,000 offenders were incarcerated and others pursued crime careers to pay for their drug use. Together, there was a loss of about 1 million person years of effort that could have and arguably would have been available to the legitimate economy if these individuals had not been involved with drug-related crime. There were an estimate 23,500 drug-related<sup>3</sup> deaths from all causes (e.g., overdose, poisoning, homicide, HIV and hepatitis B/C) in 2000, the most recent year with available data. Trend comparisons with earlier years are problematic because the US (and world) mortality diagnostic system changed in 1998. The mortality losses represent the present

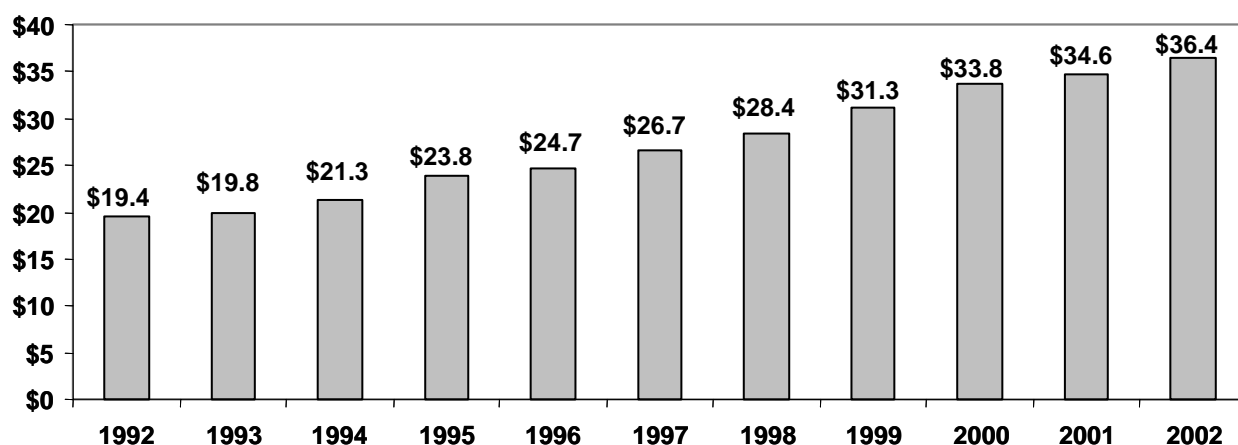
<sup>3</sup> These include both causes of death where drug use is the overt cause of death, e.g., drug overdose, as well as illnesses such as HIV infection or hepatitis C where needle sharing while abusing drugs was the underlying cause of the illness. These are detailed in Section IV.B.1 and in Appendix C.

discounted value of lost lifetime market and household productivity. At a 3 percent discount rate, this value averaged about \$1 million per death.

### E. Cost of Other Effects

The final major component of costs came to \$36.4 billion in 2002. These primarily concern costs associated with the criminal justice system and crime victim costs, but also include a modest level of expenses for administration of the social welfare system. Figure 5 displays the trend in costs of these other impacts of drug abuse for each year between 1992 and 2002.<sup>4</sup> Between 1992 and 2002, the costs for the other effects of drug abuse rose at a 6.5 percent annual rate. This rate is clearly higher than the combined 3.5 percent annual increase which is the sum of the growth in population (one percent annually) and general inflation (2.5 percent annually) and even exceeds the 5.1 percent annual growth in the total economy over this period.

**Figure 5**  
**Cost of Other Effects, 1992-2002**  
**(in billions of dollars)**



The largest detailed component of these costs is for state and federal corrections at \$14.2 billion, which is primarily for the operation of prisons. Another \$9.8 billion was spent on state and local police protection, followed by \$6.2 billion for federal supply reduction initiatives. Significant amounts of our nation's criminal justice resources are estimated to go towards drug abuse. In 2002, the most recent year with publicly available data, there were almost 330,000 persons incarcerated for drug specific offenses and an estimated 135,000 for income-generating or other crimes attributable to drug abuse. There were about 1.5 million arrests on drug specific charges and another half million for offenses attributable to drug abuse. In total, about 34 percent of the prison and jail population and about 15.5 percent of arrests were attributable to drug abuse. Crimes attributable to drug abuse include "drug specific" offenses such as sales, manufacturing and possession of illicit drugs and also a quarter to a third of income generating crimes (e.g.,

<sup>4</sup> We re-estimated the 1992 cost of drug abuse as re-estimated in Harwood et al. (1998) based on more recent data, using the original methodology. The 1992 estimates was 6 percent higher.

