

THE TRUE COSTS OF POLICING

Hidden Impacts and Smart Alternatives



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The Legal Defense Fund (LDF) is the first and foremost legal organization fighting for racial justice in America. Using the power of law, narrative, research, and people, we defend the humanity and advance the rights of Black people in America.

At the Thurgood Marshall Institute, America’s Civil Rights Think Tank, a dedicated team of social science researchers and archivists carry forward LDF’s legacy of building a multiracial democracy through social science research and public education materials that inform and advance racial justice legal advocacy in the areas of criminal justice, education equity, political participation, and economic justice.

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EXECUTIVE SUMMARY

In recent years, local officials across the country have begun experimenting with alternatives to police, including community responders, to improve public safety responses to a variety of 911 calls. Between 2020 and 2022, sixty-two percent of the fifty largest cities in the United States formed at least one alternative community responder program.¹ Many of these experiments were launched following the police killings of George Floyd, Breonna Taylor, and others in 2020, which triggered worldwide protests and led to a national reckoning about the longstanding failures of policing systems to value Black life and keep Black people safe.

This Report from the Legal Defense Fund’s Thurgood Marshall Institute (TMI) was inspired by the significant unknowns, including the costs of community responder programs, that government officials must face when considering shifts to their emergency response systems. These unknowns can create barriers to implementing important services that could strengthen communities’ safety. At the same time, communities frequently rely on law enforcement agencies as the sole source of public safety, without a true and full accounting of the real costs of law enforcement’s actions. Officials must understand and consider the true and full costs of policing when considering the advantages of community responder programs and other investments that promote public safety.

Drawing on case studies from thirty cities, this Report presents a method to more accurately identify the true costs of policing and to estimate the likely fiscal advantages of community responders.

It does so by applying a well-established statistical methodology, the Monte Carlo simulation. The Monte Carlo simulation enables researchers across disciplines to predict outcomes while accounting for real-world uncertainty and variability. The Report also includes a literature review of prior studies and benefit-cost analyses regarding investments in the social safety net. These investments include food and cash aid, housing assistance, summer youth employment, early childhood education, health care, and improvements to infrastructure and public spaces—all of which have been shown to improve public safety.

This Report has three parts:

- **Part I** uses the Monte Carlo simulation method to examine policing costs that are typically excluded from benefit-cost analyses to more accurately estimate the true costs of policing in thirty cities.
- **Part II** describes a variety of community responder programs and estimates the costs of these programs in the thirty cities featured in Part I. It then compares the costs of the programs to the more accurate costs of policing produced in Part I. It also provides estimated costs for community responders in an additional thirteen cities.
- **Part III** provides a literature review of prior studies and, where data permit, benefit-cost analyses of social safety net programs and other community-based investments.

This Report brings the weight of evidence and research to communicate truths that Black families and communities have long known: that the costs of policing include more than just operational expenses, and that there is great potential to promote safety through programs and supports that invest in, rather than punish, communities.

This Report provides an economic argument for community responders and community-based investments as strategies to enhance public safety. Economic considerations constitute only one dimension of public safety policy, yet financial constraints frequently impede the adoption of community responder programs. Accordingly, each jurisdiction should undertake a comprehensive, community-specific assessment of the true costs of policing, as well as the relative economic benefits of community responders and social safety net investments. This assessment is essential for policymakers and communities engaged in deliberations about public safety. TMI offers this research to support evidence-based decision-making among local officials and community stakeholders to improve safety.

Key Findings

Part I: The True Costs of Policing

This Report’s analysis of thirty cities shows that policing costs that are typically excluded from benefit-cost analyses (e.g., use of force, misconduct settlements, and opportunity costs from police stops²) are significant and comparable to other major expenditures.

- In Chicago, Illinois, previously excluded tangible costs of policing totaled \$71.7 million annually—nearly four times the \$18.1 million invested in 2019 in One Summer Chicago, a youth employment program proven to reduce crime and to be cost-beneficial.³

- From 2013 to 2019, Chicago saw an average of 164 injuries caused by police use of force incidents per year, with annual costs exceeding \$11 million. Medical expenses for the 164 people injured by the Chicago Police Department each year totaled \$1.2 million, with an additional \$166,775 in reduced labor force productivity.

Part II: The Value of Community Responders

The analysis used the Monte Carlo simulation technique to predict the anticipated costs and benefits of transitioning to a community responder program for forty-three cities.

- Estimated annual savings range from approximately \$327,722 in Burlington, Vermont, to approximately \$180.8 million in New York, New York.
- Annual savings from a combination of reduced police labor offset by the labor of community responders, reduced use of force by the police, and fewer settlements because of reduced use of excessive force by law enforcement could total an estimated \$51.2 million in Los Angeles, California, or \$96.7 million in Chicago.
- Smaller cities could also see sizeable savings: Tulsa, Oklahoma, could save \$10.4 million annually, and North Charleston, South Carolina, could save \$2.7 million annually from avoiding similar expenses.
- Cities could increase the compensation of community responders to more accurately reflect the scope of their work, while still achieving net fiscal savings: an enhanced compensation structure for community responders serving as alternatives to police could save \$1.5 million annually in North Charleston, \$8.9 million in Tulsa, \$39.9 million in Los Angeles, \$57.6 million in Chicago, and \$126 million in New York City.

