



**THE COST AND
CONSEQUENCES**
OF SEXUAL VIOLENCE
IN CALIFORNIA

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The tangible costs of sexual violence in California, including medical and mental health care, prevention, investigation, sanctioning, treatment, and victim services, totaled over **\$9 billion** in 2012.

When intangible costs, such as lost quality of life and lost work productivity, are included, the total costs increase to

\$140 BILLION.

EXECUTIVE SUMMARY

This report is intended to examine the overall impact and consequences of sexual violence on California's economy, local communities, and the health and general well-being of its population. It provides the first systematic estimate of the cost of sexual violence in California, using well established economic methodologies and based on available data on the occurrence of sexual violence in 2011-2013. Based on these analyses, the conservative estimate is that the tangible costs of sexual violence in California, including medical and mental health care, prevention, investigation, sanctioning, treatment, and victim services, totaled over \$9 billion in 2012. When intangible costs, such as lost quality of life and lost work productivity, are included, the total costs increase to \$140 billion. This translates to an average of \$3,700 for each resident of California per year. At least \$2.9 billion, or two percent of total costs, come from tangible local and state government spending and federal funding allocated to California. Importantly, almost \$117 billion of the estimated costs come from the work and quality of life losses experienced by victims and their families.

“Prevention programs would lead to substantial cost savings: every prevented rape of an adult could save up to \$163,800, and every prevented rape or sexual assault of a child could save up to \$227,700.”

Research has shown that programs that address the root causes of sexual violence, by modifying risk factors and/or enhancing protective factors, can prevent sexual violence perpetration (DeGue et al., 2014). Prevention programs would lead to substantial cost savings: every prevented rape of an adult could save up to \$163,800, and every prevented rape or sexual assault of a child could save up to \$227,700. Preventing future incidents of sexual violence, while maintaining and improving services, would reduce costs to victims, governments and society.

INTRODUCTION

Sexual violence is a serious and costly problem in the U.S., with substantial impacts on victims' and their families and exorbitant costs to state and local governments (Waters et al., 2004). Sexual violence is defined in this report as the attempt or completion of a sexual act undertaken without the victim's freely given consent, which includes rape and other sexual assault. In 2012, an estimated 948,000 California residents were sexually assaulted. Some victims were assaulted repeatedly during the year, with the total incidents of rape and sexual assault exceeding 1.1 million. Two out of every three victims who experienced rape or other sexual assault in California were female.

In 2012, an estimated

**948,000
CALIFORNIA
RESIDENTS**

were sexually assaulted.

“Consequences of sexual violence can include physical injury and other medical problems, poor mental health outcomes, lost work productivity, decreased quality of life, and sometimes death.”

Consequences of sexual violence can include physical injury and other medical problems, poor mental health outcomes, lost work productivity, decreased quality of life, and sometimes death. Children who are victims of sexual violence are especially vulnerable to both short- and long-term negative behavioral, mental, and emotional consequences, and are significantly more likely to be re-victimized in the future. In addition to physical injury or death, sexual violence can cause a myriad of short- and long-term health consequences for victims, including pregnancy, sexually transmitted infections, chronic pain, gynecological and pregnancy complications, and disability that can limit employment. It can also lead to anxiety, post-traumatic stress disorder, depression, substance abuse, and attempted or completed suicide, among other issues (Centers for Disease Control and Prevention [CDC], 2014a).

“Children who are victims of sexual violence [are] significantly more likely to be re-victimized in the future.”

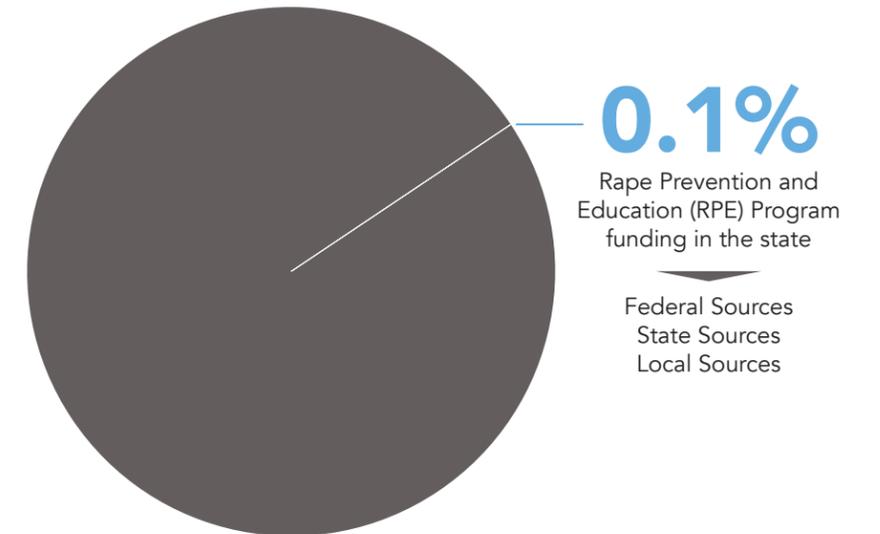
¹ The term “survivor” is also sometimes used instead of the term “victim” to describe someone who has experienced sexual violence. The authors of this report acknowledge that “victim” may not reflect how every individual views their experience of sexual violence. However, for the purposes of maintaining consistency, the term “victim” will be used throughout this report.

Comprehensive prevention programs, addressing the root causes of sexual violence and preventing sexual violence from initially happening, can

reduce these costs

of health care and criminal justice responses, as well as the substantially greater long-term costs of reduced quality of life and reduced productivity.

Prevention Funding in California TOTAL GOVERNMENT SPENDING



Comprehensive prevention programs, addressing the root causes of sexual violence and preventing sexual violence from initially happening, can reduce these costs of health care and criminal justice responses, as well as the substantially greater long-term costs of reduced quality of life and reduced productivity. Prevention funding in California is provided through the federally-funded Rape Prevention and Education (RPE) Program, administered by the California Department of Public Health (CDPH). RPE funding in the state constitutes 0.1 percent of the total government spending—including state, federal, and local sources—related to the consequences of sexual violence. California’s RPE funding was reduced by over 20 percent in 2014. Given this limited and unstable funding, it is challenging for service providers to sustain comprehensive prevention efforts which would decrease both the public health burden, and subsequent financial burden, of sexual violence. To demonstrate the financial burden, this report estimates the cost of sexual violence in California.

METHODS

In order to determine the cost of sexual violence in California in 2012, it is necessary to estimate how many people were victimized in each of the three included categories of sexual violence, as well as the rates and incidence of each category of violence. The report analyzed the best available data and acknowledges the data limitations in the Appendix (starting on p. 34). Estimates of the occurrence of sexual violence were based on California self-report surveys and reports when available, and extrapolated from national and local surveys and the best available related surveys from other states when no other data were available. Similarly, cost estimates were requested from California state agencies or based on publicly-available data sources when possible. When California cost data were not readily available, costs were extrapolated from national and small area studies based on the estimates of California victims, incidents, and rates, and adjusted to California prices. All costs in this report are in 2012 dollars.

For a detailed list of data sources and descriptions of how counts of victims, incidents, rates, and costs of rape and other sexual assault were calculated, see the Appendix (starting on p.34).

DEFINITIONS

Incidents Included in this Report

SEXUAL VIOLENCE is defined in this report as attempted or completed sexual activity, with physical contact, undertaken without the victim's freely given consent. It is used as an umbrella term for forcible and non-forcible rape, and other sexual assault. This report divides sexual violence into three categories, which are defined below. The definitions of rape age 18 and over, sexual assault age 18 and over, and child rape and sexual assault are based on definitions used in surveys that have assessed the annual rate of sexual violence in California. For more details on the survey questions that informed the definitions, see the Appendix (starting on p. 34).

18+

Rape, Age 18 and Over

Rape of an adult in the past year is defined in this report as unwanted completed or attempted forced vaginal, anal, or oral penetration or unwanted penetration completed when the respondent was drunk, high, drugged, or passed out and unable to consent. "Forced" includes use of physical force or threats to physically harm the respondent.

Other Sexual Assault, Age 18 and Over

Sexual assault is defined in this report as incidents involving unwanted sexual touching without penetration.

0-17

Child Rape and Other Sexual Assault

Child rape and other sexual assault are grouped together in this report in order to increase the consistency of our definition with legal definitions. Child rape and other sexual assault are defined as any attempted or completed forced vaginal, anal, or oral penetration or unwanted sexual touching of a person under age 18. Further, because of the large costs incurred by Child Protective Services (CPS), the report differentiates "child sexual abuse" from child rape and other sexual assault. Child sexual abuse is defined in this report as the subset of child rape and other sexual assault that CPS responds to, wherein the child's parent or caretaker's action or lack of action results in the rape or other sexual assault of the child (CAPTA Reauthorization Act of 2010, 2010).

Incidents Omitted from this Report

Other Sexual Violence Victimization

Due to a lack of data, this report excludes child sexual incidents that involved consensual sex with someone at least five years older than the child (which is legally considered rape). It does not include sexual violence that did not involve touching, threats of sexual violence to accomplish some other end, flashing, voyeurism, or taking photographs of a sexual nature of another person without his or her consent or knowledge. Commercial sexual exploitation was also excluded.



