

# **Costs of Sexual Violence in Minnesota**

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**Minnesota Department of Health**

**July 2007**



Sexual Violence Prevention Program  
Injury and Violence Prevention Unit  
Center for Health Promotion  
Health Promotion and Chronic Disease Division

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In 2005, more than 61,000 Minnesota residents were sexually assaulted. Four of every five people assaulted were female. On average, each person victimized was assaulted 1.26 times during the year. More than 77,000 sexual assaults occurred.

While there were 7,200 reports to police of “unwanted sexual intercourse,” 2,617 met the law enforcement definition of rape. This means that two-thirds of rapes routinely are not included in state and national rape statistics.

Sexual assault in Minnesota cost almost \$8 billion in 2005, or \$1,540 per resident. The largest cost was due to the pain, suffering, and quality of life losses of victims and their families, and related breakdowns in their lives and relationships. Medical care, mental health care, victim work loss, sexually transmitted diseases, unplanned pregnancy, suicidal acts, substance abuse, and victim services cost \$1.3 billion. Criminal justice and perpetrator treatment cost \$130.5 million.

These estimates are a fraction of the true costs. For example, they exclude (1) the costs of crimes committed by people whose experiences of victimization contributed to their criminal behavior; (2) costs of family and relationship problems that arise when someone perpetrates sexual violence; (3) revictimization during the disclosure and/or investigation process; (4) costs to those who are mistakenly suspected of committing sexual offenses; (5) costs of personal and community protection like alarms and security services; and (6) heightened fear and mistrust in neighborhoods, schools, workplaces, and other community settings.

In Fiscal Year (FY) 2006, the state government spent \$130.5 million on people known to have perpetrated sexual violence, while spending \$90.5 million on those who were assaulted. Funding for offender treatment and supervision recently was boosted, but victim services do not reach every county. Nearly \$823,000 of federal funds were spent changing societal norms to prevent sexual assault.

Sexual violence costs 3.3 times as much as alcohol-impaired driving in Minnesota. Policy recommendations aimed at preventing sexual violence BEFORE it occurs should be vigorously pursued, adopted, or sustained.

Sexual violence is a serious public health issue in Minnesota. The Minnesota Department of Health (MDH), funded by the Centers for Disease Control and Prevention, worked with the Pacific Institute for Research and Evaluation (PIRE) to develop this first ever report on the cost of sexual violence in Minnesota.

In this report, “sexual violence” and “sexual assault” are used interchangeably.

## **Definitions**

Sexual violence is the use of sexual actions or words that are unwanted by and/or harmful to another person. It can include assault, rape, harassment, voyeurism, and other noncontact abuse. In this report, sexual violence is broken into four parts. This section defines each part.

### ***Incidents Costed in this Report***

**Rape.** Rape is defined as completed or attempted sexual penetration without a person’s consent, or involving a minor or other person who is unable to consent or refuse. The estimated number of adult rape victims per year was computed from “yes” responses to (1) the 1999 or 2002 Minnesota Crime Survey question: “Did anyone force you or attempt to force you to have unwanted sexual intercourse?” or (2) the 2004 Community Survey of Health and Safety of Minnesota Women question: “Has anyone had or attempted to have sex with you against your will, or without your consent? Specifically, has anyone had vaginal, anal, or oral sex with you, or inserted their fingers or any type of object into your body against your will?”

**Child Sexual Assault.** Child sexual assault includes rape as well as other inappropriate sexual contact. It was

computed from “yes” responses to any of the 2004 Minnesota Student Survey questions: (1) “Were you the victim of date rape?” or (2) “Has any adult or older person outside the family ever touched you sexually or had you touch them sexually?” or (3) “Has any older/stronger member of your family touched you sexually or had you touch them sexually?” “Yes” responses by teens from the 1999 or 2002 Minnesota Crime Survey questions also were included.

**Other Sexual Assault, Aged 18 and Older.** The estimate reported comes from “yes” responses by people aged 18 and older to the 2002 Minnesota Crime Survey question: “Did anyone force you or attempt to force you to have unwanted sexual activity including touching, grabbing, kissing, fondling, or other unwanted sexual acts?” It excludes adults who answered “yes” to the Minnesota Crime Survey question about rapes and attempted rapes.

### ***Incidents Omitted from this Report***

**Other Forms of Sexual Violence.** Cost data were not available for the following categories of sexual violence when this report was prepared: voyeurism; intentional exposure of an individual to exhibitionism; exposure of a non-consenting individual to pornography; verbal or behavioral sexual harassment; threats of sexual violence to accomplish some other end; or taking photographs of a sexual nature of another person without his or her consent or knowledge. It is also likely that prostitution and other forms of commercial sexual exploitation are not captured by the data in this report.

