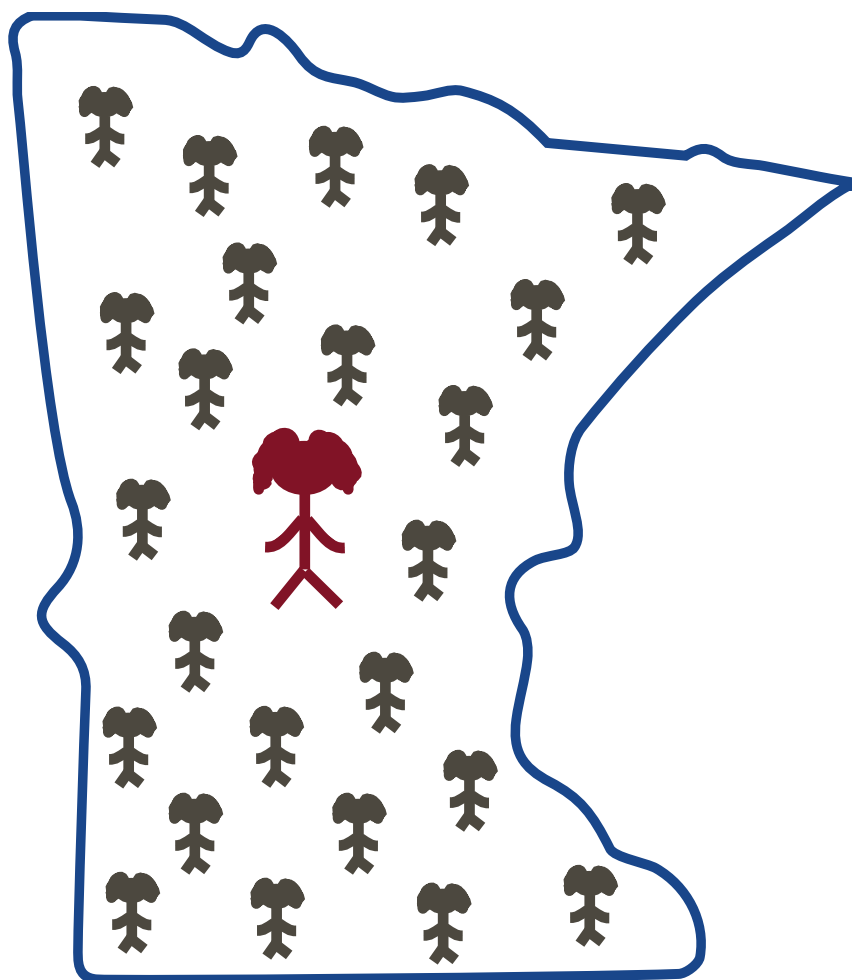


# Early Intervention to Avoid Sex Trading and Trafficking of Minnesota's Female Youth: *A Benefit-Cost Analysis*

Executive Summary



This report and executive summary is a product of the Minnesota Indian Women's Resource Center and funded by a grant from the Nathan Cummings Foundation. The authors would like to thank everyone who contributed to the report and executive summary, a list of contributors can be found in the full report.

© Minnesota Indian Women's Resource Center 2012

**Lead Author**

Lauren Martin, PhD  
Director of Research  
Urban Research Outreach-Engagement Center (UROC)  
University of Minnesota  
mart2114@umn.edu

**Lead Author**

Richard Lotspeich, PhD  
Professor  
Department of Economics, Indiana State University  
rickl@indstate.edu

**Author**

Lauren Stark  
Research Assistant  
Urban Research Outreach-Engagement Center (UROC)  
University of Minnesota



The Federal Bureau of Investigation (FBI) identified Minnesota as one of a dozen states with notable sex trafficking activity, particularly of juveniles.<sup>1</sup> Sex trading, prostitution, and sex trafficking are all terms used to reflect the act of exchanging sexual services for something of value. We use the term “sex trading” to include all these forms, including sex trafficking. When the individual providing these services is under the age of 18, this activity is a federal crime under the Trafficking Victims Protection Act (TVPA). Thus, according to Federal law all juvenile sex trading is, by definition, sex trafficking.

