

SAKI Cost Benefit Analysis

Cost benefit analysis (CBA) is an important tool for understanding the net effects of testing previously unsubmitted sexual assault kits (SAKs). Many jurisdictions throughout the country are implementing CBA to evaluate more inclusive testing practices and to better understand the impact of testing.

The National Sexual Assault Kit Initiative (SAKI) is critical to supporting the jurisdictional reform of the approach to unsubmitted SAKs and enhancing the criminal justice response in these cases. CBA is just one tool for securing or justifying funding and support by demonstrating the system-wide cost savings associated with testing SAKs.

CBA is used to evaluate a program's or policy's financial outcomes, account for program operating costs, and identify the benefits of the program outcomes. CBA plays an essential role in outcome evaluations, which consider a policy's effectiveness and efficiency. In facing difficult decisions about resource allocation, research-informed evaluations can help determine whether a particular policy is fiscally sound.

Even in the absence of direct financial outcomes, framing a policy in terms of dollars saved for every dollar spent can significantly impact ongoing funding. This becomes increasingly important for SAK processing and testing as jurisdictions move between different funding sources. For example, as agencies move from reliance on federal funds to state or local support, CBA can help identify or justify sustainable best practices. Overall, this means that exploring and presenting cost savings can (1) help to expand effective policies that save money and (2) have a net benefit to society beyond financial savings, in the case of SAK testing.

CBA in the Context of SAKs

Policymakers must evaluate the financial impacts of whether to address all previously unsubmitted SAKs. This evaluation includes estimating costs associated with testing against the benefits of holding offenders accountable and preventing further victimization. A 2018 Kentucky Sexual Assault Response Team Advisory Committee report succinctly states, "It would cost victims and taxpayers less to test all Sexual Assault Forensic Evidence (SAFE) kits swiftly upon collection than to shelve kits and allow perpetrators to commit new crimes" (Hoelscher, 2018).

"If testing rape kits doesn't appeal to one's better nature of providing justice for victims and a safer community for all, we can also show that these efforts can improve the bottom line."

—Rachel Lovell (2016)

Much of the research in this area comes from SAKI site efforts. Indeed, all relevant literature points to the cost savings of preventing another sexual assault as significantly outweighing the costs associated with testing. Singer and colleagues (2016) estimated that in one jurisdiction, the total cost of preventing future sexual assaults due to testing was \$48.3 million. This compares to the \$9.6 million needed to test all SAKs. Davis and Wells (2019) used data from Denver and concluded that testing cold case SAKs was similarly cost effective, despite the delay between victimization and testing.

Applying CBA to the SAK testing process is not limited to examining money saved for each tested SAK. CBA can also be broadly applied to questions of staffing efficiency—or the examination of SAK testing workflow—to identify improvements or policy changes. For example, an initial investment in a multidisciplinary team's shared workspace may provide substantive improvements to that group's workflow and cohesion that may justify the upfront cost (Luminais et al., 2017). Additionally, evaluating victim advocacy approaches may identify cost saving opportunities that result in the same level of victim engagement and satisfaction. CBA can be creatively applied to numerous aspects of the SAK workflow.

Primary Considerations

Identifying Costs and Benefits. When conducting a CBA, the goal is to create a comprehensive account of all costs and benefits—including tangible and intangible aspects. Tangible costs are readily translated into financial terms. In the context of SAK testing, the Cuyahoga County Prosecutor's Office (Ohio) case study provides an example of a crime's

- ◆ Direct costs associated with additional testing (e.g., supplies, labor costs, storage)

- ◆ Criminal justice costs (e.g., investigative time, victim services, prosecution)
- ◆ Direct costs to the victim (e.g., medical expenses, lost productivity, damaged property).

Even within tangible costs, some are more evident than others. A victim's medical bill is well defined, but it may also make sense to consider distal outcomes—such as possible lifelong consequences of interruptions to education.