Therefore, in this report, the costs calculated are primarily due to or associated with rape and sexual assault.

## People Who Were Sexually Assaulted in 2005

In 2005, an estimated 17,562 children were sexually assaulted in Minnesota (Table 1). Among adults, an estimated 21,779 were raped and 22,268 suffered other forms of sexual assault. Overall, 47,795 females and 13,814 males were sexually assaulted.

These estimates come from a combination of Minnesota surveys and one national survey that poll different age groups. The Minnesota Student Survey asked about lifetime experience with sexual assault rather than experience in the past year. We used the National Survey of Adolescents in the United States (1995) to infer annual sexual assault history from lifetime experience. We combined two Minnesota Crime Surveys and the 2004 Community Survey of Health and Safety of Minnesota Women to get enough cases to detail adult sexual assault.

Self-report yields an underestimate. Biases against reporting may exist by age group, gender, race/ethnicity, sexual

orientation, or a combination of characteristics. Some groups may be especially fearful or discouraged from disclosing incidents because of social messages that discount their victimization or because of their prior experience with government systems. Data were not available to support an analysis by race or sexual orientation.

According to 1999 and 2002 Minnesota Crime Survey respondents, 7,200 victims reported coerced “unwanted sexual intercourse” to the police annually. Police received that many reports and coded 2,617 as rapes. The rest were coded as sexual assault, possibly because they did not involve vaginal penetration. Thus, most reported rapes were not included in FBI Uniform Crime Reports and media coverage of rape rates.

The highest sexual assault rate was 5.36 per 100 Minnesota girls aged 13–17, meaning 1 in 19 girls was assaulted (100/5.36 sexual assaults per 100 population from Table 2). Overall, 1 in 70 Minnesota children was sexually assaulted, as was 1 in 89 Minnesota adults.

Table 1. Victims of Sexual Violence, Minnesota, 2005

	Sexual Assault including Rape Aged 0–17	Rape Aged 18 and Older	Other Sexual Assault Aged 18 and Older	Total
Female	14,020	15,542	18,233	47,795
Male	3,542	6,237	4,035	13,814
Total	17,562	21,779	22,268	61,609
% Female	80%	71%	82%	78%

Note: The number of perpetrators is unknown.

Table 2. Number of People Sexually Assaulted, including Rape, per 100 Population by Age Group and Gender, Minnesota, 2005

	Aged 0–12	Aged 13–17	Aged 18–44	Aged 45 and Older	Total
Female	1.06	5.36	2.96	0.46	1.85
Male	0.45	0.83	0.87	0.16	0.54
Total	0.74	3.03	1.90	0.32	1.20

Some people are raped more than once in a year. Parents, caregivers, household/family members, and others in positions of authority may abuse the same person multiple times. Other people are attacked by more than one perpetrator. Nationally, the average victim is raped 1.26 times during the year of a rape. Minnesota survey respondents report a higher rate of repeat incidents than the national average. Conservatively, this report uses the national rate.

It is estimated that at least 77,600 sexual assaults occurred in Minnesota in 2005 (Table 3). Children younger than age 18 bore 29% of the sexual assault burden. Females bore 78%.

Table 3. Rape and Other Sexual Assault Incidents, Minnesota, 2005

	Aged 0–17	Aged 18 and Older	Total
Female	17,600	42,600	60,200
Male	4,500	12,900	17,400
Total	22,100	55,500	77,600

## Costs of Sexual Assault

Many factors contribute to the high costs of sexual assault. Table 4 (pp. 8 and 9) separates costs of victimization from the costs of society’s response to victimization. Victimization costs pay for damaged and destroyed lives. These costs cover medical and mental health care, other victim services, property damage, work loss, unplanned pregnancy, sexually transmitted diseases, pain, suffering and lost quality of life, substance abuse, and suicidal behavior. Society’s response includes personal and public prevention efforts, fear of crime, treatment of sexual offenders, criminal justice costs, costs of risk assessment and community notification when offenders are released, and costs of falsely accusing

people who mistakenly were suspected of sexual assault.

## Government Spending on Sexual Violence

Minnesota government spent more on sexual violence offenders than on people who were assaulted in FY 2006. Forty-one percent was for people who were sexually assaulted (Figure 1). This estimate includes both federal and state spending.

