

IV. ESTIMATES FOR 1992-2002

In this section the updated cost estimates derived based on the methodology discussed above are presented. The updated cost estimates overall and for health care, productivity, other costs, and crime-related costs are displayed, respectively, in Tables IV-1 through IV-5. For the majority of the cost components observed data are available to calculate the updates through 2002. There are several exceptions, however. Public Criminal Justice System costs for police protection, legal adjudication, and corrections are only available through 1999 and costs for community-based specialty treatment are only available through 1997. The estimates for these cost categories subsequent to the last year of observed data are projections based on the observable trends in the cost category.

A. Overall Costs

Table IV-1 displays the estimates for 1992 through 2002 overall and for the three major categories.

Table IV-1
Estimated Societal Cost of Drug Abuse, 1992-2002
Overall Costs
(in billions of dollars)

Cost Category	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Health Care Costs	\$10.7	\$11.8	\$12.1	\$11.9	\$11.5	\$11.8	\$12.5	\$13.0	\$13.5	\$14.6	\$15.8
Productivity Losses	\$77.4	\$79.3	\$83.9	\$89.2	\$93.4	\$95.5	\$99.3	\$107.3	\$113.4	\$120.0	\$128.6
Other Costs	\$19.4	\$19.8	\$21.3	\$23.8	\$24.7	\$26.7	\$28.4	\$31.1	\$33.8	\$34.6	\$36.4
Total	\$107.5	\$110.9	\$117.3	\$124.9	\$129.6	\$133.9	\$140.1	\$151.4	\$160.7	\$169.2	\$180.8

Source: Analysis by The Lewin Group, 2004.

Between 1992 and 2002 the overall economic cost of drug abuse to society increased at a rate of 5.9 percent annually. By 2002 the economic cost of drug abuse was \$180.8 billion.¹⁴ 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.

¹⁴ We have re-estimated the 1992 cost of drug abuse originally estimated by Harwood et al. (1998) based on more recent data. The revised estimate is \$107.5 billion. This estimate is 10 percent higher than the previous Harwood et al. (1998) estimate of \$97.7 billion.

B. Health Care Costs

Table IV-2 displays the estimates of health care related costs for 1992 through 2002.¹⁵ Overall the health care costs related to drug abuse increased 2.9 percent annually over this six-year period. This rate of increase is somewhat lower than the increases in the adult population and prices for medical services. Between 1992 and 1998, the adult population increased at 1.0 percent annually and prices for medical services increased 4.1 percent annually for a combined 5.1 percent annual increase. The rate of growth in health care service costs was moderated by projected declines in the cost of caring for HIV/AIDS patients that have resulted from the new treatments available to these patients. The cost of HIV/AIDS care is estimated to have declined from \$3.7 billion in 1992 to \$3.4 billion in 2002.

The two categories of service with the greatest annual increase in spending were treatment research and hospital and ambulatory care for the medical consequences of drug abuse which increased at a 11.2 and 10.9 percent annually, respectively. One category of service, Department of Defense spending on treatment saw a sharp decline between 1992 and 1994, dropping from \$14 to \$5 million, rising to \$8 million in 2002.

The distribution of spending across the components remained relatively constant during this period. However, the share of HIV/AIDS spending declined and then rose. In 1992, HIV/AIDS spending represented the second largest component of health care spending attributable to drug abuse. HIV/AIDS costs were \$3.7 billion or 34.2 percent of total health care costs in 1992. In 1997, the spending level dropped to \$2.5 billion representing or 21.2 percent of all spending, and then rose again to \$3.75 billion, or 23.7 percent of the total. Meanwhile, the cost of community-based specialty health treatment increased from \$3.8 billion to \$6.0 billion. Community-based specialty represented 35.7 percent of all health care related drug abuse costs in 1992. By 2002, this component represented 37.9 percent.

C. Productivity Losses

Table IV-3 displays the estimates of productivity losses related to drug abuse for 1992 through 2002.¹⁶ Overall the productivity losses related to drug abuse increased 5.2 percent annually over this ten-year period. This rate of increase is somewhat higher than the 4.1 percent annual combined increase in the adult population and the BLS ECEC. Between 1992 and 1998, the adult population increased 1.1 percent annually and the BLS ECEC increased 3.0 percent annually for a combined 4.1 percent annual increase.

¹⁵ We have re-estimated the 1992 cost of drug abuse originally estimated by Harwood et al. (1998) based on more recent data. The revised estimate for health care related costs is \$10.65 billion. This estimate is 9.0 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 by the Department of Veterans Affairs (VA). The revised estimate is \$671 million relative to the original estimate of \$235 million. The second component of health care costs that was revised substantially is spending for community-based specialty treatment. The original estimate for this component was \$2.8 billion. The revised estimate is \$3.2 billion. The revised estimate is based on a study by Mark et al. (1999) that was more comprehensive than the original study.