Part III: Investing in People, Communities, and the Social Safety Net

The literature review of prior studies and benefit-cost analyses indicates that investments in financial assistance, early childhood education, youth employment programs, and affordable health care significantly improve public safety, often offsetting or fully covering taxpayer costs for these programs.

- A North Carolina study found that, for each year children up to age five had access to the Food Stamp Program, their likelihood of receiving a criminal conviction by age twenty-four decreased by 2.5%.⁴ The program also reduced tangible and intangible crime costs from 1964 to 1974 by up to \$510 billion (in 2015 dollars).⁵
- Removing adults from Supplemental Security Income (SSI) led to a twenty percent increase nationally in criminal charges over two decades and a sixty percent higher likelihood of incarceration in a given year, mainly for offenses that could generate income (such as theft, burglary, fraud, and prostitution).⁶ SSI removal increased the likelihood of being incarcerated within a year by fifty percent for men and 242% for women, and it also increased first-time interactions with the criminal legal system.⁷ Each SSI removal cost an estimated \$126,600, factoring in the costs of police and courts, incarceration costs, and victim costs. Conversely, providing SSI had a 2.7 benefit-cost ratio, suggesting that the benefits of the program were more than double the costs incurred by administering the program.⁸
- Summer youth employment programs demonstrated significant positive outcomes. A program in Philadelphia, Pennsylvania, prevented three arrests and 1.5 incarcerations per 100 youth.⁹ A Chicago program saw even greater reductions: 4.6 fewer drug offense arrests and 6.4 fewer arrests for other offenses.¹⁰ For high-risk youth, New York City's program saved up to \$1,250 per participant, recovering nearly ninety percent of program costs from the savings due to fewer arrests.¹¹
- The availability of Head Start reduced, by twenty percent, the likelihood of a serious conviction by age thirty-five in high-poverty counties in North Carolina.¹² A similar North Carolina program, Smart Start, has a benefit-cost ratio of 0.79 overall and 0.93 in high-poverty counties, suggesting that the taxpayer savings from reduced arrests and incarceration cover seventy-nine to ninety-three percent of the costs of administering the program.¹³
- In states that enacted Medicaid expansion, rates of reported offenses decreased for aggravated assaults (by 6.7%) and burglaries (by 4.4%).¹⁴ Medicaid expansion is estimated to have saved \$10.6 billion in crime-related tangible and intangible costs, compared to its total cost of \$28 billion.¹⁵ Young men losing Medicaid coverage were fourteen percent more likely to be incarcerated within two years.¹⁶



PART I

THE TRUE COSTS OF POLICING

Daniel Prude's family members participate in a community celebration of his life on September 10, 2020, in Rochester, New York. Photo by Joshua Rashaad McFadden/Getty Images

Introduction

After 2021, a person in Durham, North Carolina, could call 911 to report suicidal ideation, and rather than deploying armed law enforcement officers, the city would refer the caller to a Holistic Empathetic Assistance Response Team (HEART).¹⁷ Under Durham's HEART community responder program, the city dispatches a three-person, unarmed unit, which is trained in trauma-informed responses, to some calls for service. Durham also connects other callers to care navigators, a two-person team of a peer-support specialist and a licensed clinician.¹⁸ For example, in one case, a clinician spoke to a caller's mother and, after learning that the caller had been struggling to find a therapist, worked with the family to locate a therapist who would take his insurance.¹⁹

While many municipalities are experimenting with unarmed community responders, most 911 calls in the United States concerning mental illness, substance use, and trespassing are still handled by armed members of law enforcement.²⁰ These encounters leave persons with mental illness, unsheltered persons, persons struggling with addiction, and other marginalized populations disproportionately vulnerable to police violence and criminal legal sanctions.²¹ Daniel Prude, a forty-one-year-old Black man, was killed by police in 2020 in Rochester, New York, after family members called 911 while he was experiencing a mental health crisis.²² A day earlier, Prude was evaluated at a hospital for another mental health crisis. The next day, however, a 911 call for assistance with the same



HEART team members Ashley Knight, David Prater, and Allison Casey stand in front of their response vehicle in Durham, North Carolina. Photo by Angela Hollowell for Tradeoffs

condition ended with responding officers killing Prude.²³

The stark contrast between Durham’s HEART responders and the police killing of Prude makes clear that armed law enforcement responses to behavioral or mental health incidents can harm, rather than enhance, public safety. Furthermore, having police respond to these calls fails to address the underlying issues behind many criminalized behaviors or actions in American society. Many criminalized activities and conditions are a product of poverty, inequality, a deeply racist criminal legal system, failures of the social safety net, segregation, and limited opportunities.²⁴ Similarly, the criminalization of people who are unhoused, through bans on loitering, public camping, and

urinating in public, is rooted in growing urban inequality, increasingly unaffordable housing, and urban growth strategies that displace unhoused persons.²⁵