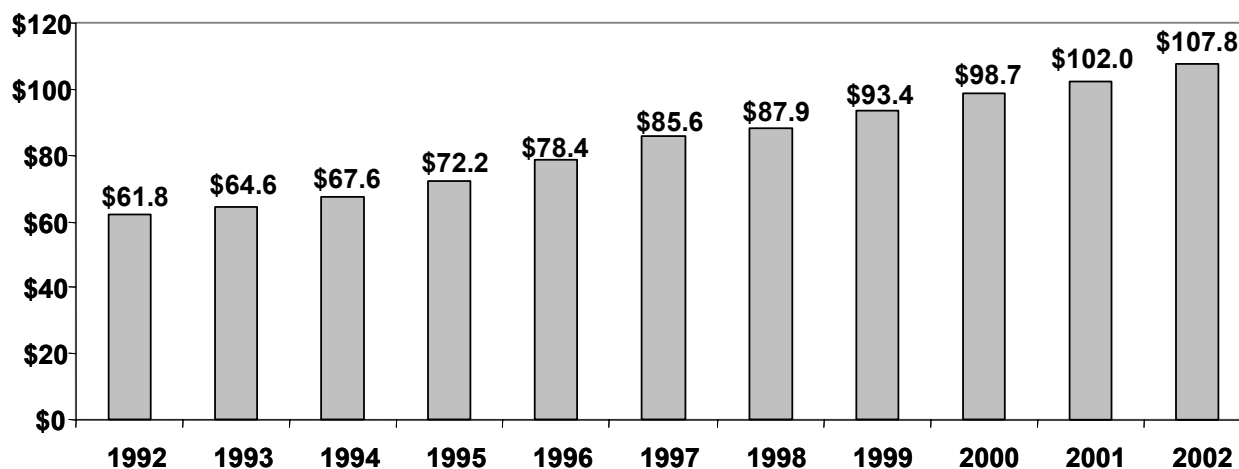
larceny, burglary) that were committed by drug dependent individuals in order to finance expensive drug addictions.

## F. Crime Related Costs

Selected components of health care, productivity loss, and other costs are crime-related costs. When these costs are aggregated a more complete picture is gained of the role of drug-related crime in the total economic impact. It is estimated that \$107.8 billion, or almost 60 percent of total costs are related to crime. Figure 6 displays the crime costs related to drug abuse.<sup>5</sup> Overall crime related costs rose 5.7 percent annually between 1992 and 2002. The major drivers of this increase were increases in police and corrections expenditures and productivity losses from incarceration. This rate of increase is greater than the summed increase of population growth and general inflation (3.5 percent) and growth in the general economy (5.1 percent).

As suggested above, the large majority of these costs are for drug specific offenses—sales, manufacturing, possession—and the smaller fraction are for drug-related crimes undertaken to finance expensive drug habits. Over 11 percent of arrests in the US are for drug offenses. In addition, appreciable fractions of income generating crimes are attributed to drug abuse: on the order of a quarter of burglaries, personal larcenies and robberies. Many studies have found that in excess of half of all arrestees and prisoners charged or convicted for such offenses are users of illicit drugs. However, income generating crimes committed by non-addicted users can not be blamed on their “need” to finance their expensive addiction. Therefore the cost of income generating crimes committed by non-addicted users are not included as costs of drug abuse.

**Figure 6**  
**Crime Related Costs, 1992-2002**  
**(in billions of dollars)**



<sup>5</sup> The estimate of \$61.8 billion is 8 percent higher than the Harwood et al. (1998) 1992 crime cost estimate. The main source of this revision was increases in estimated criminal justice system and other public costs of crime based on more current data.

## **G. Discussion**

The economic cost of drug abuse in the United States was estimated at \$180.9 billion in 2002. This estimate is fundamentally an update of the detailed cost study for 1992 (Harwood et al., 1998) that estimated costs of \$97.7 billion and the prior update that estimated costs of \$143.4 billion in 1998 (ONDCP, 2001). The new estimate has used the most current data available and has made projections of particular components as necessary to produce estimates for 2002.

The overall cost of drug abuse rose 5.3 percent annually between 1992 and 2002, increasing from \$107.5 to \$180.9 billion. The most rapid growth in drug costs came from increases in criminal justice system activities, including productivity losses associated with growth in the population imprisoned due to drug abuse. Expenditures on health services and the costs of premature mortality grew at relatively slow rates, at least in part due to the development of more effective therapies for HIV.

This study and prior estimates indicate that drug abuse is one of the most costly health problems in the United States. The estimates have followed guidelines developed by the U.S. Public Health Service for cost of illness studies. These guidelines have been applied in earlier studies of drug abuse in the U.S. (e.g., for 1992, 1985, 1980, and 1977), and to cost of illness studies for virtually all of the major health problems. Accordingly, these estimates can be compared meaningfully to estimates for e.g., cancer, stroke, heart disease, diabetes, alcohol abuse and mental illness. The National Institute of Health collects and reports on cost estimates for the major health problems in the nation. Based on estimates from the 1990s employing generally comparable methodologies, drug abuse (\$124.9 billion in 1995) is comparable to heart disease (\$183.1 billion in 1999), cancer (\$96.1 billion in 1990), diabetes (\$98.2 billion in 1997), alzheimer's disease (\$100 billion in 1997), stroke (\$43.3 billion in 1998; ), smoking (\$138 billion in 1995), obesity (\$99.2 billion in 1995), alcohol abuse (\$184.6 billion in 1998) and mental illness (\$160.8 billion in 1992). Even if we only compare the health-related costs of drug abuse--\$51 billion in 1995—it still must be considered one of the more costly health problems in the nation.

Finally, these estimates could be considered conservative in that they make no allowances for the impact of drug abuse on the quality of life of the family, neighbors and victims of drug abusers or on the drug abuser her/himself. Economic valuation studies increasingly incorporate such quality of life impacts and costs, and the resulting cost estimates are typically several times greater than the productivity losses. However, relatively few studies of the economic costs of health problems have yet incorporated quality of life factors, although studies of the cost effectiveness of health interventions are based on quality of life analyses.