**OCCURRENCE OF
SEXUAL VIOLENCE IN
CALIFORNIA IN 2012**

OCCURRENCE OF SEXUAL VIOLENCE IN CALIFORNIA IN 2012

Number of Victims of Rape and Other Sexual Assault in 2012

In 2012, an estimated 310,435 children were raped or otherwise sexually assaulted in California (Table 1). Among adults, an estimated 223,854 reported they were raped, and an additional 413,785 reported suffering other sexual assault. Overall, an estimated 948,000 people (621,963 females and 326,111 males) were victimized.

Table 1. Estimated Number of Victims of Rape and Other Sexual Assault, California, 2012

VICTIMS		Child Rape & Other Sexual Assault Age 0-17 (%)	Rape Age 18 & Over (%)	Other Sexual Assault Age 18 & Over (%)	TOTAL (%)
	Female		200,812 (65%)	171,736 (77%)	249,415 (60%)
Male		109,623 (35%)	52,118 (33%)	164,370 (40%)	326,111 (34%)
TOTAL		310,435	223,854	413,785	948,074

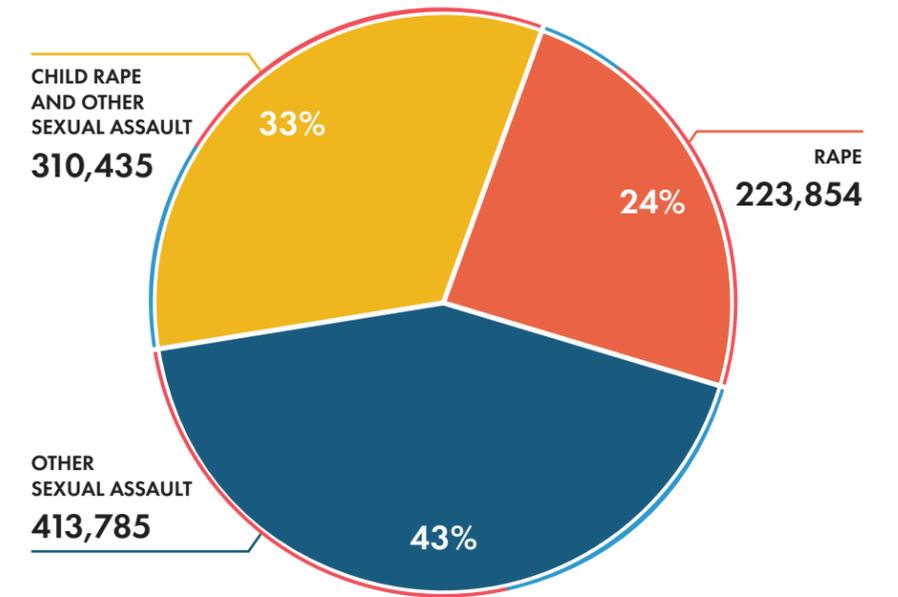
Sources and methods: See Appendix p. 34

“These figures highlight the extensive underreporting of sexual violence in California crime reports...”

These figures are likely lower than the true number of victims of rape and other sexual assault. Most of these estimates are based on self-report, which tend to yield an underestimate for the non-institutionalized population (National Research Council, 2014). 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 sexual assaults in surveys, for example, because of social messages that discount their victimization or because they were sexually assaulted by an authority figure who pressured them to conceal the assault. The bias in self-reports by incarcerated people is less clear. Moreover, the estimates in Table 1 omit rape and other sexual assault of high-risk people who were not surveyed because they had dropped out of school or resided in nursing homes or psychiatric hospitals.

Self-report data from representative surveys are substantially more valid than crime reports for estimating incidence. Rape of a female is one of the seven crimes for which the California Department of Justice collects statistics on a yearly basis. In 2012, an estimated 203,274 females who were not imprisoned were raped (171,285 women and 31,989 children). However, only 7,828 of these victims reported a crime to police that the police coded as a rape (State of California Department of Justice, 2013). These figures highlight the extensive underreporting of sexual violence in California crime reports and demonstrate that self-report survey data are critically important in understanding the scope of the problem.

Estimated Number of Victims of Rape and Other Sexual Assault in 2012



66%
621,963 FEMALES

34%
326,111 MALES

Rate of Rape or Other Sexual Assault Victimization in 2012

By gender and age, the highest rate of rape and other sexual assault in this analysis was 7.6 per 100 California females ages 13-17, meaning 1 in 13 girls in this age group was assaulted in 2012 (Table 2). In the same period, 1 in 26 California adults age 18-44 experienced rape or other sexual assault.

“The highest rate of rape and other sexual assault in this analysis [was] California females ages 13-17...”

Table 2. Estimated Rates of People Raped or Otherwise Sexually Assaulted, per 100 Population by Age Group and Gender, California, 2012

RATE PER 100		Age 0-12	Age 13-17	Age 18-44	Age 45 & Over	TOTAL
	Female		2.6	7.6	5.3	0.8
Male		1.5	5.2	2.4	0.4	1.7
TOTAL		2.1	6.6	3.8	0.6	2.5

Sources and methods: See Appendix p. 36

Number of Incidents of Rape and Other Sexual Assault in 2012

Some people are raped or otherwise sexually assaulted more than once in a year, by one perpetrator repeatedly or by multiple perpetrators. In addition to the number of people who are victims of rape and other sexual assault, it is critical to know how many incidents of rape or other sexual assault occurred in order to estimate costs. Based on national data, this report estimates that the 948,000 people who were victimized experienced a total of over 1.1 million incidents of rape or other sexual assault in 2012 (Table 3). About two out of three incidents of sexual violence were against females, and over one out of three was against children.

“...people who were victimized experienced a total of over 1.1 million incidents of rape or other sexual assault in 2012.”

Table 3. Estimated Number of Incidents of Rape and Other Sexual Assault, California, 2012

INCIDENTS		Child Rape & Other Sexual Assault, Age 0-17	Rape, Age 18 & Over	Other Sexual Assault, Age 18 & Over	TOTAL
	Female		253,000	218,000	249,000
Male		140,000	88,000	164,000	392,000
TOTAL		393,000	306,000	413,000	1,112,000

Sources and methods: See Appendix p. 36



**COSTS OF
SEXUAL VIOLENCE
IN CALIFORNIA**

COSTS OF SEXUAL VIOLENCE IN CALIFORNIA

This report divides the costs into two categories: tangible and intangible costs. Tangible costs include those that were spent to prevent and respond to sexual violence, such as costs related to medical and mental health care, property damage, victim services, adjudication, sanctioning, etc. Intangible costs estimate the value of losses due to sexual violence throughout the lifespan, such as lost work productivity, earning loss while confined, and lost quality of life. Detailed methods for calculating each of these costs are presented in the Appendix (starting on p. 34).

TANGIBLE COSTS: \$9,124,336,000



+

INTANGIBLE COSTS: \$130,821,480,000



TOTAL COSTS: **\$139,945,816,000**

Total Costs

The tangible costs of sexual violence in California are estimated at over \$9 billion in 2012. When including the intangible costs of sexual violence incurred when individuals experience sexual violence, and in subsequent years of their lives, this figure increases to \$140 billion (Table 4). Lost quality of life accounted for 81 percent of total costs. Medical and mental health care accounted for 5.2 percent of total costs. Investigation, adjudication, sanctioning, and treatment for offenders accounted for 1.1 percent of costs, while victim services, out-of-home placement, and prevention accounted for less than 0.1 percent of costs. See the Appendix (starting on p. 37) for details on how data in Tables 4-9 were calculated and on how lost quality of life is defined.

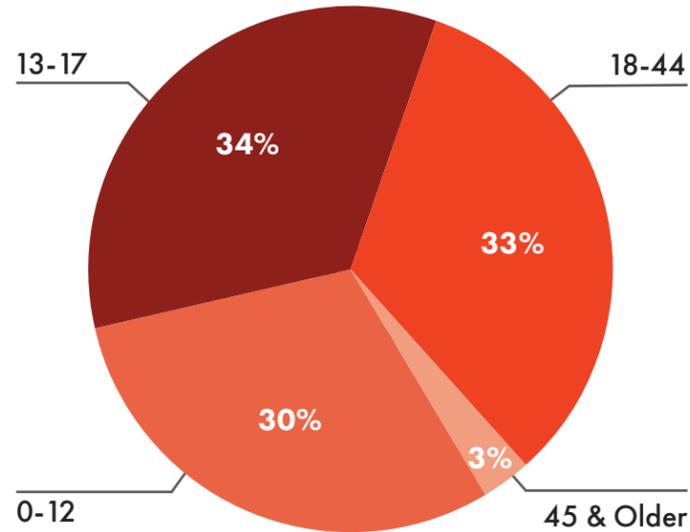
Table 4. Estimated Total Cost of Rape and Other Sexual Assault, California, 2012 (in 2012 Dollars)