All people and communities want to be safe. In some cases, however, police presence may exacerbate harm to individuals and the wider community. As Durham’s HEART program shows, many 911 calls do not need the power of police officers to arrest, detain, coerce, and apply force. In fact, most 911 calls do not involve an active emergency, an in-progress threat to safety, or a serious threat to life or property.²⁶ Dispatching an armed member of law enforcement is not necessary to respond to many calls for service—such as those for public disturbances, noise complaints, reports of traffic

accidents, or assistance with a person in emotional distress.²⁷

To fully evaluate the current public safety system that primarily relies on police, it is important to accurately measure the true costs of policing. This part of the Report explains how most research underestimates the full costs of policing and proposes a more comprehensive and accurate measure of these costs. It presents a statistical methodology, the Monte Carlo simulation, that allows for estimates of the true costs of policing while acknowledging the many unknowns and incomplete data associated with policing. This part includes the results of the Monte Carlo simulation in thirty U.S. cities to document the true costs of policing in those localities.

Cost analyses about policing are rare and incomplete.

For many areas of government spending, researchers, policymakers, and advocates evaluate how much a government program, department, or policy costs and where those costs stand relative to benefits. Cost analysis in the context of the criminal legal system should include a careful economic accounting of all costs of a public safety program.²⁸ In the realm of policing, researchers have typically considered labor/personnel costs (which include salaries, benefits, and overtime), equipment and capital costs (such as precinct buildings, patrol cars, and surveillance equipment), and contractual services (such as for information technology support).²⁹ Determining the full costs of a program is necessary to conduct accurate cost-effectiveness analyses³⁰ and assessments of the value of the program relative to its costs, known as benefit-cost analyses (BCAs).³¹

Despite the widespread use of cost analyses, cost-effectiveness analyses, and BCAs in many domains of policymaking, these analyses are notably rare in research for public safety policy generally, and for

policing specifically.³² For example, the Washington State Institute for Public Policy maintains a large database of BCAs across programs and policies designed to improve public health, public education, child welfare, workforce development, and public safety.³³ Yet, this database of all high-quality studies of public policies and programs contains very few studies concerning public safety in general or policing in particular.³⁴ There is compelling evidence that diversion programs, therapy and counseling, and mentorship for young people in the criminal legal system improve public safety, but far less is known about the true costs, benefit-cost ratios, or cost-effectiveness of many policing strategies and tactics.³⁵

Even when researchers evaluate the costs of policing, they often narrowly include only costs to taxpayers.³⁶ For example, one recent analysis of the Community Oriented Policing Services (COPS) hiring grant program incorporated some social costs of crime and found a marginal benefit of police to taxpayers—but notably, the analysis excluded many of the individual and collective harms of policing analyzed in this TMI Report.³⁷ Leveraging data from a natural experiment, in which researchers study the impacts of a real-life event,³⁸ the COPS analysis found that hiring additional police officers in cities eligible for COPS grants in 2009 reduced crime and may be cost-beneficial.³⁹ The analysis suggested that each new officer, which cost \$185,107, generated \$352,000 in social benefits, thus concluding that the benefits of hiring more police officers through the grant program exceeded the program’s costs. However, the COPS analysis entirely ignored the substantial social costs of increased policing resulting from hiring more officers, as well as important additional taxpayer costs.

Few studies account for the harms of policing, despite ample and growing evidence of their existence.⁴⁰ Indeed, a recent National Academy

of Sciences report analyzed decades of academic research and concluded that any gains from Stop, Question, and Frisk practices “are likely offset by the negative outcomes found for people who are stopped.”⁴¹ The study noted, however, a paucity of research that identified those negative outcomes, assessed their costs to society, and determined the impacts of those costs on public safety.⁴²

An accurate analysis of the costs of policing must account for the harms that result from police activity.