Intangible costs are indirect and include pain and suffering, decreased quality of life, and psychological distress. In this context, benefits can be conceptualized as the possible prevention of additional victimizations. The CBA is only as effective as the factors considered, so evaluating all aspects of testing, investigative costs, and costs to the victim is important. To that end, considering the challenges of estimating intangible costs and ensuring only accurate costs and benefits are included so as to not inflate the CBA's results is also important.

Assigning Value. A prominent issue in CBA generally is that not all costs or benefits are measured in dollars spent or saved. For SAK testing, fixed costs (e.g., equipment or labor hours) may be easy to evaluate. However, assigning a cost to a sexual assault—or even cost savings to the prevention of a sexual assault—can be morally and logistically difficult. However, this is the standard practice for considering the tangible and intangible costs of crime and crime prevention. Attempts to measure the true cost of a crime are varied. Approaches, such as contingent valuation, employ survey methods to assess what people would be willing to spend to prevent a crime (Cohen & Bowles, 2010). More direct measures attempt to sum the total costs to society—including medical costs, lost wages, decreased quality of life, and associated criminal justice process costs (Montemayor & Hunt, 2020, McCollister et al., 2010). These estimates place rape/sexual assault as second only to homicide in their costs—at around \$265,000 per crime. The potential for positive hits to prevent repeat sexual assaults contributes significantly to the net benefits associated with testing SAKs.

Determining Which SAKs. CBA not only answers the question of whether a policy is worth it but also addresses the value in comparing a policy's methods or variations to determine the most effective option. One prominent discussion in SAK testing is whether testing should be limited to a selected sample or completed for the entirety of unsubmitted SAKs. Selective testing can occur by (1) prioritizing only those SAKs with the greatest likelihood of a match to an existing sample in the Combined DNA Index System (CODIS) or (2) choosing the most probative samples within the SAK itself.

Recent CBA research has directly addressed these discussions. Wang and Wein (2018) address the cost effectiveness of testing all SAKs and conclude that this approach is recommended, with each SAK (1) costing \$1,641 to test and (2) averting sexual assaults costing about \$133,484 on average. Wang and colleagues (2020) also note that some municipalities opt to test only a SAK's most probative samples. They suggest that by testing all of the SAK's samples, the yield of positive hits doubles for only a modest increase in cost. There are increased tangible costs associated with testing all SAKs and samples. Findings have consistently shown this approach to be extremely cost effective—so much in fact that it is recommended over selective sampling.

Case Study: Cuyahoga County Prosecutor's Office (Ohio)

A recent cost analysis by Cuyahoga County's SAKI site serves as an effective case study of how to conduct these analyses; Cuyahoga County's example also illustrates the choices made for key considerations about measuring costs and determining which SAKs to test (Lovell et al., 2021).

Identifying and assigning value to the costs and identifying the probability of the benefits are foundational steps for any CBA. In this case, positive matches—here defined by those tests that result in indictments and convictions—drive the benefits to testing SAKs. Of the SAKs Cuyahoga County tested, 10.2% resulted in conviction, which—based on calculated recidivism rates—prevents repeat offenses and provides financial and societal benefits. The researchers enumerated costs in three categories: cost of testing, cost of investigating, and cost to victims (i.e., societal costs). In balancing the known costs with the likely benefits, they concluded that SAK testing produced a cost savings of close to \$26.5 million. Of this figure, nearly \$10 million is attributed to the testing of SAKs that do not have corresponding CODIS hits. They echo recommendations for a “test all” approach for processing and testing SAKs.

Conclusion

CBAs are effective tools for changing the conversation about policy and increasing support for or expanding cost-effective policies. As previously mentioned, there is an inherent and intangible good that comes from seeking justice and testing SAKs, and the approach's evident cost savings can highlight its effectiveness as a policy. These claims should be based on rigorous CBA and be mindful of the considerations explored in this brief to ensure reliable, valid results.

The Kentucky SAKI initiative embodies this principle and has employed CBA to reframe the issue from asking about the cost to test all unsubmitted SAKs to asking about what the costs are for *not* testing all SAKs. Reframing the question realigns assumptions, promoting cost savings and improved justice outcomes as a result of testing all SAKs. Additional examples of CBA and other SAKI research can be found at <https://sakitta.org/metrics>.

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