¹⁶ The 1992 estimates are identical to the Harwood et al. (1998) estimates for the productivity loss cost components.

Table IV-2
Estimated Societal Cost of Drug Abuse, 1992-2002
Health Care Costs
(in millions of dollars)

Cost Components	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Community-Based Specialty Treatment	\$3,770	\$4,188	\$4,423	\$4,569	\$4,930	\$5,091	\$5,369	\$5,257	\$5,159	\$5,563	\$5,997
Federally-Provided Specialty Treatment											
Department of Defense	\$14	\$9	\$5	\$5	\$5	\$5	\$5	\$7	\$7	\$7	\$8
Indian Health Services	\$26	\$33	\$31	\$31	\$33	\$31	\$32	\$41	\$42	\$52	\$54
Bureau of Prisons	\$17	\$17	\$17	\$18	\$19	\$20	\$21	\$32	\$34	\$38	\$39
Department of Veterans Affairs	\$113	\$127	\$153	\$169	\$152	\$135	\$119	\$108	\$109	\$119	\$116
Support											
Federal Prevention	\$616	\$623	\$639	\$624	\$560	\$657	\$725	\$934	\$1,024	\$1,075	\$1,203
State and Local Prevention	\$89	\$93	\$91	\$101	\$81	\$85	\$118	\$141	\$143	\$145	\$148
Training	\$49	\$51	\$53	\$55	\$57	\$59	\$60	\$62	\$65	\$67	\$69
Prevention Research	\$158	\$164	\$175	\$180	\$212	\$231	\$250	\$286	\$317	\$353	\$402
Treatment Research	\$195	\$242	\$254	\$261	\$283	\$313	\$328	\$382	\$417	\$497	\$564
Insurance Administration	\$268	\$302	\$329	\$335	\$344	\$333	\$333	\$349	\$365	\$413	\$476
Medical Consequences											
Hospital and Ambulatory Care Costs	\$518	\$657	\$796	\$848	\$879	\$1,000	\$1,103	\$1,172	\$1,239	\$1,341	\$1,454
Special Disease Costs											
Drug-Exposed Infants	\$407	\$424	\$439	\$453	\$468	\$480	\$503	\$523	\$558	\$579	\$605
Tuberculosis	\$30	\$29	\$29	\$28	\$27	\$25	\$22	\$20	\$20	\$20	\$19
HIV/AIDS	\$3,489	\$3,894	\$3,694	\$3,221	\$2,592	\$2,484	\$2,603	\$2,853	\$3,138	\$3,461	\$3,755
Hepatitis B and C	\$462	\$399	\$419	\$457	\$394	\$439	\$434	\$371	\$376	\$340	\$312
Crime Victim Health Care Costs	\$92	\$142	\$148	\$139	\$136	\$132	\$127	\$118	\$111	\$109	\$110
Health Insurance Administration	\$340	\$383	\$392	\$360	\$301	\$287	\$308	\$347	\$397	\$448	\$513
Total	\$10,652	\$11,776	\$12,087	\$11,854	\$11,474	\$11,806	\$12,461	\$13,004	\$13,522	\$14,628	\$15,843

Source: Analysis by The Lewin Group, 2004.

Table IV-3
Estimated Societal Cost of Drug Abuse, 1992-2002
Productivity Losses
(in millions of dollars)

Cost Components	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Premature Death	\$22,586	\$22,391	\$23,094	\$24,064	\$20,709	\$17,755	\$17,507	\$20,869	\$22,059	\$23,317	\$24,646
Drug Abuse Related Illness	\$14,205	\$13,766	\$15,845	\$17,737	\$20,270	\$19,916	\$23,143	\$24,999	\$27,427	\$30,203	\$33,452
Institutionalization/ Hospitalization	\$1,477	\$1,502	\$1,683	\$1,872	\$1,533	\$1,662	\$1,786	\$1,735	\$1,706	\$1,841	\$1,996
Productivity Loss of Victims of Crime	\$2,059	\$2,488	\$2,554	\$2,377	\$2,332	\$2,293	\$2,065	\$1,955	\$1,847	\$1,806	\$1,800
Incarceration	\$17,907	\$19,366	\$21,095	\$22,983	\$24,833	\$27,221	\$30,133	\$32,782	\$34,693	\$36,295	\$39,095
Crime Careers	\$19,198	\$19,755	\$19,603	\$20,172	\$23,758	\$26,608	\$24,627	\$24,960	\$25,688	\$26,538	\$27,576
Total	\$77,432	\$79,268	\$83,874	\$89,205	\$93,435	\$95,455	\$99,261	\$107,300	\$113,420	\$120,000	\$128,566

Source: Analysis by The Lewin Group, 2004.