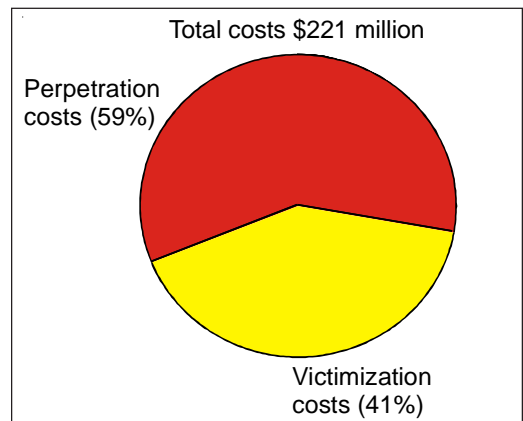


Figure 1. Minnesota Government Spending on Sexual Assault Perpetrators and Victims, FY 2006

In FY 2006, Minnesota spent \$130.5 million on sexual offenders (Table 5, p. 10). The largest expenses were for inpatient treatment and for confinement in prisons and jails. In FY 2005, 5,400 convicted criminal sexual conduct offenders were under supervision in Minnesota. Of the 585 offenders convicted of criminal sexual conduct offenses in Minnesota in 2004, 10% had a prior conviction for criminal sexual conduct.

At the same time, Minnesota spent \$90.5 million on people who were sexually assaulted (Table 6, p. 10). The bulk of that funding paid medical bills for sexually

*Table 4. Cost Categories and Who Pays the Costs*

<b>I. COSTS OF CRIME by Cost Element</b>	<b>WHO PAYS (before recovery through legal action)</b>
Medical Care and Mental Health Care for Victim/Family*	
(1) Costs not reimbursed by insurance	Victim/Victim's Family/Society
(2) Costs reimbursed by insurance	Society
(3) Administrative cost of insurance reimbursement	Society
Lost Work*	
(1) Lost wages for unpaid workdays	Victim
(2) Lost household work	Victim/Victim's Family
(3) Lost productivity	Employer/Society
(4) Temporary labor and training of replacements	Employer
Lost School Days	
(1) Foregone wages due to compromised education	Victim
(2) Foregone nonmonetary benefits of education	Victim
(3) Foregone social benefits due to compromised education	Society
Property Damage (e.g., torn clothing, stolen jewelry)*	
(1) Losses not reimbursed by insurance	Victim
(2) Losses reimbursed by insurance	Society
(3) Administrative cost of insurance reimbursement	Society
(4) Recovery by police	Government
Pain and Suffering, Lost Quality of Life*	Victim/Victim's Family
Sexually Transmitted Diseases*	Victim or Offender/Society
Unplanned Pregnancies*	Victim/Victim's Family/Society
Substance Abuse by Victims and their Families*	Victim/Victim's Family/Society
Suicide Acts*	Victim/Society
Victim Services/Out-of-Home Placement/Family Support Services*	
(1) Expenses charged to victim	Victim
(2) Expenses paid by agency	Government primarily
(3) Volunteer time	Society
Legal Costs Associated with Tort Claims	Victim or Victim's family
Crime Committed by People Whose Victimization Contributed to their Subsequent Criminal Behavior	Society

\* = Cost estimated in this report.



*Table 4. Cost Categories and Who Pays the Costs (cont.)*

<b>II. COST OF SOCIETY’S RESPONSE TO SEXUAL ASSAULT by Cost Element</b>	<b>WHO PAYS</b>
Criminal Justice System	
(1) Police and investigative costs*	Government
(2) Adjudication Costs (Prosecutors, Courts, Defense)*	Government/Offenders for Private Defense
(3) Incarceration costs including offender treatment*	Government
(4) Nonincarcerative sanctions (e.g., intensive supervision)*	Government
(5) Post-release costs (e.g., halfway houses)*	Government
(6) Victim loss of dignity and privacy associated with evidence collection and testimony	Victim
(7) Victim time	Victim
(8) Jury and witness time	Jury/Witness
Other Non-Criminal Programs	
(1) Hot-lines and public service announcements	Government/Society
(2) Community treatment programs*	Government
(3) Private therapy/counseling	Society/Offender
Risk Assessment and Community Notification Programs*	Society
Confined/Publicly Identified Offender Costs	
(1) Lost wages*	Offender/family
(2) Lost tax revenue*	Government
(3) Value of lost freedom	Offender
(4) Psychological cost to family/loss of consortium	Family of Offender
“Overdeterrence” Costs	
(1) Innocent individuals accused of offense	Innocent Individuals
(2) Restriction of legitimate activity	Innocent Individuals
(3) Actions taken by offenders to avoid detection (e.g., kill witnesses to reduce chance of being caught)	Society/Offender/Victim
“Justice” Costs	
(1) Constitutional protections to avoid false accusations	Government
(2) Cost of increasing detection rate to avoid differential punishment	Society
Victim Compensation and Reparation Program Administration	Government
Fear of Crime	Potential victims/Society
Precautionary Expenditures/Effort	
(1) Personal Protection (mace/whistles, martial arts training, alarm systems, gated communities)	Potential victims
(2) Defensible space (security guards, lighting)	Society
(3) Prevention (e.g., through education, mass media)*	Government

\* = Cost estimated in this report.