COST CATEGORY	AGE 0-17 ^a	AGE 18 & OVER ^b	TOTAL
TANGIBLE COSTS	\$7,159,775,000	\$1,964,561,000	\$9,124,336,000
Medical Care - Total	\$1,021,312,000	\$675,660,000	\$1,696,972,000
Direct Medical Costs	\$528,123,000	\$410,774,000	\$938,897,000
Sexually Transmitted Infections	\$67,742,000	\$59,835,000	\$127,577,000
Pregnancy	\$10,670,000	\$55,505,000	\$66,175,000
Suicide Acts	\$126,385,000	\$45,564,000	\$171,949,000
Substance Abuse ^c	\$288,392,000	\$103,982,000	\$392,374,000
Mental Health Care	\$5,019,696,000	\$620,217,000	\$5,639,913,000
Property Damage	\$78,831,000	\$67,076,000	\$145,907,000
Victim Services/Out-of-Home Placement/Prevention	\$70,022,000	\$36,228,000	\$106,250,000
Investigation/Adjudication	\$367,304,000	\$130,839,000	\$498,143,000
Sanctioning/Treatment	\$602,610,000	\$434,541,000	\$1,037,151,000
INTANGIBLE COSTS ACROSS THE LIFESPAN	\$82,492,217,000	\$48,130,937,000	\$130,821,480,000
Earning Loss While Confined (<i>Perpetrator</i>)	\$289,851,000	\$242,385,000	\$532,236,000
Lost Work Productivity (<i>Victim</i>)	\$2,295,148,000	\$1,215,767,000	\$3,510,915,000
Lost Quality of Life (<i>Victim</i>)	\$70,100,330,000	\$42,888,762,000	\$113,187,418,000 ^d
Other Intangible Costs (<i>Victim</i>)			
Sexually Transmitted Infections	\$393,926,000	\$347,950,000	\$741,876,000
Pregnancy	\$8,764,000	\$45,593,000	\$54,357,000
Suicide Acts	\$7,607,931,000	\$2,742,821,000	\$10,350,752,000
Substance Abuse	\$1,796,267,000	\$647,659,000	\$2,443,926,000
TOTAL	\$89,651,992,000	\$50,095,498,000	\$139,945,816,000

a. Includes costs for both rape and other sexual assault of children age 0-17
 b. Includes costs for rape of adults age 18 and over
 c. Includes \$138,460,000 for resources for substance abuse treatment other than medical care
 d. Total includes \$198,326,000 in lost quality of life due to adult sexual assault other than rape, which is not accounted for in the cost estimates for age category of age 18 and over

Sources and methods: See Appendix p. 37

Figure 1.
Percentage of Costs of Rape and Other Sexual Assault,
by Age Group

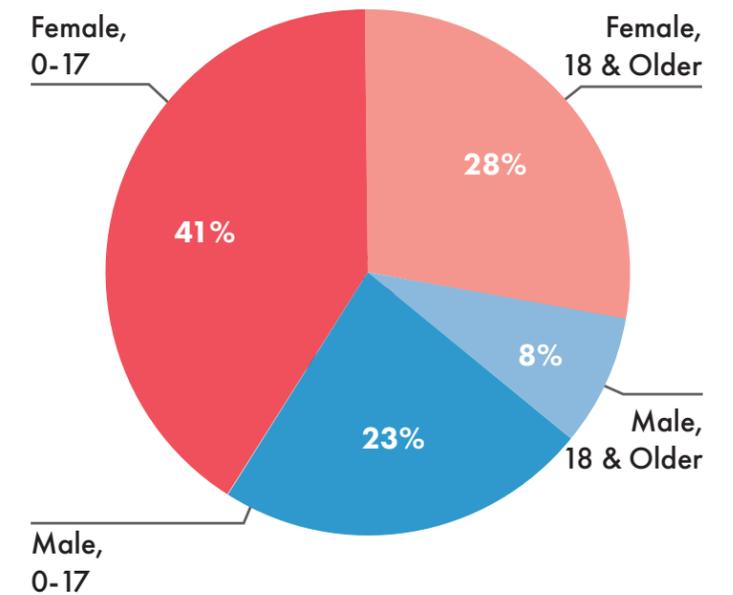


“Young people are especially likely to become victims of rape and other sexual assault, and almost two-thirds of the costs... resulted from rapes and other sexual assaults of children.”

Young people are especially likely to become victims of rape and other sexual assault, and almost two-thirds of the costs (\$89.7 billion) resulted from rapes and other sexual assaults of children (Figure 1). For minors, mental health care alone cost over \$5 billion. This figure reflects the profound mental health impact that victimization can have over the life course.

Rape and other sexual assault of females accounted for 69 percent of the costs (Figure 2). Female victimizations constituted 65 percent of the costs for children and 77 percent of the costs for adults.

Figure 2.
Percentage of Costs of Rape and other Sexual Assault,
by Age Group and Gender



The costs in these estimates are incidence-based. That means that if a rape occurred in 2012, the lifetime mental health, medical, and work loss costs that resulted were included. Costs incurred because someone was raped or otherwise sexually assaulted before 2012 were excluded, even if the victim had continuing health care expenses, work losses, or other relevant costs during 2012.

Tangible Government Spending on Sexual Violence in California

Local, state, and federal governments incurred tangible costs for various services related to sexual violence in 2012. As shown in Table 5, local, state, and federal governments spent an estimated \$2.9 billion total in California in 2012 related to sexual violence. Medical care of victims who are in foster care, the military, or prison, or who are on Medicare or Medi-Cal account for \$1.3 billion. Law enforcement costs, prisons/jails, court costs, sex offender management, and spending on offenders accounted for another \$1.3 billion. Table 5 details the cost categories that are referenced in other sections of this report. Table A on p. 38 of the Appendix displays which cost categories involved government spending, as well as which other parties incurred costs for each cost category. The government costs include \$2.5 million for prevention efforts directed toward the general population. This funding comes from the federal RPE program. The federal government also funds efforts that include prevention for special populations, such as the military and college students, but data on how much of this funding was allocated to prevention, as opposed to response, were unavailable. Additionally, federal, state, and local governments spend approximately \$33 million to comply with requirements of the Prison Rape Elimination Act (PREA), as shown in Table 5.

Table 5. Estimated Tangible Spending by Government Related to Rape and Other Sexual Assault, California, Fiscal Year (FY) 2012-13 (in 2012 Dollars)

Spending on Victims (Prevention, Investigation, Comprehensive Response, Investigation/Adjudication, Victim Services/Out-of-Home Placement/Prevention, & Medical Care)	
Medical Care	\$1,313,374,000
Child Welfare	\$222,986,238
Prison Response (primarily environmental prevention)	\$32,786,172
Community Response and Capacity Building (e.g., Rape Crisis Centers) ^b	\$27,575,956
Military & National Guard Response	\$7,360,244
Higher Education Response	\$4,335,475
Victim Services & Compensation	\$3,140,797
Rape Prevention and Education ^a	\$2,494,194
Long-term Care Facility Response	\$37,500
Subtotal	\$1,614,090,576
Spending on Offenders (in Investigation/Adjudication & Sanctioning/Treatment)	
Prison	\$650,053,260
Law Enforcement Costs, Offender Registry	\$212,148,612
Sex Offender Treatment	\$198,291,525
Probation/Parole	\$130,881,987
Jail	\$55,391,984
Prosecution & Court Costs	\$41,119,320
Electronic Monitoring	\$1,666,662
Sex Offender Management Board	\$865,000
Subtotal	\$1,290,418,350
Total	\$2,904,508,926

a. Annual budget for FY2013-2014 and beyond, a decrease from \$4,004,000/year in FYs 2010-2013

b. Excludes an estimated \$4,347,562 in private and fee-for-service funding

Sources and methods: See Appendix p. 37

Table 6. Estimated Rates of Rape and Sexual Assault per 100 Persons and Government Spending per Victim, by Category of Victim, California, 2012 (in 2012 Dollars)

	Victims per 100 Persons in Victim Category	Government Spending per Victim (Excluding Medical)	Government Spending per Victim (Including Medical)
All Victims	2.5	\$1,640	\$2,890
All Children	3.4 ^a	\$3,730	\$6,460
Child (Sexual Abuse)	0.3	\$11,230	\$14,200
Child (Rape or Other Sexual Assault)	3.1	\$3,010	\$5,710
All Adults	2.2	\$570	\$1,150
College Student	5.1	\$530	\$1,070
Prisoner	3.8	\$3,840 ^b	\$7,210 ^b
Military	2.0	\$1,950	\$5,320
Other Adult	2.0	\$420	\$960

a. The estimate of 3.4 percent of children experiencing rape or other sexual assault in 2012 is likely to be a significant underestimate.²

b. The costs listed for prison inmates are likely underestimated because they exclude additional incarceration time for perpetrators apprehended in prison.

Sources and methods: See Appendix p. 41

Based on conservative estimates of child sexual abuse, rape and other sexual assault, government spending including medical costs averages \$6,460 per child victimized. Child sexual abuse, defined as when the child's parent or caretaker is responsible for the incident, is more costly than other forms of child rape and other sexual assault. Because the mandate of CPS is to protect children from abuse and neglect by their caretakers, CPS responds to incidents of child sexual abuse, but not to other rape or sexual assault against children (CAPTA Reauthorization Act of 2010, 2010). CPS interventions are intensive and long lasting, and can include investigation, foster care funding and coordination, and adoption. Because of costly CPS services, the average spending per victim of child sexual abuse is \$14,200, which is about 2.5 times the average spending on child victims of other forms of rape and sexual assault.

