

Cost Savings and Cost Effectiveness of the Cuyahoga County Sexual Assault Kit Task Force

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Introduction

The following includes the cost savings and cost effectiveness of the Cuyahoga County Sexual Assault Kit (SAK) Task Force. **Our findings are based upon**

the number of unsubmitted SAKs that had been tested as of January 1, 2016.

Estimates presented here are intended to serve as conservative estimates of the cost savings or cost effectiveness of the testing of the unsubmitted SAKs.

Our key findings:

- From the 4,347 SAKs tested as of January 1, 2016, we project a total of 1,290 indictments and 948 convictions, which represent 90.5% of all indicted, non-dismissed cases and 21.8% of all tested SAKs—a rate much higher than previously expected and higher than most other jurisdictions testing their unsubmitted SAKs.

Sexual assault is a crime that is underreported (approximately 2 of 3 cases are not reported), under-investigated, under-prosecuted, and generally under-prioritized.

These findings provide further evidence of the cost victims and the community have suffered because of under-prioritization.

- The total tangible and intangible costs to the victims associated with the unsubmitted SAKs tested as of January 1, 2016 is \$885.8 million dollars.

- The total cost of testing and investigating the unsubmitted SAKs is estimated to be \$9.6 million dollars.

- The total cost savings of future sexual assaults averted due to the SAK Task Force as of January 1, 2016 is \$48.2 million dollars.

- The SAK Task Force is projected to produce a net savings of \$38.7 million dollars to the community.

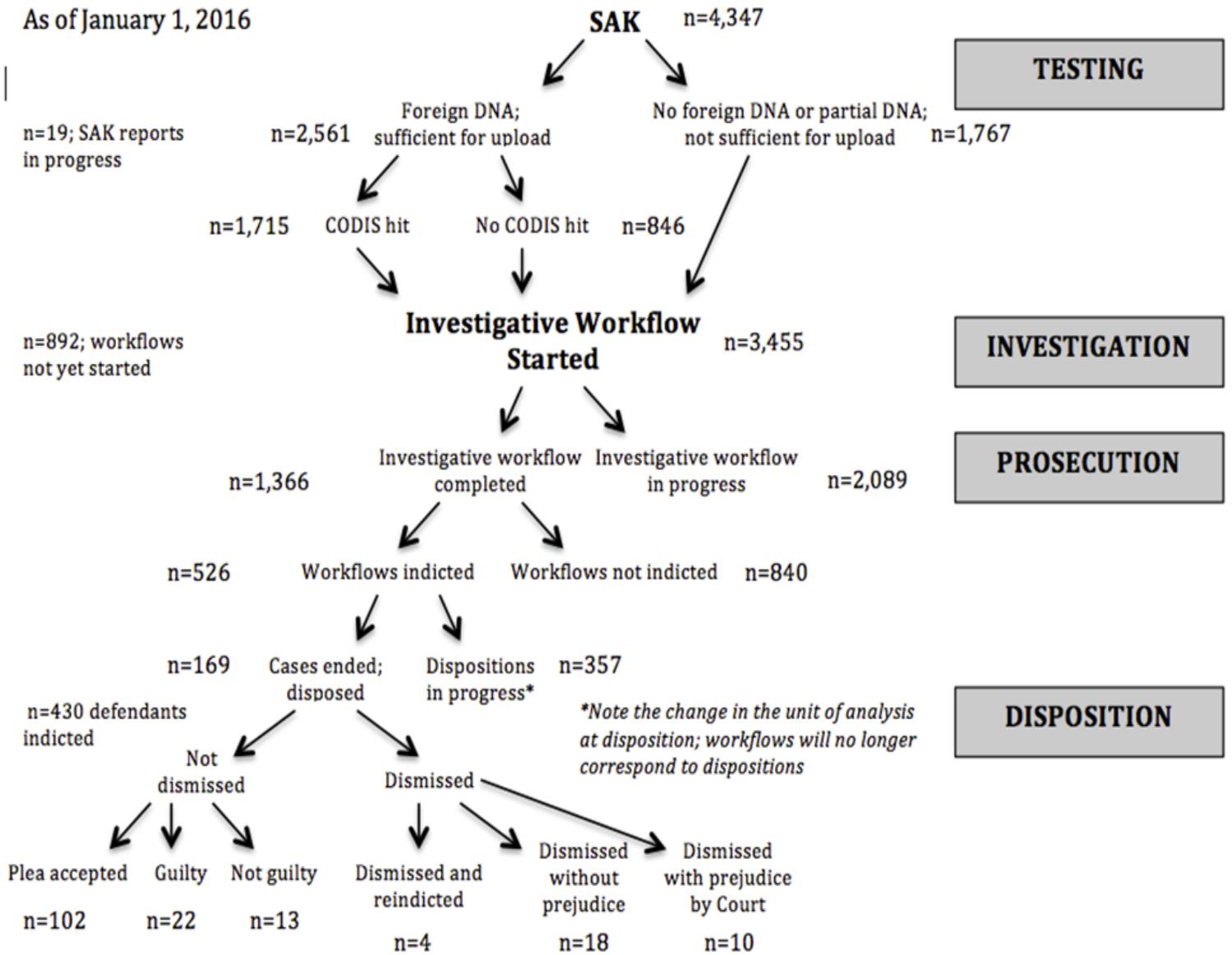
Each SAK tested produces a net savings to the community of \$8,893.