*Table 5. Government Spending on Criminal Justice Related to Sexual Assaults and on Sexual Offender Treatment, Minnesota, FY 2006*

Investigation/Adjudication	\$26,817,000
Confinement, Adult Facility	\$41,534,000
Confinement, Juvenile Facility	1,285,000
Probation	5,063,000
Intensive Supervision	1,016,000
Enhanced or Supported Release	Unavailable
Halfway House	104,000
Rental Assistance Post-Release	10,000
Freestanding Inpatient Treatment	51,000,000
Amortized Capital Costs, New Inpatient Facility	3,021,000
Registration, Community Notification and Risk Assessment *	670,000
<b>Total</b>	<b>\$130,520,000</b>

\* Excludes notification expenses of local police departments.

assaulted people on Medicaid. Funding to assist people who were sexually assaulted was \$1 million below the minimum needed to serve all counties in the state. Nearly \$823,000 of federal funds were spent changing societal norms to prevent sexual assault.

Government costs generally were compiled from state staff and record systems; therefore, this report omits city and county costs. Medicaid costs were estimated based on the percentage of U.S. residents with Medicaid coverage.

*Table 6. Government Spending on Sexual Violence Medical Treatment and Efforts to Assist Victims, Minnesota, FY 2006*

Medicare and Medicaid	\$82,113,000
Victim Services	3,353,000
Out-of-Home Placement	4,696,000
Financial Assistance	378,000
<b>Total</b>	<b>\$90,540,000</b>

## **Societal Cost of Sexual Assault**

Table 7 shows the estimated cost per sexual assault in Minnesota in 2005. For children, the cost averaged \$184,000. The cost of rape for adults was lower—an average of \$139,000. Adults had lower mental health care costs, lost less quality of life, and had less likelihood of turning to suicide or substance abuse than children following a sexual assault. Sexual assault of adults without physical injury or attempted penetration cost an estimated \$270 per incident.

Quality of life losses and related pain and suffering dominate the costs of sexual violence. They result from sexual assault and subsequent sexually transmitted diseases, pregnancy, suicide acts, and substance abuse. Overall, they account for 88% of the total costs.

Except for sanctioning and other government costs, most unit costs come from a national study of rape costs (Miller et al., 1996) adjusted to Minnesota prices in 2005. The pain and suffering costs are based on a national study of jury awards to rape victims for their nonmonetary losses. They come primarily from suits for inadequately lighting parking lots, leaving hotel halls unsecured, or serving intoxicated patrons. They exclude punitive damages. Sexually transmitted disease and pregnancy costs were modeled for this report using studies that tracked rape victims, Minnesota pregnancy cost data, and national unit cost data adjusted to Minnesota prices (Trussell, 1997; Jenny, 1990; Johnson & Harrison, 2005; Miller et al., 2006). The appendix and a supporting document on the World Wide Web (<http://www.pire.org/>

*Table 7. Cost per Sexual Assault Victimization in Minnesota, 2005 (in 2005 Dollars)*

	Rape and Child Sexual Assault Aged 0–17	Rape Aged 18 and Older	All Rape and Child Sexual Assault	Other Adult Sexual Assault Aged 18 and Older
Medical Care	\$ 700	\$ 700	\$ 700	—
Mental Health Care	9,400	1,400	5,000	—
Lost Work	3,900	2,800	3,300	—
Property Damage	100	100	100	—
Suffering and Lost Quality of Life	143,400	118,100	129,400	\$270
Sexually Transmitted Diseases	1,100	1,100	1,100	—
Pregnancy	300	400	300	—
Suicide Acts	16,500	8,200	11,900	—
Substance Abuse	4,600	2,300	3,300	—
Victim Services/Out of Home Placement	300	100	200	—
Criminal Justice:				
Investigation/Adjudication	600	500	500	—
Sanctioning	2,100	2,100	2,100	—
Earning Loss While Confined	1,300	1,300	1,300	—
<b>Total (Rounded)</b>	<b>\$184,000</b>	<b>\$139,000</b>	<b>\$159,000</b>	<b>\$270</b>

Note: Ignores problems that result for people who perpetrated and for family and friends of people who were victimized or perpetrated.