Sexual assault against children is also more costly than that against adults because it draws stronger criminal sanctions. An estimated 50 percent of arrests for sexual offenses involve child victimization. Those arrests result in 72 percent of all prison-days for felony sexual offenses and 59 percent of all jail days for misdemeanor sexual offenses.

Of the vulnerable populations examined in this report, college students have the highest self-reported rate of rape and other sexual assault; however the government spent the least on them, compared to other categories of victims. In 2012, 5.1 percent of college students were raped or sexually assaulted in California, and government spending was \$1,070 per college student victim (see Appendix starting on p. 34 for details of calculations for college student victims in Table 6).

The government spends over 5.5 times as much per rape or other sexual assault against military personnel as it spends per rape or other sexual assault of other noninstitutionalized adults (see Appendix starting on p. 34 for details of calculations for military victims in Table 6). The U.S. Department of Defense Sexual Assault Prevention and Response Office (SAPRO) employs at least one specialized victim advocate and legal counselor per installation for military victims of sexual assault and rape. SAPRO also funds prevention programs for broader military populations.

² Kaiser Health Plan's Adverse Childhood Experiences (ACEs) study (Dong et al., 2003) estimates that over 20 percent of respondents who were aged 18 or older had experienced rape or other sexual assault at some time during their childhood, compared to 7-11 percent in the surveys that the report's estimate is based on. If the Kaiser Permanente study is correct, it could easily be that over nine percent of children experience rape or sexual assault each year.

Detailed Costs per Sexual Violence Incident

Table 7 shows the total costs per rape or other sexual assault in California in 2012 (see Appendix p. 44 for details of calculations). Each rape or other sexual assault of a child costs an estimated \$227,700. For adult victims, each rape cost \$163,800. Quality of life losses accounted for the majority of the costs of sexual violence.

Table 7. Estimated Cost per Rape or Other Sexual Assault Victimization, California, 2012 (in 2012 Dollars)

COST CATEGORY	Child Rape & Other Sexual Assault, Age 0-17	Rape, Age 18 & Over	All Rape & Other Child Sexual Assault
Direct Medical Costs	\$1,300	\$1,300	\$1,300
Sexually Transmitted Infections	\$1,200	\$1,300	\$1,200
Pregnancy	\$50	\$400	\$200
Suicide Acts	\$19,600	\$9,100	\$15,200
Substance Abuse	\$5,300	\$2,500	\$4,100
Mental Health Care	\$12,800	\$2,000	\$8,300
Property Damage	\$200	\$200	\$200
Victim Services/Out-of-Home Placement/Prevention	\$200	\$100	\$200
Investigation/Adjudication	\$900	\$400	\$700
Sanctioning/Treatment	\$1,500	\$1,400	\$1,500
Earning Loss While Confined	\$700	\$800	\$800
Lost Work	\$5,800	\$4,000	\$5,100
Lost Quality of Life	\$178,100	\$140,300	\$162,200
TOTAL	\$227,700	\$163,800	\$201,000

Note: Omits \$480 in lost quality of life for other sexual assault of adults that is included in estimated total costs of sexual violence, due to lack of data on various cost categories for "other sexual assault" of adults.

Sources and methods: See Appendix p. 44

Sexual violence in California in 2012 resulted in an estimated 175,000 sexually transmitted infection cases, and 7,200 pregnancies, of which 3,600 resulted in abortions (Table 8). Per case, the most expensive of the sexually transmitted infections was HIV/AIDS. The second most costly, which strikes women who are not treated promptly for some sexually transmitted infections, was pelvic inflammatory disease, which can cause infertility. Some medical and mental health care costs of rape and other sexual assault, such as sexually transmitted infections, are immediate, but others arise many years later, and may occur across the lifespan. Sexual violence in California during 2012 is estimated to result in 96,400 victims abusing alcohol, tobacco, or other drugs (Table 9), and results in 20,000 victims committing suicide or requiring medical treatment for suicide attempts.

Table 8. Estimated Sexually Transmitted Infection Cases and Pregnancies Resulting from Rape and Other Sexual Assault, California, 2012, and the Cost per Case (in 2012 Dollars)

CONDITION	Number of Cases	Medical (\$)	Lost Work (\$)	Lost Quality of Life (\$)	Total Cost per Case (\$)
Sexually Transmitted Infections	174,582	\$700	\$900	\$3,300	\$4,900
HIV	192	\$407,000	\$639,700	\$2,345,900	\$3,392,600
Pelvic Inflammatory Disease	780	\$6,000	\$400	\$1,500	\$7,900
Human Papillomavirus	10,150	\$1,300	\$400	\$1,500	\$3,200
Herpes simplex	4,230	\$900	\$400	\$1,500	\$2,800
Syphilis	440	\$900	\$400	\$1,500	\$2,800
Gonorrhea	31,890	\$400	\$400	\$1,500	\$2,300
Chlamydia	37,170	\$300	\$400	\$1,500	\$2,200
Trichomoniasis	89,730	\$40	\$30	\$90	\$160
Pregnancy	7,190	\$5,800	\$6,600	\$900	\$13,300
Live Birth	2,730	\$23,200	\$16,800	Unknown	\$40,000
Abortion	3,600	\$600	\$400	\$1,500	\$2,500
Miscarriage	860	\$600	\$400	\$1,500	\$2,500

Sources and methods: See Appendix p. 45

Table 9. Estimated Suicide Acts and Substance Abuse Resulting from Rape and Other Sexual Assault, California, 2012, and the Cost per Case (in 2012 Dollars)

	Number of Cases	Medical (\$)	Other Resource (\$)	Lost Work (\$)	Lost Quality of Life (\$)	Total Cost per Case (\$)
Suicide Acts	20,050	\$8,600	\$0	\$184,500	\$331,800	\$524,900
Substance Abuse						
Alcohol Dependence & Abuse	24,690	\$4,700	\$2,500	\$13,300	\$33,100	\$53,600
Smoking	38,350	\$2,200	\$0	\$2,700	\$17,300	\$22,200
Illicit Drug Use	33,400	\$1,500	\$2,300	\$7,500	\$8,500	\$19,800

Sources and methods: See Appendix p. 46



CONCLUSIONS



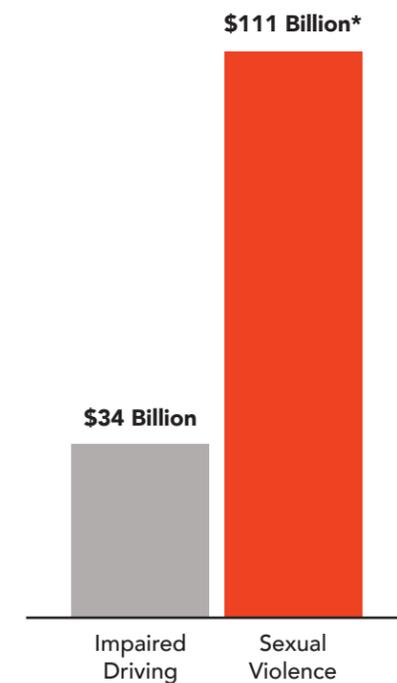
Preventing future incidents of sexual violence, while maintaining and improving services, would

reduce costs

to victims, governments and society.

CONCLUSIONS

Figure 3.
Cost of Impaired Driving vs. Cost of Sexual Violence in California



*For purposes of comparison, this excludes adjudication, sanctioning, substance abuse, and prevention costs included in \$140 billion estimate but unavailable for impaired driving

Based on the conservative estimates made in this report, the cost of sexual violence in California in 2012 was \$140 billion. Sexual violence costs 3.25 times as much as alcohol impaired driving in California, yet it receives far less public attention (Figure 3; Rosen et al., 2008, following methods in Jensen et al., 1999).

A large majority of the total costs, \$117 billion, resulted from lost quality of life and productivity for victims and their families. In addition to the trauma of experiencing rape or other sexual assault, victims face medical and mental health care expenses, lost wages and productivity, property damage, lower quality of life, and increased risk for substance abuse and suicide.

The services provided in response to rape and other sexual assault are critical, and mitigate the long-term costs to victims and their families. Government and society's contributions in response to sexual violence help find safe homes for sexually abused children, apprehend and sanction offenders, and mitigate the impacts of sexual violence on victims and their families.

The federally funded RPE program, administered by CDPH, is one prevention program currently being implemented for the general population in California. Out of the \$2.9 billion in government spending related to sexual violence identified in this report, 0.1 percent (\$2.5 million) was from the RPE program. Thirty-three out of 63 rape crisis centers throughout the state receive this federal funding for sexual violence prevention programs.

Preventing violence has been shown to result in decreased costs (Clark et al., 2002). Although few evidence-based sexual violence prevention programs exist, there are a number of promising prevention strategies focused on decreasing the incidence, and therefore the impact, of sexual violence (DeGue et al., 2014; Krug, 2002). Evidence based and promising prevention practices may lead to decreased sexual violence perpetration, reduce the number of victims of sexual violence, improve Californians' quality of life, and potentially save millions of dollars. Various tangible costs to the State of California and to local governments within California would likely decrease over time, such as sexual violence-related health care, law enforcement, sex offender monitoring, CPS investigations, victim's compensation, adjudication, incarceration, and sex offender treatment. Much of the suffering and other intangible costs of sexual violence experienced by victims and their families are avoided when efforts are focused on preventing sexual violence from happening. Preventing future incidents of sexual violence, while maintaining and improving services, would reduce costs to victims, governments and society.