A growing body of empirical research interrogates the social costs of policing—such as costs associated with physical injuries, the deterioration of mental health, and children’s reduced academic achievement—as well as the racial disparities of these social costs.⁴³ While some costs, such as physical harm from police use of force, may be more immediately discernible, other harms, like the psychological consequences of that use of force, are just as real even if less visible. For example, Jamal Jones, a twenty-three-year-old Black man from Illinois who had been pulled over by police, noted, “If I get pulled over [by the police] now, I know exactly what’s going to happen. I’m going to have an anxiety attack.”⁴⁴ Recent research conducted across a large sample of people in the United States confirms that those who encounter police are more likely to experience mental health issues, such as anxiety, depression, post-traumatic stress disorder, and suicidal ideation.⁴⁵

There is also increasing evidence that police contact negatively affects the academic performance of students,⁴⁶ and these findings support the removal of police from schools.⁴⁷ Leanne Nunes of New York City stated, in a 2020 interview during her senior year of high school, “My entire high school career—had it not been for the pandemic—would have been spent being policed every day in school. . . . It’s too much. . . . Police do not belong in our schools.”⁴⁸

Students who have contact with the police or who live in neighborhoods with high levels of policing perform worse on standardized tests and are more likely to be absent from school.⁴⁹

For the communities that are most vulnerable to the harms of policing, there are considerable physical, psychological, emotional, and social costs.⁵⁰ Black people are more likely to experience both lethal and non-lethal police violence, and they are far more likely to be stopped, searched, and frisked by the police. They are also disproportionately burdened by the financial harms of policing, such as excessive or targeted ticketing of Black motorists, and they have a greater likelihood of suffering the negative consequences of further criminal legal contact.⁵¹ Families and communities face additional costs of policing, including depression, anxiety, and other forms of psychological distress,⁵² when police violence kills or injures their loved ones. Other costs include reduced academic performance due to persistent police encounters, wasted time for motorists who take detours to avoid traffic stops by the police, and the erosion of residents’ quality of life from police misconduct.

While Black people experience more of the harms of policing, they are less likely to experience the benefits. For example, recent research suggests that, on average, the hiring of additional police officers reduces homicides within the entire U.S. population, including among all racial demographics.⁵³ However, the study assumed that Black and white people primarily live in the same communities, overlooking the persistence of racial housing segregation. In fact, Black people have been and remain the most segregated racial group in the United States. While the average white person in the United States lives in a community that is nine percent Black, the average Black person lives in a community that is forty-one percent Black.⁵⁴ A more accurate analysis estimated the impacts of hiring additional police officers by degree of residential

segregation and found that employing more police officers actually *increases* homicides of Black people in predominantly Black communities.⁵⁵ When conducting future studies on whether policing is effective for Black communities, researchers must consider the full and true costs of policing.

The next section describes the frequently excluded costs of policing and presents a method for incorporating a broader range of social harms of policing into cost estimates for the public safety systems in thirty cities.

Method for Identifying Previously Excluded Costs of Policing

Identifying Tangible, Intangible, Direct, and Indirect Costs

Generally, all costs associated with a policy or program should be included in a cost analysis.⁵⁶ For example, a cost analysis of a proposed highway should consider the costs of labor and materials needed to build the highway, as well as the costs associated with the destruction of natural habitats in its anticipated path.⁵⁷ The costs associated with this destruction may be *tangible* if the natural habitats are essential to species that are farmed or fished and eventually sold—meaning they may impose a direct and clear economic cost on some people. However, the costs may also be *intangible* if local residents value the scenery, fresh air, or wilderness associated with those habitats or if the habitats significantly enhance their quality of life. This Report considers both the tangible and intangible costs of policing, and the disproportionate burden of these costs on Black communities and other communities of color.

Prior analyses of policing costs ignore the effects of policing on other criminal legal institutions.⁵⁸ Policing is the front door of the criminal legal system, and policing practices that increase arrests or civil fines can enlarge costs paid by other criminal legal institutions. For example,

proactive policing tactics can increase the number of persons who are ticketed by the police, who are arrested or jailed, and who must appear in court. Therefore, proactive policing tactics may increase costs associated with arrests, pretrial detention, court adjudication, and punishment. This Report’s analysis does not include these “downstream” costs associated with the higher volume of people involved in the later stages of the criminal legal system. However, researchers should include all of these costs to produce a fuller and more accurate estimate of the total costs of proactive policing tactics on the criminal legal system.

This Report identifies five categories of policing costs and endeavors to monetize as many as possible to conduct a cost analysis. The first are policing infrastructure costs to taxpayers: money paid by communities to fund their local law enforcement agency. This first category is usually the only type of cost considered in cost analyses of policing. The remaining four categories of policing costs considered in this Report are largely ignored in current research on policing. These include both “tangible” (monetary or financial) costs and “intangible” (not normally exchanged in private or public markets) costs that are incurred by individuals, families, and communities because of police encounters. There are many methods for estimating intangible costs and assigning them a monetary value, such as by using the value of statistical life calculated by the U.S. Department of Health and Human Services for regulatory analyses.⁵⁹ Tangible and intangible costs are commonly delineated in many types of cost studies.

Costs may also be either “direct” (flowing directly from officers’ actions, largely to the people involved in police encounters themselves) or “indirect” (flowing to the families and communities of those who experienced the police encounter). Researchers have long distinguished between direct and indirect costs in studies on the costs of crime.