[mn\\_sv.asp](#)) add details on methods. Costs of substance abuse and suicidal acts were modeled for this report using data from twin studies about the risk elevation resulting from child sexual assault (Kendler et al., 2000; Nelson et al., 2002), the assumption that adult rapes raise risk by half as much as child sexual assaults, and national unit cost data adjusted to Minnesota prices (Miller & Hendrie, 2006; Fellows et al., 2002; Corso et al., 2007).

Sexual violence in Minnesota in 2005 resulted in an estimated 12,700 sexually transmitted diseases (STDs). It caused an estimated 1,500 pregnancies that resulted in almost 750 abortions (Table 8, p. 12). Per case, the most expensive of the sexually transmitted diseases is HIV/AIDS. The second most costly is pelvic inflammatory disease (a leading cause of infertility),

which strikes women who are not treated promptly for some STDs. Pregnancy also is costly. The pregnancy costs shown include prenatal care costs.

Sexual violence in Minnesota in 2005 is expected to cause 8,400 of those assaulted to start to abuse alcohol, tobacco, or other drugs and 1,800 to kill themselves or require medical treatment for self-inflicted injuries (Table 9, p. 13).

Sexual violence in Minnesota cost almost \$8 billion in 2005 (Table 10, p. 13), or \$1,540 per resident. Half of the cost resulted from child sexual assault. Health care accounted for 4% of the costs; lost work for 6%; victim services and criminal justice for 2%; and pain, suffering, and lost quality of life for 88%. Excluding intangibles and lost work, the out-of-pocket costs exceeded \$475 million.

## Costs of Sexual Violence in Minnesota

Table 8. Sexually Transmitted Diseases and Pregnancies Resulting from Sexual Assault in Minnesota, 2005, and the Cost per Case

	Cases	Medical	Work Loss	Quality of Life Loss	Total Cost per Case
Sexually Transmitted Disease	12,720	\$700	\$1,200	\$3,500	\$5,400
Chlamydia	2,660	300	300	1,000	1,600
Gonorrhea	2,260	300	300	1,000	1,600
Herpes Simplex	310	700	300	1,000	2,000
HIV	15	312,400	704,400	2,016,600	3,033,400
Human Papillomavirus	730	1,000	300	1,000	2,300
Pelvic Inflammatory Disease	60	4,600	300	1,000	5,900
Syphilis	30	700	300	1,000	2,000
Trichomoniasis	6,650	30	20	60	110
Pregnancy	1,480	\$5,200	\$5,700	\$600	\$11,500
Abortion	740	500	300	1,000	1,800
Live Birth	560	12,900	14,400	Unknown	27,300
Miscarriage	180	500	300	1,000	1,800

The \$8 billion estimate is a fraction of the true costs. For example, it excludes (1) the costs of crimes committed by people whose experiences of victimization contributed to their criminal behavior; (2) costs of family and relationship problems that arise when someone is victimized

or perpetrates sexual violence; (3) revictimization during the disclosure and/or investigation process; (4) costs to those who are mistakenly suspected of committing sexual offenses; (5) costs of personal and community protection like alarms and security services; and (6) heightened fear

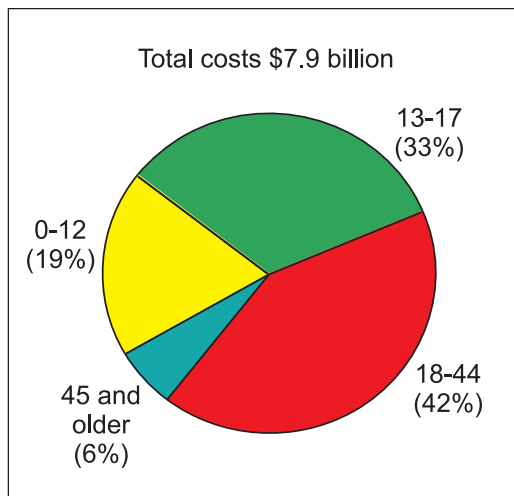


Figure 2. Costs of Sexual Assault by Age Group, Minnesota, 2005

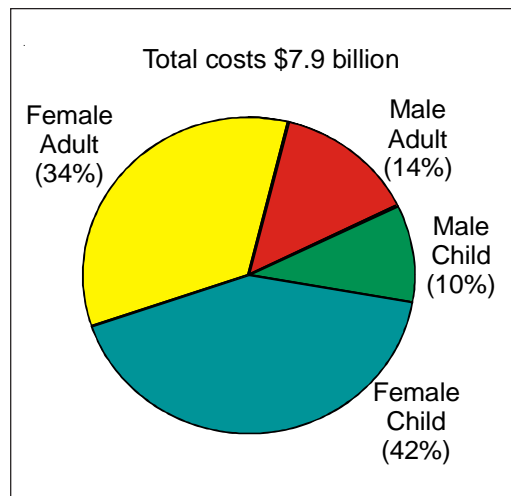


Figure 3. Costs of Sexual Assault by Age Group and Gender, Minnesota, 2005

*Table 9. Suicide Acts and Substance Abuse Resulting from Sexual Assault in Minnesota, 2005, and the Cost per Case*