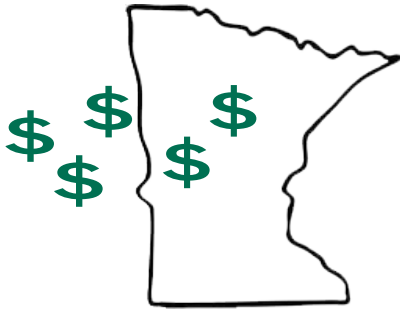
In the summer of 2011, the State of Minnesota passed the Safe Harbor for Youth Act. The Minnesota Safe Harbor Act views youth under the age of 16,<sup>2</sup> who are involved in any form of sex trading (including trafficking) as children in need of protection. It also increases penalties for purchasers, pimps and other traffickers of minors for the purpose of prostitution. The Act more closely aligns Minnesota State statutes with federal law (the TVPA) and creates structures for victimized youth to be routed into protective or healing services. Full implementation of the law is deferred until 2014 to allow law enforcement, service providers and judicial systems time to align with the new law’s requirements.

The Safe Harbor Act focuses on runaway and homeless girls in the State of Minnesota as a population at greatest risk of sex trading and trafficking. The analysis in our study is oriented to this current policy context of the Safe Harbor Act. Our benefit-cost model assumes that current investments by the state as described in this report will remain constant. Sex trading and trafficking of juveniles causes significant and documented harm to individuals and communities, such as poor health and mental health outcomes, unplanned pregnancy, violence, and more.<sup>3</sup> Here we summarize our study that demonstrates early intervention to prevent adolescent sex trading is in the best interest of Minnesota taxpayers.

<sup>1</sup>[http://www.fbi.gov/minneapolis/about-us/what-we-investigate/priorities#violent\\_crime](http://www.fbi.gov/minneapolis/about-us/what-we-investigate/priorities#violent_crime); National Security Priority Area number 8.

<sup>2</sup>This is accurate as of July 2012. It is possible that the legislature may raise that to age 18 in line with the Federal legislation (TVPA).

<sup>3</sup>The full report has an extensive discussion of these harms (p. 16-48). See for example, Estes, R., & Weiner, N.A. (2001). *The Commercial Sexual Exploitation of Children In the U.S., Canada and Mexico*. Philadelphia: University of PA School of Social Work.



Early intervention to avoid sex trading and trafficking of Minnesota's female youth passes a rigorous benefit-cost test with a return on investment of \$34 in benefit for each \$1 in cost. Therefore we find that it is in the best interest of Minnesota taxpayers to invest in prevention and early intervention services for runaway and/or homeless adolescent girls in the state who are at highest risk for sex trading and trafficking.

This report reflects only the benefit to the taxpayer through government expenditures and does not include private philanthropic investments. The benefit-cost model assumes that the specific current state expenditures described in the report remain constant. The full cost of sex trading and trafficking of adolescents extends well beyond taxpayer expenditures. The return on investment would be much larger if the full social, community and individual costs of sex trading and trafficking of adolescents were considered.

## About The Report

The authors were hired by the Minnesota Indian Women's Resource Center (MIWRC) using a grant by the Nathan Cummings Foundation to provide a carefully constructed benefit-cost analysis of early intervention to prevent sex trading by Minnesota's female youth, under the age of 18. Our definition and scope of analysis includes survival sex, sex trafficking of juveniles, and so-called juvenile prostitution. The authors of this report use the term "sex trading" to describe the sale of sex and sexual activity for money, food, drugs, clothes, a place to stay or anything else. We do not only use the term "trafficking" because part of our analysis includes those adolescents who continue sex trading into adulthood, where sex trading is not necessarily trafficking according to Federal law.

The report is complex because the issue of adolescent sex trading and trafficking is complex and it is not well researched. There is wide individual variation of experiences among adolescent females and vast differences in individual trajectories of sex trading and trafficking. While much research has been conducted on this topic, we found no nationally representative sample in a longitudinal study of adolescents involved in sex trading and trafficking on which to base our model. This is a difficult group with which to conduct research. Girls who trade sex (including victims of trafficking) are stigmatized by society and are often disconnected. Some are forcibly controlled by others. They are hard to find, lack trust and may be scared to participate in research. Therefore, our analysis rests on conservative best estimates based on available scholarly evidence. When judgment was required we selected the most conservative option. For purposes of this study the authors focused on research pertaining to sex trading and trafficking among runaway and homeless adolescent girls ages 12-17, as well as, the proportion of those youth who trade sex into adulthood. We include all racial and ethnic groups.