Effectiveness

Figure 1 details the Task Force processing of a SAK from testing to disposition, with four main phases to this process: Testing, Investigation, Prosecution, and Disposition. As a SAK proceeds through the process, it (potentially) changes from a SAK, to an investigation, to a prosecution, and to a final disposition. We base our estimations of effectiveness on the numbers presented in Figure 1.

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Figure 1. Cuyahoga County's Sexual Assault Kit Task Force Testing Process



NOTES: For more information on the process, see the brief: Lovell, R., Butcher, F., Flannery D. (2016). Describing the Process of Testing, Investigating, and Prosecuting Unsubmitted SAKs in Cuyahoga County.

Indictments

As of January 1, 2016, 1,366 investigations have been completed by the SAK Task Force resulting in 526 indictments². We project the rate of indictment will be reduced for the remaining investigations as the Task Force will not likely be indicting as many no CODIS hit and no DNA cases. We estimate a 1/3rd reduction in the rate of indictments, leading to a 50% increase in the number of investigations required per indictment.

Based on current practices, we estimate:

- Current number of investigations per indictment: 2.6 ($1,366 \div 526 = 2.6$).

- Projected number of investigations per indictment for remaining cases: 3.9 ($1.5 * 2.6 = 3.9$)
- Total number of additional indictments from investigations that have not yet been completed: 764 (a total of 2,981 SAKs have yet to have completed investigations [$4,347 - 1,366 = 2,981$] as of January 1, 2016; $2,981 \div 3.9 = 764$)
- **Total number of indictments from the 4,347 SAKs: 1,290 (526 + 764)**

Convictions

Figure 2. Number of SAKs, Testing to Conviction as of January 1, 2016



2. These numbers are derived from JusticeMatters and presented in the Cuyahoga County Prosecutor's Office Scorecard.

As of January 1, 2016, 169 cases (of the 526 indictments) have been completed, with 137 resulting in a guilty verdict, a not guilty verdict, or a plea (e.g., not dismissed)- 81.1% of all completed cases ($137 \div 169 = 81.1\%$) (see Figure 2).

We expect a steady rate of non-dismissed cases for future SAKs.

- Projected number of non-dismissed cases (e.g., guilty verdicts, not guilty verdicts, and pleas) from the projected 1,290 indictments: $1046 (.811 * 1,290 = 1046)$

We expect a steady rate of non-dismissed cases for future SAKs.