	Cases	Medical	Other Resource Cost	Work Loss	Quality of Life Loss	Total
Suicide Act	1,770	\$5,900	-	\$117,200	\$210,700	\$333,800
Substance Abuse						
Alcohol Abuse and Dependence	2,240	3,200	2,000	8,500	21,000	34,700
Smoking	4,400	1,500	-	1,700	11,000	14,200
Illicit Drug Use	1,770	1,000	1,800	4,800	5,400	13,000

*Table 10. Costs of Sexual Assault and Rape, Minnesota, 2005*

	Aged 0–17	Aged 18 and Older	Total
Medical Care	\$15,645,000	\$19,511,000	\$35,156,000
Mental Health Care	\$206,898,000	\$38,693,000	\$245,591,000
Lost Work (including Rape-Murder)	\$86,233,000	\$76,562,000	\$162,795,000
Property Damage	\$2,191,000	\$3,869,000	\$6,060,000
Suffering & Lost Quality of Life	\$3,173,615,000	\$3,247,779,000	\$6,421,394,000
STDs	\$23,367,000	\$31,448,000	\$54,815,000
Pregnancy	\$7,236,000	\$9,906,000	\$17,142,000
Suicide Acts	\$364,848,000	\$226,338,000	\$591,186,000
Substance Abuse	\$100,882,000	\$62,512,000	\$163,394,000
Victim Services/Out of Home Placement	\$5,908,000	\$2,140,000	\$8,048,000
Investigation/Adjudication	\$12,436,000	\$14,270,000	\$26,706,000
Sanctioning/Treatment	\$46,292,000	\$57,408,000	\$103,700,000
Earning Loss While Confined	\$29,541,000	\$36,634,000	\$66,175,000
Primary Prevention			823,000
<b>TOTAL</b>	<b>\$4,075,092,000</b>	<b>\$3,827,070,000</b>	<b>\$7,902,985,000</b>

Note: Quality of Life, Ages 18 and Over, includes costs of other adult sexual assault.

and mistrust in neighborhoods, schools, workplaces, and other community settings.

Young people are especially likely to become victims of sexual assault. More than half of the costs (\$4.1 billion) resulted from sexual assaults on children aged 0–17 (Figure 2). Only 6% of the costs involved victims older than age 45.

Assaults of females accounted for 76% of the sexual assault costs (Figure 3). Female victimizations were 80% of the costs for child sexual assault and 71% of adult sexual assault costs.

Sexual violence costs 3.3 times as much as alcohol-impaired driving in Minnesota (Figure 4, p. 14).

## **Policy Implications**

Sexual violence is a serious, costly problem in Minnesota.

During 2007, the Minnesota Department of Health is coordinating the development of a strategic plan for the primary prevention of sexual violence in Minnesota. This action plan should be completed by December 2007.

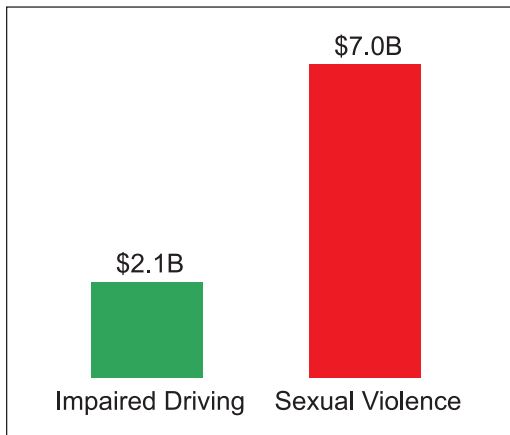


Figure 4. Sexual violence costs 3.3 times as much as alcohol-impaired driving in Minnesota. (Both columns exclude costs associated with suicide, substance abuse, adjudication, sanctioning and prevention that are unavailable for impaired driving.)

The state has invested in incarceration, treatment, and supervision of sexual offenders, although unmet needs remain. Victim services do not reach all Minnesota counties.

Over the past 20 years, as sexual violence captured public attention, Minnesota elected officials periodically commissioned groups to study and recommend the best ways to address and prevent sexual violence.