The full 83-page report is a quantitative evaluation of benefits and costs related to early intervention and prevention of sex trading and trafficking of adolescent females in the State of Minnesota. The report focuses narrowly on benefits and costs to the tax payers of Minnesota.



## The Benefit-Cost Model

Our benefit-cost model examines the return to the tax payers of Minnesota if they invest in prevention of female adolescent sex trading, including sex trafficking. The model assumes that current state expenditures on the health and wellbeing of the population of Minnesota remain constant.

Research shows that sex trading and trafficking cause harm to the individuals providing sexual services as well as the broader community. Some of these harms require public expenses paid for by the tax payers of Minnesota. In our model the “benefits” are the avoidance of these harms by successful intervention that prevents female adolescent trading sex (and trafficking), where these harms reflect public spending. The “costs” are expenditures the state must make to pay for the early intervention and prevention program. The benefit-cost analysis is a quantitative economic model that compares the cost of the program with the multi-year stream of benefits resulting from prevention of sex trading and trafficking.

We calculated our Return on Investment (ROI) as a net present value. The formula for our calculation of net present value is provided in this summary. Our model uses additional formulas, not shown here, to derive valuations for each variable in our net present value formula.

$$NPV = \sum_{t=1}^T \frac{B_t}{(1+r)^t} - IC$$

NPV Net Present Value: if this is a positive number, the program passes a benefit cost test.

t Time in yearly increments.

Expenditures for the intervention program are incurred at  $t = 0$ ,

Benefits from the program accrue in discrete years starting in  $t = 1$ .

T The full time horizon over which benefits accrue.

IC Investment Cost, i.e. the cost of the intervention program.

Bt Benefits per yearly time period - defined as the value of harms avoided in each year.

r Discount rate



# Harms of Sex Trading Avoided (Benefits)

Sex trading (trafficking) is associated with many short and long term harms to adolescent females involved. This includes a wide range of poor health and mental health outcomes, experience of violence and intimidation, homelessness, chemical dependency, unplanned pregnancy, involvement in criminal justice, decreased lifetime earning, welfare expenditures (food stamps, MFIP, Social Security, Medicare, etc.), and loss of human potential. For this study we identify, document and quantify only those harms that can be directly attributed to sex trading and that have a clear impact on the public treasury. We identify and evaluate 16 specific harms that research with strong empirical evidence shows are caused by sex trading, including trafficking.

For each of the 16 harms analyzed in our model, we specify a unit of measure, estimate of unit cost, time profile, and harm quantity per year. Each of these harms has a high degree of complexity with respect to both prevalence and dollar valuation.

Time profile is both important and hard to document. The length of time an individual is involved in sex trading influences the degree of harm to the individual, and thus to local and state expenditures that address these harms. We found no representative, longitudinal study on the average length of time adolescents engage in sex trading. This is a hidden problem in many communities, highly stigmatized and often unrecognized. Absent clear empirical evidence, we constructed a pattern of trajectories that resulted in an estimated average duration of 7 years in the sex trade per juvenile, which is consistent with the limited empirical evidence. Our model requires an average age of first involvement in the sex trade. We set an average age of 14, which is consistent with the limited evidence.<sup>4</sup> This implies that two thirds of these adolescents will continue trading sex into adulthood. This justifies the inclusion of costs to the tax payer incurred by those adolescents who continued trading sex into adulthood.

Numerous additional harms caused by sex trading have been documented by research and practice, but were not included in this analysis because we could not identify a direct cost to the public treasury or we could not establish a clear and direct causal link to sex trading as an adolescent. Some of these include untreated medical issues, poor mental health, pain and suffering, the impact of multi-generational trauma and poverty, the full cost of welfare payments, and lost human potential. Thus, our conservative analysis likely reflects a minimum return on investment to the taxpayer.