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APPENDIX: DETAILED METHODOLOGY

1. Methods used for estimating numbers of people who were raped and otherwise sexually assaulted

Table 1. Estimated Victims of Rape and Other Sexual Assault, California, 2012

Rape, Age 18 and Over – Rape of an adult in the past year was defined as a yes response to questions the National Intimate Partner and Sexual Violence Survey (NISVS) asked in 2010-2011 about unwanted completed or attempted forced vaginal (for women), anal, or oral penetration or unwanted penetration completed when the respondent was drunk, high, drugged, or passed out and unable to consent. “Forced” included use of physical force or threats to physically harm the respondent. For women, the NISVS national rate of 1.1 rape victims in the past year per 100 non-institutionalized United States residents age 18 and over was used. In order to estimate the annual rate for California, the national rate was multiplied times the percentage of women raped in their lifetime in California (from NISVS) divided by the percentage of women raped in their lifetime nationally (Black et al., 2011). The calculations for males used a similar adjuster.

NISVS had too few cases to report the rate of rape of males in the past 12 months. Thus, the 2010, 2011, and 2013 California Behavioral Risk Factor Surveillance System (BRFSS) and the 2013 California Crime Victims Survey (which asks about rapes in the past five years) were considered (California Department of Public Health, 2015; Californians for Safety and Justice, 2013). From these studies, the ratio of the number of male rape victims to female rape victims was computed. The BRFSS questions, although akin to the NISVS questions, are compressed and fail to capture most uncompleted attempts since they only ask if someone “forced you into unwanted sexual activity.” Uncompleted attempts are legally defined as rape, so the single question used in the California BRFSS is known to underestimate rape (Potter and Laflamme, 2011). Undercounting is probably greater with the Crime Survey’s simple question, “Did someone force you or try to force you to have sex with them?” Based on very small, unweighted counts, the ratio was 0.274 male rape victims per female victim in BRFSS and 0.267-0.302 male victims per female victim in the crime survey (California Department of Public Health, 2015; Californians for Safety and Justice, 2013). The female rape rate per 100 residents age 18 and over was multiplied by the 0.274 ratio.

Other Sexual Assault, Age 18 and Over – The definition of other sexual assault was based on responses to the BRFSS optional sexual violence module question asking whether anyone had “touched sexual parts of your body after you said or showed that you didn’t want them to or without your consent.” California BRFSS does not ask this question. It was assumed, by gender, that the proportions of completed/attempted rapes reported in the more complete BRFSS questions asked in Iowa (Yang et al., 2014) and Michigan (unpublished) to incidents involving only unwanted touching would apply to the NISVS responses. This choice is conservative; NISVS respondents reported a higher national rate of unwanted sexual touching than did BRFSS respondents (Black et al., 2011; California Department of Public Health, 2015).

Child Rape and Other Sexual Assault – In order to increase consistency with the legal definition of child sexual assault, child rape, and other sexual assault were grouped together in this report. Because of the large costs incurred by Child Protective Services (CPS), the discussion of child rape and other sexual assault includes child sexual abuse, using the U.S. Department of Health and Human Services definition for sexual abuse, i.e., child rape and other sexual assault perpetrated by a child’s caretaker (CAPTA Reauthorization Act of 2010, 2010).

In order to estimate all child rape and other sexual assault, data were examined from the Youth Risk Behavior Survey (YRBS) (CDC, 2014b) and the California Healthy Kids Survey (CHKS)

(California Department of Education, n.d.). The sexual violence modules of these surveys were administered in some localities, but not statewide. YRBS data from 2011 or 2013 exist for Los Angeles, San Bernardino, San Diego, and San Francisco. YRBS asks if anyone ever physically forced the child to have sexual intercourse and if in the past year (s)he experienced any sexual dating violence. The YRBS designers assume the intercourse question captures anal and oral intercourse. Similarly, few school districts administered optional modules of CHKS that include a question about ever being forced into unwanted intercourse. The only statewide data on incidence (rather than prevalence) of child rape and other sexual assault are CPS data on child sexual abuse.

The calculations assumed the four-city YRBS average lifetime forced intercourse incidence rates of 8.6 percent for girls and 5.9 percent for boys (7.3 percent overall) applied statewide. These rates were lower than national rates for girls but higher for boys. This choice probably yields a lower bound estimate, because the rate of respondents reporting forced intercourse was lower in YRBS (7.3 percent) than in CHKS (9.7 percent) (CDC, 2014b; California Department of Education, n.d.). BRFSS asks about forced sex as a child, but many respondents are providing recollections of sexual violence patterns 20-50 years ago rather than a snapshot of recent incidence. Although the 9.6 percent forced intercourse rate women report in the 2013 BRFSS is similar to the other studies, men report a much lower rate of 2.9 percent (California Department of Public Health, 2015.).

To estimate annual incidence, the reported lifetime occurrence in YRBS was divided by the YRBS respondents’ average age of 16.5 (CDC, 2014). Because sexual assault episodes tend to include a series of sexual assaults, the quotient was multiplied times the average years a sexual assault episode lasts (nationally, 1.29 years for girls and 1.58 years for boys, from Kilpatrick et al., 1995). It was assumed that the YRBS yes responses about forced intercourse captured substantiated child sexual abuse but missed the 23,406 cases annually that were referred to CPS in 2013 and had dispositions other than substantiated or unfounded (Needell et al., 2014). Those cases were classified as sexual assaults and added to the YRBS estimate of sexual assaults in dating situations.

All of these estimates are likely to be underestimates of total sexual violence because they do not include attempted intercourse (which the law defines as rape) and other sexual assault. California began using the BRFSS Adverse Childhood Experiences (ACEs) module in 2007. It takes a more comprehensive, three-question approach to the issue. This module reveals that 11.4 percent of adults report someone at least five years older than them forced them to have sex, touched them sexually, or tried to make them touch the other person sexually when they were under 18 (Center for Youth Wellness, 2014).

In 1995-1997, Kaiser Health Plans in California polled more than 17,000 people age 18 and over as part of an Adverse Childhood Experience (ACEs) study (Dong et al., 2003). Although it is not the most recent survey data on ACEs, this survey provides the best insight into the severity of the undercount. In comparison to subsequent California BRFSS surveys, the Kaiser Health Plans study used a better-framed, more probing and comprehensive set of sexual violence questions, including attempted as well as completed forced sex. In response to 10 questions and 52 follow-up probes, 24.7 percent of women and 16 percent of men reported that, before they reached age 18, someone at least five years older touched or fondled them in a sexual way; had them touch their body in a sexual way; attempted oral, anal, or vaginal intercourse with them; or actually had oral, anal, or vaginal intercourse with them. That estimate far exceeds the forced intercourse rates reported by other sources. **Were these contemporaneous measures, they would suggest multiplying our incidence estimates times 2.86 for girls and 2.70 for boys** (based on incidence estimates computed using the same equations described earlier for YRBS data). That differential highlights

the limitations of the sexual violence questions currently asked in California and the severity of our underestimates of sexual violence victims in California.

ADDITIONAL INCIDENTS

The NISVS and YRBS data on the non-institutionalized population were supplemented with estimates of rapes and other sexual assaults among certain institutionalized populations.

Table 1 includes an estimated 470 youth raped in juvenile detention, 5,425 adults raped and 2,640 adults experiencing other sexual assault in jails or prisons. Incidence rates by age group and gender came from the federal Bureau of Justice Statistics (BJS) surveys of inmates in prisons, jails, and juvenile detention facilities (Beck et al., 2010a, 2014). These rates were multiplied by the reported number of prisoners in California by institution type (California Department of Corrections and Rehabilitation, 2013b; Glaze and Herberman, 2013; Hockenberry, 2014). The most recent data were from 2010-2011 for prisons and jails and 2008-2009 for juvenile detention. In the inmate surveys, during a one-year period, the average incarcerated victim is victimized 3.68 times if an adult female, 5.51 times if an adult male, and 5.88 times if a juvenile (computed from data in Beck et al., 2010a, 2010b). Conservatively, sexual encounters between adult prisoners and staff were only included as rape or other sexual assault if the prisoners said those encounters were unwilling or pressured, even though legally any such sex is nonconsensual.

Although population-level data for residents of nursing homes were not available, 23 sexual assaults per year in residential treatment facilities that were reported to the state licensing board were also added.

Table 2. Estimated Rate of People Raped or Otherwise Sexually Assaulted, per 100 Population by Age Group and Gender, California, 2012

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 category and gender divided by California population of that age and gender) X 100 (California Department of Public Health, 2014). The estimate in the paragraph above Table 2 of 1 in 45 California adults experiencing rape and other sexual assault victimization was calculated using (the number of victims age 18 and over divided by the California population age 18 and over) X 100.

Table 3. Estimated Incidents of Rape and Other Sexual Assault, California, 2012

Nationally, among the non-incarcerated, the average number of victimizations in the one-year period starting from the date of the first rape is 1.26 (Miller et al., 1996). This estimate also applies to child sexual assaults, but not unwanted touching of adults, which is assumed not to be serial. Among the incarcerated, the average number of assaults per victim is much higher, at 5.88 (computed from data in Beck et al., 2010a, 2010b). These multipliers multiplied times the victim counts in **Table 1** to estimate the total number of incidents in **Table 3**.