- Current conviction rate for non-dismissed cases: $90.5\% (124 \div 137) = 90.5\%$ [22 guilty verdicts, 102 pleas]³
- Projected number of convictions from the non-dismissed cases: $947 (.905 * 1,046 = 947)$

A conservative estimate of the total percentage of SAKs that will result in a conviction: 90.5% ($947 \div 1,046$) of all indicted, non-dismissed cases and 21.4% ($947 \div 4,347$) of all tested SAKs— rates much higher than previously expected and higher than most jurisdictions that are testing, investigating and prosecuting their unsubmitted SAKs.

Costs Associated with the SAKs⁴

Below we detail costs for three aspects of the SAK process:

- Cost prior to the testing and investigating of SAKs (e.g., costs to victim)
- Cost of testing and investigating the SAKs (e.g., DNA testing, cost of investigating)
- If convicted, cost of future crimes averted (e.g., costs to victim).

3. An offender can be associated with more than one SAK, and there can be multiple offenders in a single SAK.

4. These estimates ignore the cost of actual prosecution since this is part of society's decision that indictments should be prosecuted, and the convicted offender incarcerated. This is with the knowledge that incarceration is expensive and the offender when incarcerated will not be working, so there is some loss of productivity.

Cost Prior to the Testing and Investigating of SAKs

The cost incurred prior to the testing and investigating of SAKs is primarily the cost to the victim. This is slightly conservative, as it does not include the police cost in the original handling of the case when the SAK was not tested.

Tangible and intangible costs of sexual assault provided below are based upon those provided by McCollister, French, and Fang (2010) (see Figure 3).

Tangible Cost: Cost to the victim

Tangible costs include the direct cost of crime, including medical expenditures, cash losses, property theft or damage, lost earnings due to injury, and other victimization-related costs. Costs are based on survey-based research. The costs do not factor in long-term reduced income from interrupted education and long-term mental health issues, such as Post-Traumatic Stress Disorder or increased rates of substance abuse or suicide.

Total tangible cost of the sexual assault per victim: \$5,556

Total cost for all SAKs tested as of January 1, 2016: \$24,151,932 (\$5,556 per victim * 4,347 victims = \$24,151,932).

Intangible Cost: Pain and Suffering

Intangible costs of sexual assault include indirect losses suffered by crime victims, including pain and suffering, decreased quality of life, and psychological distress and are based on jury awards. Cost of premature mortality is not included since none of the victims in the untested SAK kits were killed in the attack.

Total intangible cost for the sexual assault per victim: \$198,212

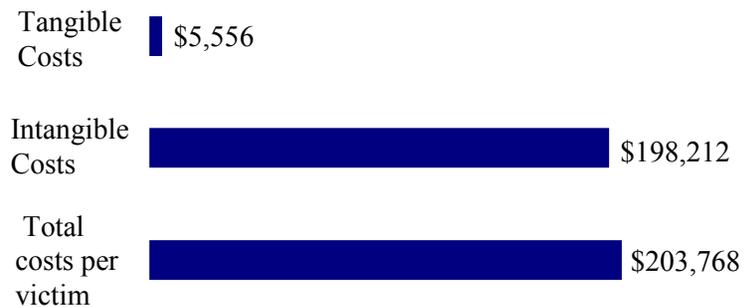
Total cost for all SAKs tested as of January 1, 2016: \$861,627,564 (\$198,212 per victim * 4,347 victims = \$861,627,564)

Total Cost: Tangible Cost + Intangible Cost

Total cost of the sexual assault per victim:
\$203,768 (\$5,556 + \$198,212)

Total cost for all SAKs tested of January 1, 2016: \$885,779,496 (\$203,768 * 4,347 victims = \$885,779,496).

Figure 3. Number Cost of Sexual Assault per Victim



Cost of Testing and Investigating SAKs

Figure 4 details the cost of testing and investigating sexual assault per SAK.