The below definitions and categories reflect one of many possible frameworks for understanding the types of costs generally excluded from cost analyses. Other researchers may prefer methods for categorizing these costs that differ from that used in this Report, or they may choose to place individual costs in different categories. For example, some researchers may consider tangible costs to family and friends—such as expenses incurred while traveling to a jail or a hospital to visit a loved one, making phone calls to speak to a loved one who is injured or incarcerated, paying for childcare, and taking time off from work—to be tangible and direct costs. This Report categorizes these as “tangible” and “indirect,” but other methods of organizing these costs are certainly possible. Regardless of how these costs are categorized, the purpose of this Report is to urge researchers to include them in cost analyses to more accurately assess the true costs of policing.

1 Policing infrastructure costs to taxpayers

The first category consists of costs borne by taxpayers for what this Report calls “policing infrastructure.” These are the local, state, and federal budget expenditures for policing, which include costs for labor (e.g., salaries, pensions, and benefits), purchasing and maintaining buildings, and equipment (e.g., uniforms, patrol cars, weapons, and body-worn cameras).⁶⁰ Researchers have historically recognized and included these costs in assessments of the costs of policing.

However, when calculating policing costs, researchers often exclude the costs to taxpayers for police misconduct and excessive use of force that may lead to civil rights settlements or jury awards. Although payouts for misconduct vary significantly from year to year, they can add millions of dollars to taxpayers’ costs for policing services.⁶¹ This Report

therefore includes the costs of police misconduct settlements and jury awards in its cost analysis.

2 Costs that are tangible (monetary) and direct (flowing from officers’ actions, largely to people involved in police encounters)

The second category consists of tangible, direct costs, or the financial losses resulting from encounters with the police. Although researchers frequently include tangible, direct costs in analyses of the costs of crime and in BCAs of crime-reduction programs, they rarely apply them to analyses of the costs of policing.⁶² A careful accounting of policing costs should include, for example, the monetized value of a stopped person’s time,⁶³ the consequences of policing on a person’s employment and earnings,⁶⁴ and any other economic consequences of a police interaction. It should also include *downstream* financial costs resulting from a police interaction, such as the costs of unemployment and lost wealth from being jailed, prosecuted, incarcerated, or otherwise criminally sanctioned.⁶⁵

Anyone who is stopped, searched, ticketed, subjected to use of force, and/or arrested by the police bears costs that researchers must include in an estimate of policing’s overall costs. Many Black people report having been stopped dozens of times by the police—while walking to their home, work, or school, socializing with friends and neighbors, or running errands in their neighborhood.⁶⁶ Young Black men, in particular, bear the brunt of these intrusive police encounters, often for unjustified reasons like walking away when approached by officers.⁶⁷

There is also an *opportunity cost* to the time spent during a police stop. A stopped person’s time is valuable and should not be taken for granted as free. Motorists who are stopped and delayed while commuting may suffer disciplinary action at work or even job loss. Given that police conduct more

DEFINITIONS

Tangible costs: costs that are monetary or financial in nature (e.g., medical expenses) and easily quantifiable and objective (e.g., based on market data).

Intangible costs: costs that are not normally exchanged in private or public markets, such as those associated with fear, pain, suffering, and lost quality of life. (Note: There are widely used methods for estimating these costs, such as the Monte Carlo simulation method used here, described below.)

Direct costs: costs to people who encounter police and directly resulting from police activity.

Indirect costs: costs to families, friends, and communities of people who encounter police.

This cost analysis uses the following categories:

1. Policing infrastructure costs to taxpayers (e.g., police salaries, infrastructure or building costs, and equipment), not including costs associated with incarceration or prosecution;
2. Tangible and direct costs: monetary or financial costs for people who encounter police or flowing directly from officers’ actions (e.g., medical costs to people who experience police violence);
3. Intangible and direct costs: the non-financial costs to people who encounter police (e.g., psychological and dignitary harms from police interactions);
4. Tangible and indirect costs: the financial costs to the families, friends, and communities of those who encounter police (e.g., economic costs associated with physical injury by police); and
5. Intangible and indirect costs: the non-financial costs to the families, friends, and communities of those who encounter police (e.g., grief and psychological stressors to families, friends, and the surrounding community from physical injury by police).

Many Black people report having been stopped dozens of times by the police—while walking to their home, work, or school, socializing with friends and neighbors, or running errands in their neighborhood.

than twenty million traffic stops each year in the United States,⁶⁸ the costs of these law enforcement stops can be substantial. Additionally, research on the effects of racially discriminatory ticketing by police demonstrates that some Black motorists do not take the most efficient routes to and from work to avoid police and their overly aggressive traffic enforcement practices.⁶⁹

There are further costs associated with police use of force. For example, on May 30, 2020, Detective Eric Knudson of the La Mesa Police Department in San Diego County, California, hit Leslie Furcron, a Black woman, with a “less-than-lethal” bean bag round, blinding her in her left eye.⁷⁰ Tangible medical costs associated with injuries like hers can exceed \$10,000.⁷¹ Her injury incurred costs at all stages of her care, such as the costs of medical transport (Furcron was flown by helicopter to the hospital), hospital care (including a medically induced coma and eye surgery), and prescription drugs during her recovery, and she will likely continue to incur costs for the rest of her life.⁷² Although Furcron may not bear all of the medical costs *directly* by herself—for example, her medical insurance may cover some costs—they are concrete, economic medical costs flowing directly from the officer’s use of force against her.