Note: Includes 3,112 rapes and other sexual assaults of youth while incarcerated and 29,067 rapes and other sexual assaults of adults while incarcerated.

2. Methods used for estimating costs of sexual assault in California

Whenever they were available, cost estimates were collected from California state agencies. When California data were not readily available, national and small area studies were used and adjusted to California prices. Most costs not directly available from California sources came from a national study of rape costs (Miller et al., 1996). The U.S. costs were then adjusted to California 2012 prices using ACCRA area price indices, U.S. Census Bureau data on per capita income by state, plus the U.S. consumer price index, employment cost index, and an index based on medical spending per capita (Council for Community and Economic Research, 2011; U.S. Census Bureau, 2015). It was assumed that the costs per incident with a noninstitutionalized victim also applied to cases with institutionalized victims. When the number of California residents (both total and by age and/or gender) are referenced in per capita calculations, population data came from the California Department of Public Health (2014).

Costs in future years that will result from rapes and other sexual assaults in 2012 (e.g., for substance abuse, suicide, or continuing medical care) were discounted to their present value in 2012 using a 3 percent discount rate. Discounting accounts for both the ability of money to earn interest until it is needed in future years and for uncertainty about the future. For example, follow-up mental health or medical care in 2020 would not be needed if the victim dies in 2018.

Table 4. Estimated Total Cost of Rape and Other Sexual Assault, California, 2012 (in 2012 Dollars)

Total costs (**Table 4**) are the product of unit costs before rounding from **Table 7**, times incidence from **Table 1**, times 1.268 incidents per case for children or 1.366 incidents per case for adults, except for costs of pregnancy, which are multiplied by 1.261 incidents per case for female children and 1.267 incidents for female adults. These incidents per case rates are national estimates of the number of times an average victim is raped during the year, according to the National Crime Victimization Survey (ICPSR, 2014; Miller et al., 2007), adjusted to incorporate the repeat victimization rates in prisons, jails, and juvenile detention facilities. This multiplication is carried out separately for each of the three categories of sexual violence that were included in the cost calculations. All calculations were carried out before rounding. For example, to get the subcategory "direct medical costs" for 0 - 17 year olds, the following was calculated: \$1,342 (the value in Table 7 before it was rounded to the nearest \$100) * 310,435 (from Table 1 total for ages 0 - 17) * 1.268 = \$528,123,000, the number listed in Table 4).

Costs of sexually transmitted infections, pregnancy, suicide acts, and substance abuse were broken down into their tangible (medical, other resource) and intangible (lost work, lost quality of life) components based on **Table 8** and **Table 9**.

Table 5. Estimated Government Spending Related to Rape and Other Sexual Assault, California, Fiscal Year (FY) 2012-2013 (in 2012 Dollars)

Government spending was estimated for the tangible cost categories in which at least some of the costs are incurred by the government, as delineated in **Table A** below. Line-by-line methods for **Table 5** are detailed below **Table A**. Estimates are based on data from selected sites obtained through survey or personal communication, with costs weighted to represent all sites. Government costs are primarily from state and local record systems; again, reports from a limited number of institutions were often assumed to be representative of institutions across the state.

Table A. Cost Categories and Who Incurs the Costs

I. TANGIBLE COSTS OF SEXUAL VIOLENCE ^a	WHO INCURS COSTS
Medical Care and Mental Health Care	
(1) Costs not reimbursed by insurance	Victim or Offender/Victim's or Offender's Family/Society
(2) Costs reimbursed by insurance	Society
(3) Administrative cost of insurance reimbursement	Society
(4) Costs reimbursed by Medicare and Med-iCal	Government
(5) Costs of care provided in foster care, prisons, and the military	Government
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
Victim Services/Out-of-Home Placement/Prevention	
(1) Expenses charged to victim	Victim
(2) Expenses paid by agency (Child Protective Services, rape crisis centers, military, higher education, etc.)	Government primarily
(3) Volunteer time	Society
(4) Victim Compensation	Government
(5) Primary Prevention (e.g., education, mass media)	Government
Investigation/Adjudication	
(1) Police, military, long-term care facility, prison, higher education, etc. investigative costs	Government/Society
(2) Adjudication Costs (Prosecutors, Courts, Defense)	Government/Offenders for Private Defense
Sanctioning/Treatment	
(1) Incarceration costs including offender treatment	Government
(2) Non-incarcerative sanctions (e.g., intensive supervision)	Government
(3) Post-release costs (e.g., halfway houses)	Government
(4) Community treatment programs	Government
(5) Community notification programs	Society

II. INTANGIBLE COSTS OF SEXUAL VIOLENCE^a

Earning Loss While Confined	Offender/Government
Lost Work	
(1) Lost wages for unpaid workdays	Victim/Employer/Government
(2) Lost household work	Victim/Victim's Family
(3) Lost productivity of co-workers and supervisors	Employer
(4) Temporary labor and training of replacements	Employer
Lost Quality of Life	Victim/Victim's Family
Other Intangible Costs (sexually transmitted infections, pregnancy, suicide acts, substance abuse)	
(1) Lost work	Victim or Offender/Victim's or Offender's Family/Employer/Government
(2) Lost quality of life	Victim or Offender/Victim's or Offender's Family

a. Only those elements that were included in the cost estimations are listed.

The government spending amounts displayed in **Table 5** were calculated as follows:

Rape Prevention Education – The California Rape Prevention and Education program provided its federal funding amount at its level for 2014 and thereafter (California Department of Public Health, Safe and Active Communities Branch, personal communication, July 22, 2014).

Law enforcement costs, offender registry – Estimates are based on personal communications with the San Jose Police Department (June 11, 2014), the Redding Police Department (July 2, 2014), and the Los Angeles Police Department (July 31, 2014). The comparable police expenditures per arrest for sexual offenses excluding prostitution for each location were averaged; those average costs were summed and multiplied by the total California arrests for sexual offenses excluding prostitution (State of California Department of Justice, 2011a; State of California Department of Justice, 2011b).

Child welfare – Estimates are based on the total cost per child for child welfare (including abuse and neglect prevention, family preservation services, CPS, in-home services, etc.) in California by the total number of children abused or neglected from DeVooght et al. (2008), inflated to 2012 dollars.

Community Response and Capacity Building – The estimate is the sum of annual California Office of Emergency Services funding, Office on Violence against Women (OVW) funding to California and its communities, and non-governmental funding data provided by 26 of 63 rape crisis centers in response to a California Coalition Against Sexual Assault survey (unpublished), factored up to all 63 centers based on percentage of the California population covered by the reporting centers (California Department of Public Health, 2013) by assuming average non-governmental funding per capita was the same in reporting and non-reporting centers.

Military and National Guard response – The National Guard supplied their response costs (California National Guard, Sexual Assault Prevention and Response Program, personal communication, June 10, 2014). For other military response, the cost of the minimum three-person SAPRO staff required at each of California's 22 military bases was estimated using online salary data by position title and community, including Victim Advocate and Sexual Assault Response Coordinator positions (Indeed, 2014).

Higher education response – It was assumed that the average cost collected from three University of California campuses, \$159,526, applied to all ten University of California campuses (University of California Merced, Violence Prevention Program, personal communication, July 15, 2014; University of California Santa Barbara, Campus Advocacy Resources & Education Program & Women’s Center, personal communication, July 21, 2014; University of California at Santa Cruz, Student Health Outreach and Promotion, personal communication, August 19, 2014). To estimate the cost at California State University (CSU) campuses, funding information from the federal OVW on funding levels for three-year grants on violence against women at two CSU campuses, Humboldt State University and California State Polytechnic University, Pomona. The full funding amounts were averaged between the two campuses (\$224,405) and divided by three to estimate annual funding (U.S. Department of Justice [DOJ], 2014a; U.S. DOJ, 2014b). It was assumed that 50 percent of the annual funding was for costs related to sexual violence, as opposed to intimate partner violence or stalking. This figure, \$37,401, was applied to all 23 CSU campuses. It was similarly assumed that 50 percent of the three-year, \$299,999 OVW college grant to Occidental College in Los Angeles would focus on sexual violence (U.S. DOJ, 2014c). It was assumed that the state’s 188 private colleges and universities would be funded on average at 20 percent of the estimated \$50,000 annual OVW funding for sexual violence response at Occidental College.

Long-term care facility response – The California State Long-term Care Ombudsmen Program, which investigates and seeks to resolve complaints from residents in long-term care facilities, provided their response costs for sexual abuse cases (California Department of Aging, State Long-Term Care Ombudsman, personal communication, June 25, 2014).

Prison response – Estimates came from a federal analysis of compliance costs with Prison Rape Elimination Act (PREA) regulations (Booz, Allen, Hamilton, Inc., 2010), which directly estimated compliance costs for California prisons and juvenile justice facilities and for the Sacramento jail. The jail costs were factored up based on the percentage of California jail inmates confined in Sacramento (Board of State and Community Corrections, 2014). It was assumed that California would not limit crossgender prisoner search.