Cost of the DNA Testing

The Ohio Bureau of Criminal Investigations (BCI) tested Cuyahoga County's unsubmitted SAKs. According to the BCI, the cost per DNA test:

Supplies: \$435 per SAK

Lab scientist: \$514.29 per SAK (\$720,000 for 10 scientists per year, approximately 1,400 SAKs tested per year, $720,000 \div 1,400 = \$514.29$)

Total DNA testing cost: \$949.29 per SAK (\$514.29 + \$435 = \$949.29)

Cost of Investigating

The Task Force investigates all reports from the BCI on the SAKs. All SAKs will have a DNA report from the BCI. According to the Task Force, the cost per investigation:

Cost of investigators: \$882.80 per investigation (40 hours per investigation* \$22.07 per hour = \$882.80)

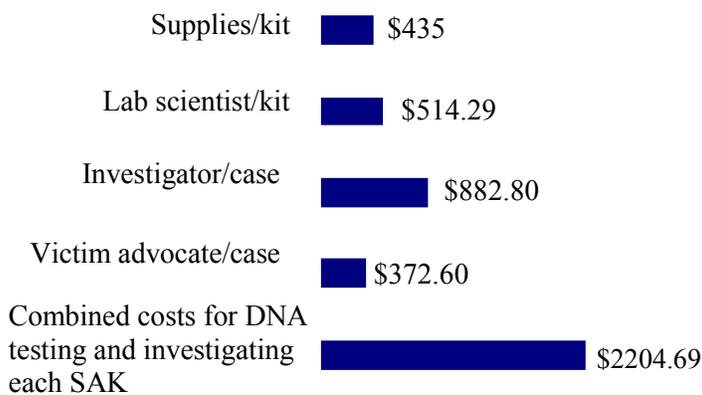
Cost of victim advocates: \$372.60 per investigation (20 hours per investigation * \$18.63/hour = \$ 372.60)

Total cost per investigation: \$1,255.40 per investigation (\$882.80 + \$372.60 = \$1,255.40)

Total Cost of Testing and Investigating the SAKs

Total cost for DNA testing and investigating: \$2,204.69 (\$949.29 + \$1,255.40 = \$2,204.69).

Figure 4. Cost of Testing and Investigating Sexual Assault per SAK



Total cost for DNA testing and investigating all SAKs tested as of January 1, 2016: \$9,583,787 (\$2,204.69 per SAK * 4,347 SAKs = \$9,583,787).

Figure 5 compares the cost to the victim to the cost of testing and investigating. **The cost to the victim is over 92 times higher than the cost of testing and investigating the SAK.**

Figure 5. Cost of Sexual Assault to the Victims



Cost of Future Sexual Assaults Averted

Preliminary analysis of the SAK Task Force data suggests that conservatively 25% of the offenders subsequently committed another reported sexual assault— crimes that could have possibly been prevented if the SAKs were tested at the time and led to conviction.

This estimate is based upon statistics collected by the Task Force on serial offenders, data collected as part of the Cuyahoga County Sexual Assault Kit Pilot Research Project (Lovell, Butcher, and Flannery 2016) and data collected as part of Detroit’s unsubmitted SAKs (Campbell, Fehler-Cabral, Pierce, Sharma, Bybee, Shaw, Horsford, and Feeney, 2015).

Thus, we conservatively estimate that 25% all sexual offenders will commit a subsequent sexual assault that is reported.

The cost of future sexual assaults averted per offender convicted are calculated based upon the 25% reported reoffending and the cost to the victim.

This estimate is very conservative, considering that only about 1 in 3 cases of sexual assault are reported (Truman and Langton, 2015).