Medical costs are not the only data that researchers should include in the calculation of tangible, direct costs. Police use of force can also result in *reduced earnings* stemming from injuries. For example, Furcron had been studying social work at San Diego City College, but her injury caused headaches that forced her to drop out of that program.⁷³ Thus, total costs from the police use of force should account for the potential higher salary that Furcron could have earned had she completed her undergraduate program. Furcron’s vision loss and headaches could also *reduce her productivity* in any employment she may have, and any absenteeism from work could

cost her wages while also reducing productivity for her employer. Police use of force may also *reduce labor force participation* through total exit from the labor force altogether. For instances of fatal police use of force, one could calculate the *present value of lifetime earnings*: the economic value of a lifetime of working.

This Report calculates a number of tangible, direct costs for which data are available: the value of time for people stopped, medical costs and the value of lost earnings for people who are fatally injured, and medical costs and work loss for people who suffer nonfatal injuries from police violence. The sources of data for each of these are listed in Table 2 below. Additional tangible, direct costs may exist and could be considered in future research as data become available.

3 Costs that are intangible (not monetary) and direct (flowing from officers’ actions and falling on the people involved in police encounters)

Intangible, direct costs include the emotional, psychological, and dignitary harms resulting from a person’s interactions with police. A growing body of research demonstrates that police interactions—particularly violent interactions—can increase the odds that a person will experience depression, anxiety, post-traumatic stress, suicidal ideation, and other mental health consequences.⁷⁴ Police contact can also erode residents’ quality of life, students’ academic achievement, and people’s perceptions about their own standing in a community.⁷⁵

Intangible costs are significantly harder to quantify than tangible costs.⁷⁶ For example, research suggests that some Black people who had prior negative encounters with police officers in heavily surveilled neighborhoods avoid locations and situations that may risk future contact with law enforcement.⁷⁷ In one study, individuals avoided visiting loved ones in hospitals, socializing in public

places, and meeting with friends and family simply to avoid being stopped by police.⁷⁸ Other research indicates that police contact can shape attitudes toward government and diminish a person’s sense of citizenship, as well as their political and civic engagement.⁷⁹ This disruption in social networks and participation in political and civic life may reasonably incur a variety of costs. However, there are limited research studies providing credible estimates of intangible costs and their impacts. Accordingly, this Report does not account for all of the possible intangible costs of policing because data are not available. Nevertheless, intangible costs are real and significant. As additional data become available, researchers should consider these costs in any analysis of the costs and overall impacts of policing practices.

When police use of force causes a person’s death, this Report includes the “value per statistical life” (VSL) in intangible and direct costs, even though these costs are not technically borne by the individual.⁸⁰ The VSL is a calculation developed by researchers and mandated by federal agencies

In one study, individuals avoided visiting loved ones in hospitals, socializing in public places, and meeting with friends and family simply to avoid being stopped by police.

such as the U.S. Department of Health and Human Services, which regularly updates and reports its recommended estimates for commonly used inputs such as the VSL.⁸¹ TMI categorizes the VSL as direct because it is a direct outcome of police violence, resulting from an officer’s actions. Although the VSL is measured with a number, it is considered intangible because human life does not have a price (unlike the cost of medical services or labor) and cannot be easily quantified. The VSL extrapolates—from surveys or observed data—how much people in the United States value risk, or the cost of reducing the risk of a fatal injury.⁸² This frequently used value is a collective estimate of how much society would be willing to pay to reduce the risk of one death—for example, how much people may be willing to pay to reduce their risk of dying in a fatal car accident or how much they would demand in additional salary to work in a dangerous job or industry (such as construction, heavy machinery, or logging). While the fatal injury rate in any of these dangerous professions may be low (less than one percent), the VSL uses data to estimate the value of reducing the risk of fatal injury by 100%.

This Report incorporates the intangible, direct costs of: the VSL for people killed by police; reductions in the quality of life for people who experience nonfatal injuries from officers; emotional, psychological, and dignitary harms; and disruptions of social networks as well as friendship and kinship ties. The sources of data for each of these intangible, direct costs are listed in Table 2 below.