Prosecution and court costs – Estimates were computed from California Administrative Office of the Courts data on non-judicial and judicial staff costs (Administrative Office of the Courts, 2013a; Administrative Office of the Courts, 2013b; Administrative Office of the Courts, 2011; Administrative Office of the Courts, Office of Court Research, personal communication, June 26-30, 2014) and Monthly Arrest and Citation Register arrest/disposition data on number of arrestees charged with sexual offenses (State of California Department of Justice, 2015). It was arbitrarily assumed that prosecution costs were 1.5 times court costs including judge time. Defense costs were inflated from Cohen et al. (1994).

Prison; jail – Estimates were computed from California data on the number of criminals under supervision in prisons (California Department of Corrections and Rehabilitation, 2013b), years detained per inmate by type of sexual felony, and costs per year in prison (Henrichson & Delaney, 2012). Years detained per inmate by type of felony were calculated by dividing the total number of inmates (California Department of Corrections and Rehabilitation, 2013b) by the number of new inmates for each type of felony (California Department of Corrections and Rehabilitation, 2013a). To compute jail costs, the cost per prison-day in California was multiplied by the ratio of the cost per day in jail versus prison in Washington State (Aos et al., 2010). The cost per day of juvenile supervision was adjusted from Henrichson & Delaney (2012) to California prices.

Probation/parole; electronic monitoring – The Orange County Probation Department supplied data on costs for probation, parole, and electronic monitoring per sexual offender

on probation or parole (personal communication, July 18, 2014), which was then multiplied by the number of sex offense parolees in California (Bonczar and Mulako-Wangota, 2014) plus the product of the number of probationers in California times the three percent average of sex offenders among the U.S. probation population (Maruschak & Bonczar, 2013).

Sex offender treatment – Most data on sexual offender treatment incidence and costs came from the Legislative Analyst’s Office (personal communication, June 18, 2014), or Department of State Hospitals (personal communication, July 31-August 1, 2014). Costs per case averaged \$1,965 for evaluation, \$4,700 per person-year to treat nonhigh risk sex offenders on parole, \$6,300 per person-year to treat high-risk sex offenders on parole, and \$200,000 per person-year to treat non-incarcerated patients identified as sexually violent predators in the hospital or on conditional release. The average daily predator census in 2012-2013 was 905.16 people, of whom 21 were admitted during that year. Data were unavailable on the frequency of parolee treatment, which was assumed to be comparable to the 22 percent rate among sex offenders in Iowa and Minnesota (Yang et al., 2014; Miller et al., 2007).

Sex offender management board – California Sex Offender Management Board staff provided cost data (personal communication, July 23, 2014).

Medical care – We assume government pays all medical costs for children in foster care, incarcerated victims, and military personnel. For other victims, we estimated government-paid medical costs by multiplying total medical costs times the percentage of California residents covered by Medicare and/or Medicaid (Kaiser Family Foundation, 2015). To estimate Medi-Cal costs, it was assumed that California residents with MediCal coverage were sexually assaulted at the same rate as other residents. This assumption is likely conservative, as poverty increases individuals’ risk of sexual violence victimization (Greco and Dawgert, 2007).

Victim services and compensation – The California Victim Compensation and Government Claims Board provided cost data (personal communication, May 13, 2014).

Out-of-home placement – Estimates were determined by multiplying costs for outofhome placement from DeVooght et al. (2008) times percentage of foster care caseload related to sexual abuse from California Child Protective Services (Needell et al., 2014).

Table 6. Rape and Other Sexual Assault Victims per 100 Population and Government Spending per Victim by Category of Victim, California, 2012 (in 2012 Dollars)

Sexual assault rates came from the following sources:

All victims – The estimate is total adults victimized from **Table 1**.

All children – The estimate is the total children victimized from **Table 1**.

Sexually abused child – The estimate is from Needell et al. (2014) data on child sexual abuse victims.

Other child – The estimate is the total from **Table 1** minus sexual abuse victims for other child victims (i.e. children who were raped or sexually assaulted by someone other than their caretaker).

All adults – The estimate is the total adults victimized from **Table 1**.

College students – Estimates are from the survey reported in Krebs et al. (2009) for college women, with the California ratio of 0.27 non-institutionalized adult males victimized annually per non-institutionalized adult female victimized used to estimate the rate for college men. (NB:

Consistent with this estimate, in a nationally representative survey of university students aged 18-24 (Koss et al., 1987), this ratio was 0.28 for completed or attempted rape since age 14). Female and male rates were weighted using the percentage of U.S. college students who are female from the U.S. Department of Education National Center for Education Statistics (2013).

Prisoners – Estimates are based on surveys reported in Beck et al. (2010a, 2014).

Military – The estimate is from the U.S. Department of Defense (2014) survey for the military.

Other adults – The estimate is all victims minus the victim estimates for children, prisoners, military, and college students.

Government spending per victim was computed as described below. Each of the costs was calculated both including and excluding medical care:

All victims – Costs excluding medical were calculated by dividing the total costs of: Rape Prevention and Education, law enforcement costs, offender registry, child welfare, community response and capacity building, private and fee-for-service funding for rape crisis centers (see Table 5 footnote b), military and National Guard response, higher education response, long-term care facility response, prison response, prosecution and court costs, prison, jail, probation/parole, electronic monitoring, sex offender treatment, sex offender management board, victim compensation, and out of home placement in **Table 5** by the total number of victims from **Table 1**.

Costs including medical also included the sum of government medical costs per child victim (see **All children** below) times the total number of child victims from Table 1 and the government medical costs per adult victim (see **All adults** below) times the total number of adult victims from **Table 1**, divided by the total number of victims from **Table 1**.

All children - Costs excluding medical were calculated by summing:

1. Costs of child welfare and out-of-home placement in **Table 5** divided by the total number of child victims from **Table 1**;
2. Costs of Rape Prevention and Education, victim services and compensation, and community response and capacity building in **Table 5** divided by the number of nonincarcerated victims from **Table 1** and its methods on p. 20; and
3. Law enforcement and prison costs related to child sexual assault and rape: the costs of prison, jail, and law enforcement and prosecution from **Table 5** related to rape and other sexual assault of children (calculated using proportion of prison-years, jail-years, and arrests for lewd and lascivious acts against children plus the product of other prison-years, jail-years, and arrests [CDCR, 2013a; CDCR, 2013b; State of California Department of Justice, 2011a; State of California Department of Justice, 2011b] and the proportion of all victims who were children from Table 1) divided by the total number of child victims from **Table 1**.

The costs including medical care also included the number of children in the CPS system for allegations of sexual abuse (Needell et al., 2014) times the cost including medical costs for sexually abused children (see Sexually abused children below) plus the number of other children victims of rape and sexual assault (total child victims minus the number of sexually abused children) times the cost including medical costs per other child, divided by the number of all child victims of rape and sexual assault from **Table 1**.

Sexually abused children – Costs excluding medical care were calculated by adding the child welfare and out-of-home placement costs from **Table 5** divided by the number of victims

of child sexual abuse (Needell et al., 2014); plus items (2) and (3) from **All children**, above.

The costs including medical care also included the sum of (a) the full costs of medical and mental health care per case of child sexual abuse (see methodology for **Table 7**) times the number of victims of child sexual abuse living in foster care (Needell et al., 2014) and (b) the proportion of California residents covered by Medicare and/or MediCal (Kaiser Family Foundation, 2015) times the costs of medical and mental health care per case of child sexual abuse (see methodology for **Table 7**) times the number of children in the CPS system for allegations of sexual abuse who were not in foster care (Needell et al., 2014). This sum was then divided by the total number of children in the CPS system for allegations of sexual abuse (Needell et al., 2014).

Other child – Costs excluding medical care were calculated by adding items (2) and (3) from **All children**, above.

Costs including medical care also included the medical and mental health costs per case of child sexual abuse (see methodology for Table 7) times the proportion of California residents covered by Medicare and/or Medi-Cal (Kaiser Family Foundation, 2015).

All adults – Costs excluding medical care were calculated by adding the costs of Rape Prevention and Education, law enforcement and offender registry, child welfare, prosecution and court costs, prison, jail, probation/parole, electronic monitoring, sex offender treatment, sex offender management board, victim compensation in **Table 5** and subtracting the product of cost per victim for all children from **Table 6** and number of child victims of rape and sexual assault from **Table 1**, then dividing by the number of adult victims from **Table 1**.

Costs including medical care also included the sum of (a) the full costs of medical and mental health care per adult rape (see methodology for **Table 7**) times the number of people who were raped in the military (U.S. Department of Defense, 2014; Governing the States and Localities, 2013), prison, jail, or juvenile detention (see methodology for **Table 1**) and (b) the proportion of California residents covered by Medicare and/or Medi-Cal (Kaiser Family Foundation, 2015) times the costs of medical and mental health care per adult rape (see methodology for **Table 7**) times the number of adult rape victims who are not incarcerated or in the military. This sum was then divided by the total number of adult rape victims from **Table 1**.