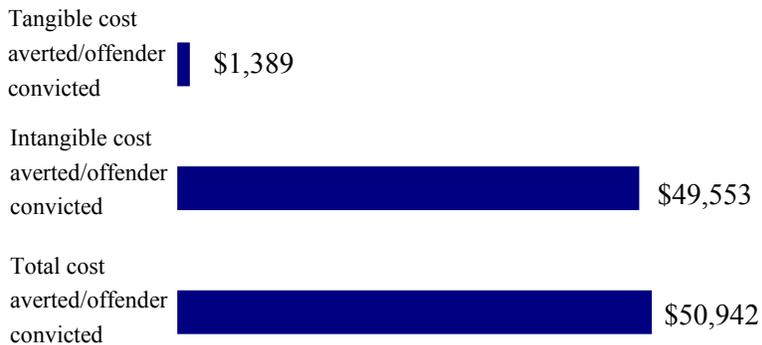
Figure 6 depicts the tangible, intangible, and total cost averted.

Tangible cost averted per offender convicted:
\$1,389 (.25 * \$5,556 = \$1,389)

Intangible cost averted per offender convicted:
\$49,553 (.25 * \$198,212 = \$49,553)

Total cost averted per offender convicted: \$50,942
(.25 * \$203,768 = \$50,942)

Figure 6. Cost of Future Sexual Assaults Averted per Offender Convicted



Using the above projection of 947 convictions from the 4,347 SAKs tested as of January 1, 2016:

Tangible cost of future sexual assaults averted due to SAK Task Force:
\$1,315,383 (947 * \$1,389 = \$1,315,383)

Intangible cost of future sexual assaults averted due to SAK Task Force:
\$46,926,691 (947 * \$49,553 = \$46,926,691)

Total cost of future sexual assaults averted due to SAK Task Force: \$48,242,074 (\$1,315,383 + \$46,926,691)

Cost-Effectiveness of the SAK Task Force

We present the cost-effectiveness of the SAK Task Force in terms of the cost per indictment and the cost per conviction. As stated previously:

Total cost of the SAK Task Force: \$9,583,787

Tangible cost of future sexual assaults averted due to SAK Task Force: \$1,315,383

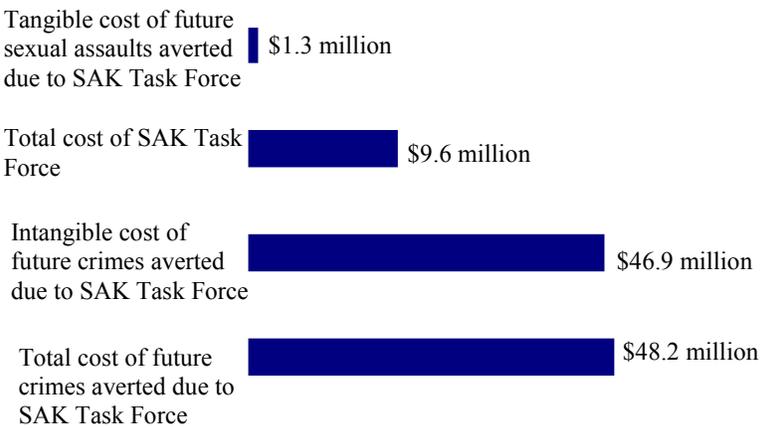
Intangible cost of future crimes averted due to SAK Task Force: \$46,926,691

Total cost of future crimes averted due to SAK Task Force: \$48,242,074

Projected number of indictments: 1,290

Projected number of convictions: 947

Figure 7. Cost of Future Sexual Assaults Averted



Net Savings of the SAK Task Force

Figure 8 shows the net savings of the Task Force.