4 Costs that are tangible (monetary) and indirect (to the family, friends, and communities of people who encounter police)

Police activity can also incur tangible, indirect costs: monetary losses borne by the friends, family, and community members of people who encounter police. These costs can be harder to identify and

estimate, and researchers rarely include them in cost analyses even though they may be significant. For example, predatory policing practices involving the disproportionate ticketing of Black drivers and seizing of their vehicles can lead to costs incurred by individuals other than the driver. Friends and family may bear additional burdens, such as the costs of driving that person to and from work.⁸³ Additionally, frequent police stops of young people may erode their mental health, potentially leading to costs to their families for private after-school programs, therapy, or other counseling or mental health services. If a police interaction results in the use of force, indirect costs may also include *informal care*—such as if the victim of the police violence relies on family members to help them address trauma from the incident, rather than paying a mental health practitioner for services. Costs may also include losses incurred by families when their loved ones are physically injured by police violence. For example, Furcron was taking care of her mother before her injury, and her vision loss and headaches may have led to a reduction in *household production* (“the monetary value of nonpaid household productivity, such as home maintenance and childcare” or, in this case, elder care).⁸⁴

Although researchers are beginning to examine tangible, indirect costs,⁸⁵ they have not yet addressed the challenge of comprehensively measuring them so they can be included in cost analyses. For example, more research is needed to examine whether concentrated policing and police violence in particular communities produce neighborhood stigma that drives away businesses and other resources that would have provided employment opportunities and investments in local economies.⁸⁶ In any event, tangible, indirect costs—like all hidden costs—are likely concentrated in Black communities, given the prevalence of police encounters with Black people and the

racial segregation of many social networks and neighborhoods.⁸⁷

The analysis in this Report does not include all of the tangible, indirect costs discussed above because all relevant data are not available. However, this Report does account for the costs of bereavement, including absenteeism, presenteeism (reduced productivity), and psychological costs. The sources of data for each of these are listed in Table 2 below.

5 Costs that are intangible (not monetary) and indirect (to the family, friends, and communities of people who encounter police)

Indirect, intangible costs are the mental, emotional, and dignitary costs of police violence to those indirectly affected by or exposed to it. Lethal use of police force exacts a devastating cost on families who lose a loved one. For example, Kimberly Davis described losing her nineteen-year-old son, Kimoni, to police violence: “When I saw my son laying on the hospital bed that day, I didn’t recognize him. He was already gone. I was forced to take him off life support. I watched my son die in my arms. When I realized I would never see his eyes open again, it was a mental war, a death sentence. That feeling never went away; I’m in pain every day.”⁸⁸

These intangible costs of policing and police violence are not confined to immediate family members. Police violence can both directly affect individuals in the police encounter and also indirectly affect their friends and neighbors, as well as their family.⁸⁹

An accounting of the intangible, indirect costs of policing, however, is almost totally absent from the academic research literature because of the limited availability of data. Accordingly, this Report’s analysis does not include these intangible, indirect costs, even though they are important and

would ideally be taken into account to gain a more accurate and comprehensive understanding of the true costs of policing. Future researchers should consider ways to account for these important intangible and indirect costs—such as worsening mental health, decreased school performance, and a diminished sense of civic engagement for people indirectly affected by police violence—as more data become available.

Table 1 provides an overview of the costs included in this analysis (in bold) to calculate the true costs of policing, as well as costs that would be included in an ideal calculation, but for which data were not available for this analysis. The following section details TMI’s methodology for ascertaining and estimating these costs.

TABLE 1 Costs of Policing (bolded costs reflect available data included in TMI’s analysis)

	Tangible (Monetary) Costs	Intangible (Estimated) Costs
Direct Costs (costs to people who encounter police or costs directly resulting from police activity)	Police stops ■ Value of time Fatal injury ■ Medical costs ■ Present value of lifetime earnings Nonfatal injury ■ Medical costs ■ Work loss	Fatal injury ■ Value of statistical life (VSL) Nonfatal injury ■ Quality of life Emotional, psychological, and dignitary harms Disruption of social networks and friendship and kinship ties
Indirect Costs (costs to the families, friends, and communities of people who encounter police)	Bereavement ■ Absenteeism ■ Presenteeism ■ Mental health costs	Emotional, psychological, and dignitary costs to individuals indirectly affected by, or exposed to, policing and police violence ■ Worse mental health ■ Decreased school performance ■ Lowered sense of citizenship and political and civic engagement



Members of the New York City Police Department's Strategic Response Group push back a crowd outside a basketball watch party on June 8, 2026. Photo by Selâşuk Acar/Anadolu via Getty Image

Methodology and Data to More Accurately Estimate the Costs of Policing

Data Limitations About Police Activity Create Uncertainty

This Report aims to calculate the costs of policing more accurately by accounting for the five categories of policing costs discussed above. However, the absence of data in some of these categories and the difficulty of addressing variability and uncertainty in research methods present important limitations. This section describes the challenges in estimating previously excluded costs and the methods employed to estimate them in this analysis.