Our identification and quantification of harms has some limitations. Many assumptions and rough estimates are involved in reaching these results.<sup>5</sup> But we believe the estimates are reasonable given the available evidence and

<sup>4</sup>Please note that this is an average derived for the purposes of this model only. We are not making a statement on the actual average age of first involvement in sex trading. The research is not yet clear enough to definitively establish an average age of first involvement. Research and practitioners report seeing both much younger and older age of first involvement in sex trading.

<sup>5</sup>A full discussion of the literature and our estimates can be found in section 3. Harms Related to Sex Trading on page 14 of the full report.

## 16 Analyzed Harms

Minor assault  
Major assault  
Post traumatic stress disorder  
HIV/AIDS  
Chlamydia early-treatment  
Chlamydia late-treatment  
Unintended pregnancy with abortion  
Unintended pregnancy with birth  
Arrest as juvenile  
Arrest as adult  
Court hearing – adults  
Incarceration - adults  
Probation - adults  
Foster care for children in state custody  
Chemical dependency treatment  
Forgone income tax revenue

likely represent a low end of the potential value of harms. We have taken great pains in assembling and evaluating the empirical information on which our estimates are based, and where we were forced to make choices, we elected more conservative assessments of both harm prevalence and unit costs. Detailed analysis of the cost savings of harms avoided by early intervention and prevention is highly complex and not presented in this summary. The reader may find explanation of these factors in the full report.

We reiterate that our model only considers costs that directly affect public budgets (i.e. expenses incurred by the tax payers of Minnesota). The social harms of adolescent sex trading extend well beyond these. Additional costs and/or loss of benefits are incurred by non-profits, school systems, families and communities, and the overall economy. But the analysis of the full social value of the harms of adolescent sex trading, including trafficking, was beyond the scope of this study.



## Intervention and Prevention Program

A state-wide program that would fulfill the goals of the Safe Harbor for Youth Act will need to consider the following elements: screening of runaway and homeless female youth for their risk of sex trading, including trafficking; referral to specific programs based on the screening; housing of various types as needed. Such a program is not yet in operation in Minnesota. To evaluate costs we combined information from a promising public health model in Ramsey County, MN with estimates of housing needs provide by the Homeless Youth Services Coordinator for the State.

We use expenditures by an existing program of this nature currently operating in an urban area, the Runaway Intervention Program (RIP) in Ramsey County. Program costs include screening, referral and health exam for all youth in the target population. RIP does not provide housing, so these costs are not included in their program cost estimates. RIP provided cost estimates for the overall program and for the most intensive level. This program has demonstrated success with this population and evaluated program outcomes. Using secondary data on homelessness and runaway youth in Minnesota we estimate that each year there are at least 391 female youth who trade sex in Minnesota.<sup>6</sup> Our model estimates the accuracy of “filtering” youth into the correct level and type of services as well as the effectiveness of each program element at preventing and intervening in sex trading.<sup>7</sup> We assume therefore that the statewide version of RIP would serve a minimum of 496 individual girls in the first year.

Minnesota’s Safe Harbor Act targets runaway and homeless youth as the key population for intervention services, as they are most vulnerable to exploitation. Lack of stable housing for adolescents is a key risk factor for sex trading, including trafficking. Therefore we also include the cost of housing in our estimate of program cost. The Homeless Youth Services Coordinator for the Department of Human Services at the State of Minnesota provided cost estimates per day for each type of housing, an estimate of the proportion of homeless youth requiring each type of housing, as well as average length of stay per housing type. Some youth require no housing support. Others need only emergency shelter; while others require transitional or long-term supportive housing. We used this data to construct a weighted average of the total cost of shelter per person and the dollar amount currently spent by the state to support this housing.<sup>8</sup>

<sup>6</sup>Wilder. (2010). Homelessness in minnesota 2009: Results of the wilder statewide survey (pp. 1-85). Saint Paul, MN: Wilder Research; Larson, A. (2008). Estimating homeless and highly mobile students Minn-LInk Issue Brief (Vol. 7B, pp. 1-2). Minneapolis, MN: Center for Advanced Studies in Child Welfare. Described in detail in Appendix A2 (p. 65-6) Wilder study; child welfare study

<sup>7</sup>Filtering and program effectiveness are described in the report in section 2 (p. 8-9), in section 4 (p.50), section 5 (p. 55-58), and in Appendix A1 (p. 64).