Total net tangible cost: \$8,268,404 ($\$9,583,787 - \$1,315,383 = \$8,268,404$)

Total net tangible cost per SAK: \$1,902 ($\$8,268,404 \div 4,347 = 1,902$)

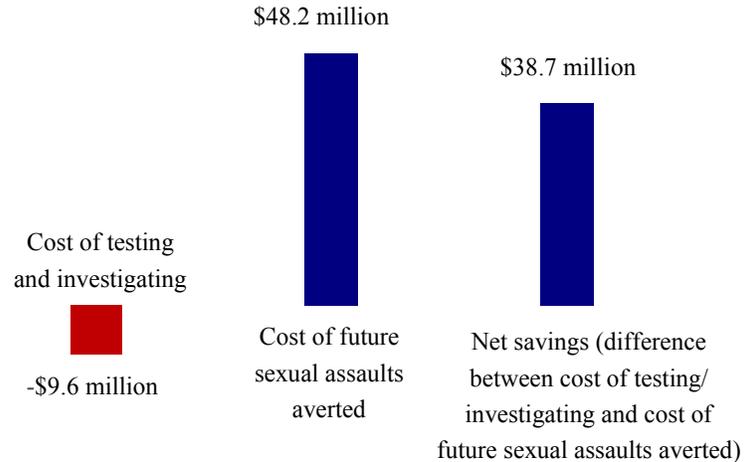
Total net savings: \$38,653,287 ($\$48,242,074 - \$9,583,787 = \$38,658,287$)

Total net savings per SAK: \$8,893 ($\$38,658,287 \div 4,347 = \$8,893$)

Thus, including both the tangible and intangible cost, each SAK tested and investigated produces a cost savings to the community of \$8,893.

Total costs averted: savings of \$38,724,008 and 948 convictions

Figure 8. Net Savings of the SAK Task Force



Discussion

In sum, the cost to the 4,347 sexual assault victims is over \$885.8 million dollars; the total cost to test and investigate the SAKs is \$9.6 million; the cost of future sexual assaults averted due to the SAK Task Force is over \$48.2 million, and the Task Force has brought a net savings to the community of over \$38.7 million dollars.

The findings presented in this report have several important implications. First, sexual assault is extremely costly to victims and to the community. In fact, sexual assault is the second most expensive violent crime after murder (McCollister, French, and Fang, 2010).

Second, the cost to test and investigate the SAKs is significantly smaller than all other associated costs presented in this report. In fact, the Task Force has actually produced a net savings of \$38.7 million— accounting for the cost of testing and investigating the SAKs and the savings associated with the cost of averting future sexual assaults. This results in a cost savings of \$8,893 for each SAK that is tested and investigated.

Given the estimate that 25% of offenders will commit a subsequent sexual assault that is reported (not even accounting for the fact that 2/3rd of cases go unreported) and how costly sexual assaults are to victims and the community, these findings highlight just how important it is to test, investigate, and prosecute all SAKs.

Sexual assault is a crime that is underreported, under-investigated, under-prosecuted, and generally under-prioritized. These findings provide further evidence of the cost the victims and the community have suffered because of this under-prioritization.

Given the conservative estimate that 25% of offenders will commit a subsequent sexual assault that is reported and how costly sexual assaults are to victims and the community, these findings highlight just how important it is to test, investigate, and prosecute all SAKs.

References

Campbell, R., Fehler-Cabral, G., Pierce, S., Sharma, D., Bybee, D., Shaw, J., Hornsford, S., Feeney, H. (2015). “The Detroit Sexual Assault Kit (SAK) action research project: final report.” <https://www.ncjrs.gov/pdffiles1/nij/grants/248680.pdf>.

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McCollister, K., French, M., Fang, H. (2010). The cost of crime to society: new crime-specific estimates for policy and program evaluation. *Drug Alcohol Dependence*. 108:98-109. [doi:10.1016/j.drugalcdep.2009.12.002](https://doi.org/10.1016/j.drugalcdep.2009.12.002).

Truman, J.L., Langton, F. (2015). Department of Justice. Office of Justice Programs, Bureau of Justice Statistics. *Criminal Victimization, 2014*. <http://www.bjs.gov/content/pub/pdf/cv14.pdf>