Costs related to premature death increased dramatically between 1992 and 1995 with the increase in the number of HIV/AIDS deaths. New treatments lead to a decline in AIDS' deaths between 1995 and 1998. For the period as a whole the percentage of the productivity losses attributed to premature death declined from 21.0 to 19.2 percent.

Meanwhile during this period the share of productivity losses related to incarceration increased from 25.8 to 30.4 percent. The productivity losses related to incarceration increased at a 8.1 percent annualized rate during this period. The productivity loss related to incarcerations was updated based on the change in the number of incarcerations attributable to drug abuse and the BLS ECEC. The number of persons under incarceration in local jails and federal and state prisons increased 4.7 percent annually in this period. The estimated number attributable to drug abuse increased at 4.7 percent annually.

In addition to the increase in productivity losses related to incarceration, there was an 8.9 percent annual increase in productivity losses due to drug abuse related illness. The productivity loss for drug abuse related illness was updated based on two factors. The real change was measured based on the change in the number of persons reporting more than 100 days of marijuana or cocaine use in their lifetime from 1992 to 1998, after which this data series was discontinued by SAMHSA. This measure increased at a 5.1 percent annual rate between 1992 and 1998. The share of productivity related losses represented by this component increased from 20.5 to 26.0 percent.

D. Cost of Other Effects

Table IV-4 displays the estimates of losses for other effects related to drug abuse for 1992 through 2002. Overall the losses related to other effects increased 6.5 percent annually over this six-year period. This rate of increase is somewhat higher than the increases in the adult population and prices for all services. Between 1992 and 2002, the adult population increased 1.1 percent annually and prices for all goods and services increased 2.5 percent annually for a combined 3.6 percent annual increase.

Criminal justice system costs increased rapidly in this period. Costs for police protection and legal and adjudication both increased at a 8.1 percent annualized rate. These increases are due to increases in overall police protection and legal and adjudication spending as well as increases in the proportion of that spending that we attribute to drug abuse. Driving the increase in criminal justice costs was an increase in the percentage of arrests attributable to drug abuse from 12.9 percent in 1992 to 15.5 percent in 2002.

Table IV-4
Estimated Societal Cost of Drug Abuse, 1992-2002
Cost of Other Effects
(in millions of dollars)

Cost Component	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cost of Goods and Services Lost to Crime											
Criminal Justice System and Other Public Costs											
Police Protection	\$4,503	\$4,991	\$5,505	\$6,093	\$6,612	\$7,216	\$7,713	\$8,130	\$8,780	\$9,504	\$9,785
Legal Adjudication	\$1,074	\$1,149	\$1,273	\$1,423	\$1,516	\$1,634	\$1,802	\$1,926	\$2,085	\$2,263	\$2,336
State and Federal Corrections	\$7,495	\$7,616	\$8,416	\$9,806	\$10,046	\$10,467	\$10,959	\$11,888	\$12,573	\$13,235	\$14,236
Local Corrections	\$1,333	\$1,390	\$1,587	\$1,746	\$1,679	\$1,730	\$2,108	\$2,269	\$2,439	\$2,628	\$2,694
Federal Spending to Reduce Supply	\$4,126	\$3,691	\$3,521	\$3,697	\$3,827	\$4,620	\$4,827	\$5,938	\$6,912	\$5,900	\$6,228
Private Costs											
Private Legal Defense	\$365	\$388	\$429	\$447	\$445	\$522	\$548	\$514	\$571	\$633	\$647
Property Damage for Victims of Crime	\$193	\$229	\$231	\$217	\$214	\$208	\$186	\$191	\$198	\$203	\$206
Social Welfare	\$337	\$355	\$367	\$368	\$364	\$283	\$249	\$234	\$225	\$241	\$281
Total	\$19,426	\$19,809	\$21,330	\$23,797	\$24,703	\$26,680	\$28,391	\$31,090	\$33,784	\$34,608	\$36,413

Source: Analysis by The Lewin Group, 2004.

E. Direct and Indirect Costs

The most basic manner in which cost of illness estimates are presented is to separate direct and indirect costs. Direct costs represent impacts where there is a requirement for use of goods or services or where property is destroyed. Direct costs include the value of goods and services that are paid for, such as health care, as well as services provided by government, as in the case of criminal justice services). Indirect costs represent the loss of potential productivity—time that would have been put toward legitimate employment or useful purposes in household activities if not for the substance abuse disorder.