In 1989, the Minnesota Attorney General’s Task Force on the Prevention of Sexual Violence Against Women made recommendations about controlling sex offenders, educating about and preventing sexual violence, and serving victims of sexual violence.

In 1999, the Katie Poirer Abduction Task Force proposed five steps to prevent sexual violence, ranging from strengthened

criminal justice responses to a comprehensive state system of family education and support. It also recommended that a 24-member State Prevention Council create a unified state prevention plan to develop, improve, and coordinate local and state primary prevention efforts.

These recommendations and other reports prompted changes in systems that respond to crime. However, policy recommendations aimed at preventing sexual violence BEFORE it occurs should be vigorously pursued, adopted, and sustained.

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# Appendix

## Methodology Summary

A more detailed methodology for this report, developed by the Pacific Institute for Research and Evaluation, can be found at [http://www.pire.org/mn\\_sv.asp](http://www.pire.org/mn_sv.asp).

### *Methods used for estimating numbers of people who were sexually assaulted*

**Rates and Incidents.** The number of people sexually assaulted, including rape, per 100 population, by age and gender (Table 2), was derived using the following formula: (number of victims by age and gender divided by Minnesota population of that age and gender) \* 100. Nationally, the average victim is raped 1.26 times during the year, according to the National Crime Victimization Survey. This multiplier was used to estimate total number of incidents in Table 3.

**Adult Rape Victims.** Three surveys were used: two Minnesota Crime Surveys and the 2004 Community Survey of Health. To estimate the number of Minnesota adults raped or sexually assaulted in 2005 (Table 1), the rape rate per person was computed across all responses in the three surveys, and average rates across the surveys were multiplied by gender and age group for the state's population.

**Child Sexual Assault.** This includes rape as well as other inappropriate sexual contact and is computed from the 2004 Minnesota Student Survey and the 1999 and 2002 Minnesota Crime Survey. Annual assaults were derived from the lifetime

assaults which were reported in the Minnesota Student Survey. Multi-year victimization was also taken into account. The annual percentages, derived from all three surveys, were multiplied by the corresponding 2005 population estimates by gender and age group. The resulting estimates were summed across categories of sexual assault (Table 1).

**Other Sexual Assault, Aged 18 and Older.** The estimates for those reporting "yes" to the question on page 5 of the report were multiplied by the 2005 Minnesota resident population by gender and age group.

### *Methods used for estimating costs of sexual assault in Minnesota*

When possible, cost estimates were collected from Minnesota state agencies. When Minnesota data were not readily available, national and small area studies were used and adjusted to Minnesota prices. Most costs not directly available from Minnesota sources came from a national study of rape costs (Miller et al., 1996). The U.S. costs were then adjusted to Minnesota 2005 prices.

### *Table 5. Government Spending on Criminal Justice Related to Sexual Assaults and on Sexual Offender Treatment*

**Investigation Costs.** Based on a survey of police departments with time-monitoring systems. The findings from the



study were applied to Minnesota.

**Adjudication Costs.** National and small area data on likely progress of the perpetrator through the criminal justice system, and the costs at each stage, were applied to Minnesota data on the probability of a suspect being apprehended, charged, and prosecuted.

**Confinement Costs.** Number of sex offenders in Minnesota adult and juvenile prison facilities, times the cost per day to house an offender, times 365 days per year. Source: Minnesota Department of Corrections (MN DOC).

**Probation.** Number of people with a criminal sexual conduct offense on probation in Minnesota, times the cost per day for probation, times 365 days. Source: MN DOC.

**Intensive Supervision.** Number of people with a criminal sexual conduct offense on probation who were on Global Positioning System (GPS) monitoring systems, times per diem cost for the system, times 365 days. Source: MN DOC.

**Halfway House.** Number of Level 3 offenders in halfway houses, times total days at the house, times cost per day. Source: MN DOC.

**Rental Assistance.** Number of released people with a criminal sexual conduct offense who received 30-day rental assistance, times per diem cost, times 30 days. Source: MN DOC.

**Freestanding Inpatient Treatment.** One-half of the 2006-2007 biennial budget of the Minnesota Sex Offender Program.

**Capital Costs of New Inpatient Facility.** Capital costs for investment in sex

offender treatment facilities in 2006, amortized over time. For this study, all other prison and treatment facilities costs were not included. Source: Minnesota Department of Human Services (MN DHS).

**Registration, Community Notification and Risk Assessment.** Total expenditures made from the sex offender registration account in 2005. Data source: Bureau of Criminal Apprehension

***Table 6. Government Spending on Sexual Violence Medical Treatment and Efforts to Assist Victims***

**Medicare and Medicaid Costs.** Estimates for sexual violence victims were determined by multiplying total medical costs times the percentage of U.S. residents covered by Medicare and/or Medicaid.