College student – Costs excluding medical care were calculated by adding item (2) from **All children**, above, plus higher education response from **Table 5** divided by the number of college student victims (Krebs, 2009), plus law enforcement and prison costs for adult victims of rape and other sexual assault. Law enforcement and prison costs were calculated by adding the law enforcement and offender registry, prosecution and court costs, prison, jail, probation/parole, electronic monitoring, sex offender treatment, and sex offender management board from **Table 5** minus the product of item (3) from **All children**, above and the number of child victims of rape and sexual assault from **Table 1**, then dividing by the total number of victims of rape and sexual assault from **Table 1**.

Costs including medical care also included the proportion of California residents covered by Medicare and/or Medi-Cal times the cost per rape of an adult for medical and mental health care (see methodology for **Table 7**).

\$110 of the government spending per victim is from funding dedicated for to college students only (college programs); the other \$960 is accounted for in by the same government medical and program spending that other adult victims receive in the general population, applied to the estimated number of college victims of sexual violence.

Prisoner – Costs excluding medical care were calculated by dividing the cost of prison response in **Table 5** by the total number of prison, jail, and juvenile detention victims (see methodology for **Table 1**).

Costs including medical care also included the full costs of medical and mental health care per case of rape of an adult (see methodology for **Table 7**), as it is assumed that the government pays for all medical and mental health care of incarcerated victims of rape and other sexual assault.

Military – Costs excluding medical care were calculated by adding item (2) from **All children**, above plus the cost of military Sexual Assault Response Coordinators and Victim Advocates in California (see methodology for **Table 5**) divided by the number people raped or sexually assaulted in the military (U.S. Department of Defense, 2014; Governing the States and Localities, 2013).

Costs including medical care also included the full costs of medical and mental health care per case of rape of an adult (see methodology for **Table 7**), as it is assumed that the government pays for all medical and mental health care of victims of rape and other sexual assault in the military.

Other adult - Costs excluding medical care were calculated by adding:

1. Item (2) from **all children**, above;
2. The costs of long-term care facility response from **Table 5** divided by: the total number of adult victims of rape and other sexual assault from **Table 1** minus the number of incarcerated victims (see methodology for **Table 1**) and the number of victims in the military (U.S. Department of Defense, 2014; Governing the States and Localities, 2013); and
3. Law enforcement costs for adults (see **College student**, above).

Costs including medical care also included the costs of medical and mental health care per case of rape of an adult (see methodology for **Table 7**) times the proportion of California residents that are covered by Medicare and/or Medi-Cal (Kaiser Family Foundation, 2015).

Table 7. Estimated Cost per Rape or Other Sexual Assault Victimization, California, 2012 (in 2012 Dollars)

Except for sanctioning and other government costs, most unit costs came from national studies of rape costs (Miller et al., 1996; Miller and Hendrie, 2014) adjusted to California prices in 2012. It was assumed that the costs per rape and sexual assault while incarcerated equaled the costs per non-institutionalized case. This assumption may result in some inaccuracy of the estimated cost.

When costs in **Table 7** are derived from other tables in this report, calculations are made using incidence data from **Table 1**.

This table omits costs that result for people who perpetrated and for family and friends of people who were victimized or perpetrated.

Direct 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 (Miller et al., 2007). Medical costs for physical assault, with or without rape, by place of medical treatment came from a 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 are based on a national provider survey (Cohen & Miller, 1998) and applied to California.

Lost work – Costs were estimated from the National Crime Victimization Survey data (Miller et al., 2007) and applied to California.

Property damage – Costs were estimated from the National Crime Victimization Survey data (Miller et al., 2007) and applied to California.

Lost quality of life – Estimates are based on nationwide jury awards to rape victims for their non-monetary losses, not including punitive damages (Miller, Cohen, and Weirsema, 1996). These awards considered pain and suffering resulting from rape and other sexual assault and associated sexually transmitted infections and pregnancy. Jury awards came primarily from lawsuits for inadequately lighting parking lots, leaving hotel halls unsecured, or serving intoxicated patrons.

Sexually transmitted infections; pregnancy – From **Table 8**. Adjusted to reflect costs per incident of rape (excluding other sexual assault, i.e. unwanted touching) for adults and children, rather than cost per case of sexually transmitted diseases and pregnancy.

Suicide acts; substance abuse – From **Table 9**. Adjusted to reflect costs per incident of rape and other sexual assault for adults and children, rather than cost per case of suicide act and substance abuse.

Victim services/out-of-home placement; investigation/adjudication; sanctioning/treatment – From **Table 5**.

Earnings loss while confined – This was estimated by multiplying state data on the number of days of confinement for sexual offenses during Fiscal Year (FY) 2013, times the median daily wage per California adult, plus average fringe benefits computed as a percentage of wages. The number of days in confinement during FY 2013 was calculated by dividing the total number of inmates (California Department of Corrections and Rehabilitation, 2013b) by the number of new inmates for each type of sexual felony (California Department of Corrections and Rehabilitation, 2013a), times 365. The median daily wage plus fringe benefits was calculated by multiplying the median hourly wage per California adult (U.S. Department of Labor, 2014) times eight hours per day, adjusted for unemployment rates (State of California Employment Development Department, 2014) and assuming 230 work days in 2013. Fringe benefits were computed as 24.1 percent of wages (US President, Table B-28, 2013).

Table 8. Estimated Sexually Transmitted Infection Cases and Pregnancies Resulting from Rape and Other Sexual Assault, California, 2012, and the Cost per Case (in 2012 Dollars)

These costs were adjusted to California prices from the estimates modeled in Yang et al. (2014) and Miller et al. (2006). Incidence of these events was computed from small area studies of the probability of being exposed times the probability of transmission if exposed (Jenny et al., 1990; Trussell, 1997). In computing overall transmission, the formula recognized that no transmission would occur if both the perpetrator and victim already had the same sexually transmitted infection.

A national sexual victimization survey found that rape of a female age 12-45 yielded a 5 percent risk of pregnancy and that 50 percent of these pregnancies ended in abortion (Holmes et al., 1996). This pregnancy risk was applied through age 50, which is the average age of menopause.

The model used national sexually transmitted infection and pregnancy unit medical cost data (Trussell, 1997; Johnson & Harrison, 2005; Machlin & Rohde, 2007; Thomson Healthcare, 2007). Lost work and lost quality of life cost estimates for sexually transmitted infections and for pregnancies not brought to term came from Miller et al. (2006).

Table 9. Estimated Suicide Acts and Substance Abuse Resulting from Rape and Other Sexual Assault, California, 2012, and the Cost per Case (in 2012 Dollars)

Incidence of substance abuse and suicide acts were modeled using data from studies of twins (Kendler et al., 2000; Nelson et al., 2002). 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 rape and other sexual assault. The analysis assumed that child rape and other sexual assault raise risk by twice as much as do adult rapes. Published national unit cost data were adjusted to California prices (Miller & Hendrie, 2009; Fellows et al., 2002; Corso et al., 2007).

3. Data Limitations

The \$140 billion estimate is likely to be a fraction of the true costs, as the data for this report are limited in several ways. A major challenge in developing this report was the paucity of data on the incidence of rape and other sexual assault in California. The only data collected and published are on arrests and corrections populations. The authors were unable to identify centralized counts of police-reported sexual crimes other than forcible rape, jail or probation population by offense, or registered sex offenders released to California community residency during 2012. California uses BRFSS questions about sexual victimization that probe a much narrower set of adult incidents than the standard optional questions, and has not conducted a criminal victimization survey. Consequently, many incidence estimates in this report are extrapolated from national estimates or from local data, or based on the assumption that California incidence would mirror data from other states. That means the estimates have wide uncertainty ranges.

Moreover, it is widely acknowledged that available estimates of the incidence and prevalence of sexual violence are underestimated due to underreporting. Thus, cost estimates that were calculated by multiplying unit costs by California victimization rates, such as medical and mental health care, reduced quality of life, and lost productivity, are likely lower than the true figures.

Some relevant costs are intangible and difficult to estimate, while other costs are tangible, but are not centrally collected or were not accessible. For example, the following tangible and intangible costs are excluded from this report:

- Costs to those who are mistakenly suspected of committing sexual offenses
- Costs of personal and community protection like alarms and security services
- Costs of crimes committed by people whose experiences of victimization contributed to their criminal behavior
- Costs of family and relationship problems (e.g., divorce) that arise when someone is victimized or perpetrates sexual violence
- Loss of dignity of rape victims during the disclosure and/or investigation process
- Heightened fear and mistrust in neighborhoods, schools, workplaces and other community settings

The authors also sought cost information from various government and private agencies, but were either able to obtain only limited data or unable to obtain any data at all from some key institutions. For instance, limited information on costs incurred by colleges and universities was available, since such costs are currently often tied to sensitive issues such as litigation. California is also home to several hundred institutions of higher education that provide a wide range of prevention and response services, making it difficult to estimate overall costs accurately. Additionally, although estimates of some average salaries in the Department of Defense Sexual Assault Prevention and Response Office (SAPRO) are provided, the authors were unable to obtain SAPRO operating budgets or any indirect costs, such as labor costs of participation in prevention programming. Finally, though the U.S. Department of Veterans Affairs (VA) provides extensive counseling and other sexual violence response services in California, the authors were unable to obtain any data from the VA.

“Research has shown that programs that address the root causes of sexual violence, by modifying risk factors and/or enhancing protective factors, can prevent sexual violence perpetration.”

(Excerpted from Executive Summary)



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