## Benefit-cost results

We find that prevention of adolescent sex trading is in the best interest of Minnesota taxpayers. It results in a return on investment of approximately \$34 for every \$1 spent. Our quantitative assessment factored in several sensitivity analyses pertaining to five main model parameters: discount rate, program effectiveness, filtering efficiency, elasticity of demand and elasticity of supply. The results of our sensitivity analysis can be found in the full report.

Our best estimate finds that for each adolescent female in the intervention program, the tax payers of Minnesota will save at least \$58,229 over a 30 year time horizon. If the program serves a cohort of 496 girls, the state would save approximately \$28.9 million.

The greatest annual savings projected in the model accrue in the first and second year after the intervention. In the first year, the state would likely save \$5,120 per year for each individual with a likely total savings of over \$2.5 million (with an additional \$2.6 million in the second year). Table 7 in the full report shows the annual aggregate benefit per client per year for all 30 years of the model.

Each adolescent served in programming during every additional year of program operation will initiate their own additional stream of benefits to the State of Minnesota.



## Conclusion

The findings of this research clearly demonstrate a positive net value, or return on investment to the public sector, of at least 34:1 for early intervention with adolescent girls at risk of sex trading (including sex trafficking). While acknowledging the complexity and difficulty of fully estimating the cost of harms to this population, the damage to juvenile girls is likely under-reported due to the stigmatization of the activity and reluctance of girls to admit sex trading.

Our work in estimating the value of harms caused by sex trading and trafficking of adolescents took pains to understate them when judgment was required. Due to limited evidence, some forms of harm are entirely excluded from our model. We are unable to definitively quantify some costs, such as long term mental health problems, traumatic brain injury, and lost consumer power. Others are costs that are likely unquantifiable, such as lowered self-worth, pain and suffering. Therefore, we believe that the evidence we have compiled argues strongly that pursuit of early intervention and prevention of adolescent sex trading is in the best interest of Minnesota citizens. This is true even from the narrow perspective of direct cost to tax payers through public budgets, but does not include long term harms mentioned above or the human impact on the victims or their families.

Most of the harms of sex trading, including trafficking, of adolescents are not paid for directly by public expenditures. Some are paid for by the non-profit sector and philanthropy. For example, youth serving housing agencies, health clinics and case management programs for this population seek funds from a wide ariety of sources. But most of the immediate costs are borne by individuals and their families. Many adolescents involved in sex trading do not receive needed services and live on the streets (or in precarious housing). Our model does not account for the lifelong toll associated with intangible harms such as fear, pain, suffering, and the lost human potential of those adolescents involved in sex trading, their children and their families. If our analysis included a broader conception of benefit and cost, such as the costs borne by individuals, families and communities, the recommendation would only be stronger.

<sup>8</sup> Calculations of these costs estimates can be found in section 4. Program Costs (p. 48-55).







**Lead Author**

Lauren Martin, PhD  
Director of Research  
Urban Research Outreach-Engagement Center (UROC)  
University of Minnesota  
mart2114@umn.edu

**Lead Author**

Richard Lotspeich, PhD  
Professor  
Department of Economics, Indiana State University  
rickl@indstate.edu

**Author**

Lauren Stark  
Research Assistant  
Urban Research Outreach-Engagement Center (UROC)  
University of Minnesota

© Minnesota Indian Women's Resource Center  
2012

To request the full report please contact the Minnesota Indian Women's Resource Center at 612-728-2000, or Suzanne Koeplinger at skoeplinger@miwrc.org, or Joni Buffalohead at jbuffalohead@miwrc.org

For further questions or comments on the full report or executive summary, please contact Lauren Martin  
mart2114@umn.edu

**Acknowledgements**

We would like to thank the Nathan Cummings Foundation for their grant support for this project. We would also like to thank Jon Luke Robertson for his graphic and formatting design work on the executive summary as well as assistance in editing. Lastly, we want to thank the Center for Early Education and Development which managed the contract for the author.



**UROC** | Urban Research and Outreach-Engagement Center

---

UNIVERSITY OF MINNESOTA  
**Driven to Discover<sup>SM</sup>**