In the cost estimates for drug abuse, direct costs constituted about \$52.3 billion and indirect costs \$128.6 billion. In fact, direct costs are the sum of health care costs plus the “other” costs, and indirect costs are simply the productivity losses (Table IV-5).

Table IV-5
Estimated Societal Cost of Drug Abuse, 1992-2002
Direct and Indirect Costs
(in billions of dollars)

Cost Category	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Direct Costs	\$30.1	\$31.6	\$33.4	\$35.7	\$36.2	\$38.4	\$40.8	\$44.1	\$47.3	\$49.2	\$52.2
Indirect Costs	\$77.4	\$79.3	\$83.9	\$89.2	\$93.4	\$95.5	\$99.3	\$107.3	\$113.4	\$120.0	\$128.6
Total	\$107.5	\$110.9	\$117.3	\$124.9	\$129.6	\$133.9	\$140.1	\$151.4	\$160.7	\$169.2	\$180.8

Source: Analysis by The Lewin Group, 2004.

F. Crime Related Costs

Many health care, productivity, and other costs listed in the three previous sections are crime-related costs. In this section, we aggregate all the crime-related costs attributed to drug abuse. The costs reported in this section are not in addition to the costs from the prior sections. Instead, this represents a “cross-cut” of all of the crime-related costs that were estimated and presented in earlier sections. These costs totaled \$107.8 billion in 2002, growing from \$61.8 billion in 1992.

Table IV-6 displays the estimates of crime related costs for 1992 through 2002. In 1992, crime related costs represented 57.5 percent of the total cost of drug abuse. In 2002 crime costs represented a slightly greater share, 59.6 percent of the overall cost of drug abuse. Overall the costs related to crime increased 5.7 percent annually over this ten-year period between 1992 and 2002. This rate of increase is somewhat higher than the increases in the adult population and prices for all services. Between 1992 and 2002, the adult population increased 1.1 percent annually and consumer prices increased 2.5 percent annually for a combined 3.6 percent annual increase.

Table IV-6
Estimated Societal Cost of Drug Abuse, 1992-2002
Crime Related Costs
(in millions of dollars)

Cost Component	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Health Care Costs											
Crime Victim Health Care Costs	\$92	\$142	\$148	\$139	\$136	\$132	\$127	\$118	\$111	\$109	\$110
Productivity Losses											
Homicide Victims	\$3,459	\$3,348	\$3,237	\$3,126	\$3,014	\$2,903	\$2,792	\$2,681	\$2,776	\$2,935	\$3,102
Productivity Loss of Victims of Crime	\$2,059	\$2,488	\$2,554	\$2,377	\$2,332	\$2,293	\$2,065	\$1,955	\$1,847	\$1,806	\$1,800
Incarceration	\$17,907	\$19,366	\$21,095	\$22,983	\$24,833	\$27,221	\$30,133	\$32,782	\$34,693	\$36,295	\$39,095
Crime Careers	\$19,198	\$19,755	\$19,603	\$20,172	\$23,758	\$26,608	\$24,627	\$24,960	\$25,688	\$26,538	\$27,576
Cost of Other Effects											
Criminal Justice System and Other Public Costs											
Police Protection	\$4,503	\$4,991	\$5,505	\$6,093	\$6,612	\$7,216	\$7,713	\$8,130	\$8,780	\$9,504	\$9,785
Legal Adjudication	\$1,074	\$1,149	\$1,273	\$1,423	\$1,516	\$1,634	\$1,802	\$1,926	\$2,085	\$2,263	\$2,336
State and Federal Corrections	\$7,495	\$7,616	\$8,416	\$9,806	\$10,046	\$10,467	\$10,959	\$11,888	\$12,573	\$13,235	\$14,236
Local Corrections	\$1,333	\$1,390	\$1,587	\$1,746	\$1,679	\$1,730	\$2,108	\$2,269	\$2,439	\$2,628	\$2,694
Federal Spending to Reduce Supply	\$4,126	\$3,691	\$3,521	\$3,697	\$3,827	\$4,620	\$4,827	\$5,938	\$6,912	\$5,900	\$6,228
Private Costs											
Private Legal Defense	\$365	\$388	\$429	\$447	\$445	\$522	\$548	\$514	\$571	\$633	\$647
Property Damage for Victims of Crime	\$193	\$229	\$231	\$217	\$214	\$208	\$186	\$191	\$198	\$203	\$206
Total	\$61,804	\$64,553	\$67,599	\$72,226	\$78,412	\$85,554	\$87,886	\$93,351	\$98,673	\$102,049	\$107,815

Source: Analysis by The Lewin Group, 2004.