**Victim Services Costs.** Funding for sexual assault advocacy programs for fiscal year 2006. Source: Minnesota Department of Public Safety (MN DPS).

**Out-of-Home Placement.** Costs for out of home placement for episodes that are sexual abuse related. Source: MN DHS.

**Financial Assistance.** Sexual assault related reparations payments made directly to victims. Source: MN DPS.

***Table 7. Cost per Sexual Assault Victimization and***

***Table 10. Total Cost of Sexual Assault***

Total costs (**Table 10**) are the product of unit costs from **Table 7**, times incidence from **Table 1**, times 1.26 incidents per case, the national estimate of the number of times an average victim is raped during the

year. This multiplication is carried out separately for each of the three major categories of sexual violence that were costed. All computations were carried out before rounding.

*For example, to get medical costs for 0 - 17 year olds, we multiplied: \$707 (the value in Table 7 before it was rounded to the nearest \$100) \* 17,562 (from Table 1 total for ages 0 - 17) \* 1.26 = \$15,644,581 (the rounded number is listed in Table 10).*

**Medical Costs.** The 2000 - 2004 National Crime Victimization Survey data were pooled and tabulated to estimate the distribution of place of medical treatment for rape victims. Medical costs for physical assault, with or without rape, by place of medical treatment came from a recent national study (Corso et al., 2007). Using this information, the following formula was applied: (a) medical cost per physical assault by place of treatment and gender, times (b) ratio of medical costs per sexual assault to medical costs per physical assault by place of treatment, times (c) an adjuster of 1.054 for the costs of medical claims processing. An emergency transport cost of \$14 per case (times the claims processing expense) was added.

**Mental Health Care.** Estimated mental health care utilization and costs based on a national provider survey, applied to Minnesota.

**Lost Work.** Estimated from the National Crime Victimization Survey data and applied to Minnesota.

**Property Damage.** Estimated from the National Crime Victimization Survey data, and applied to Minnesota.

**Quality of Life.** Quality of life losses and related pain and suffering dominate the costs of sexual violence. They result from sexual assault and subsequent sexually transmitted diseases, pregnancy, suicide acts, and substance abuse which are listed below.

**Pain and Suffering.** Pain, suffering and lost quality of life costs are based on nationwide jury awards to rape victims for their non-monetary losses, not including punitive damages (Miller, Cohen, and Weirsema, 1996).

**Sexually Transmitted Disease (STD)/Pregnancy.** These costs were modeled for this report using STD incidence and pregnancy studies that tracked rape victims, Minnesota pregnancy cost data, and national STD unit cost data adjusted to Minnesota prices. Incidence of these events was computed from national and rape-specific small-area studies of the probability of being exposed, times the probability of transmission if exposed. In computing overall transmission, the formula recognized that no transmission would occur if both the perpetrator and victim already had the same STD. Cost for the different STDs came from national studies focused on the different STDs.

A national sexual victimization survey found that rape of a female ages 12-45 yielded a 5 percent risk of pregnancy and that 50 percent of these pregnancies ended in abortion. We applied this pregnancy risk through age 50, which is the average age of menopause.

Medical costs for pregnancy were computed and pooled from national survey data using three factors: (1) costs associ-

ated with the probability that a pregnancy resulting from rape would end in abortion rather than a miscarriage or live birth; (2) Minnesota medical costs per live birth; and (3) Medicaid and private health insurance data on medical costs for abortion, miscarriage, and pre-natal care.

Work loss and quality of life costs for STDs and for pregnancies not brought to term came from a national study whose findings were then applied to Minnesota.

**Substance Abuse/Suicidal Acts.**

Incidence of substance abuse and suicidal acts were modeled using data from studies of twins. Twin studies often allow for study of unique events or occurrences while controlling for environment, age and other socioeconomic variables. These studies examined responses in which one twin experienced a sexual assault as a child and

the other did not. They computed the elevation in risk of substance abuse or suicidal acts resulting from child sexual assault. The analysis assumed that child sexual assaults raise risk by twice as much as do adult rapes. Published national unit cost data were adjusted to Minnesota prices.

**Earnings Loss While Confined.** This was estimated by multiplying state data on the number of days in confinement during FY 2006, times the mean daily wage per Minnesota adult, plus average fringe benefits computed as a percentage of wages.

**Victim Services/Out-of-Home Placement, Investigation/Adjudication, and Sanctioning Costs.** All were explained under “Data Sources for Table 5.”

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