Current research does not provide the high-quality measurements needed to estimate the previously excluded costs of policing with a reliable level of precision. This is in part due to the lack of accurate and high-quality data about police enforcement activity. Following the police killings of Eric Garner and Michael Brown in 2014, researchers and advocates discussed the lack of quality, centralized data on lethal use of force by police in the United

States. This deficiency led to the development of crowdsourced datasets on lethal use of force, maintained by private volunteers.⁹⁰ These datasets, however, are likely incomplete and thus undercount incidents of lethal use of force by police.

Estimating the true costs of policing requires many datapoints that police departments may not collect accurately (or at all) or make publicly available. For example, police departments do not make publicly available what data or information they collect on officers' use of force⁹¹—lethal or non-lethal—or the factual circumstances leading up to such incidents. Small police departments typically do not collect substantial data regarding law enforcement activity, and nearly half (forty-six percent) of all local police departments nationwide had fewer than ten full-time sworn officers as of 2020.⁹²

Another cost of policing is the opportunity cost of time during a police stop, or the economic value of a stopped person's time. Yet, very few police departments record how long each stop takes, and

some police departments do not even measure the frequency of such stops. An analysis of police stops would also ideally include data on the wages of stopped persons, but police departments do not—and may not be able to—collect this information. To address these uncertainties, this Report draws on estimates of the number of people stopped by police in a particular city and the average wages of people in each metropolitan area to calculate the opportunity cost of a person's time during a police stop.

Beyond the limitations in raw data, current research findings do not always provide clear or consistent evidence on how different factors are related. For example, little is known about how fatal police use of force affects the labor market productivity of close family and friends who mourn the person killed by police. Recent studies also sometimes provide *no estimates whatsoever*, or they provide an estimate with a fair amount of *uncertainty*. For example, Part II of this Report reviews a recent evaluation of a program in Denver, Colorado, where researchers estimated that the deployment of community responders to 911 calls for a range of public safety issues resulted in a thirty-four percent reduction in such calls.⁹³ However, there was some uncertainty in this estimate: if the experiment were run 100 times, the estimated reduction would range from twenty-four percent to forty-two percent in ninety-five of those 100 hypothetical experiments. A reliable accounting of policing costs would need to factor in this type of variability.

Using the Monte Carlo Simulation to Develop Reliable Estimates Despite Uncertainty and Variability in Data

To account for this uncertainty and variability, TMI employed a statistical methodology called a Monte Carlo simulation. Researchers commonly use these simulations in the physical and social sciences to estimate quantities that are subject to a high degree

of uncertainty and variability, such as estimations of criminal legal impacts and costs.

A Monte Carlo simulation first establishes a range of possible values for inputs to a model. In the cost model, for example, the medical costs of injuries from police use of a Taser might range from \$0 to \$10,000, based on research studies and medical data. To account for this variability, a Monte Carlo simulation would randomly assign a cost from \$0 to \$10,000 to each Taser deployment from Police Scorecard data, a public repository of police use of force. Thus, if a particular city had three Taser deployments in 2019, the simulation would randomly generate three values between \$0 and \$10,000 to stand in as the medical costs of those Taser deployments. Importantly, some costs are more likely to be incurred than others. For example, because most Taser deployments in the United States do not require medical attention, a cost of \$0 is more likely than a cost of \$10,000. The Monte Carlo simulation therefore incorporates information about the probability of a particular cost value for a wide range of inputs or values to generate estimates of various costs of policing.

A second key component of Monte Carlo simulations is repetition, which entails the process of randomly assigning inputs to the model to generate a single, more accurate estimate. Although there is no governing convention on the appropriate number of estimates to generate through repetition in a Monte Carlo simulation, the preferred number increases when the data are more complex and variable, and when researchers seek a greater level of precision in the estimate. The repetition produces a *distribution* of cost values, which allows researchers to make statements about both their best guess and the uncertainty. In this Report, the process was repeated 10,000 times, following the approach of a prior study that used Monte Carlo simulations to estimate the costs of crime.⁹⁴

Data Sources Used in the Monte Carlo Simulation

This Report draws on multiple sources of data. TMI pulled raw data from the U.S. Census Bureau, TMI’s National Police Funding Database,⁹⁵ *The Washington Post*, The Marshall Project, *The New York Times*, the Police Scorecard, *Vice News*, the Centers for Disease Control and Prevention (CDC) Web-based Injury Statistics Query and Reporting System (WISQARS), the Center for Victim Research, and the U.S. Bureau of Labor

Statistics, as well as data from local police and academic research. Together, the multiple sources helped TMI collect data about thirty U.S. cities. TMI also pulled from multiple sources in the research literature to estimate, for example, the rate at which use of force results in injury and the number of people who grieve following the fatal use of force. Table 2 identifies the sources of data and the cost estimates for which each dataset was employed in the model. The data often required some cleaning or standardization, and these processes are described in detail in the Appendix.

TABLE 2 Data Sources

Cost	Source(s)
Policing Infrastructure Costs	
Police budget costs (operating expenditures)	U.S. Census Bureau
Police misconduct settlements	1. TMI’s National Police Funding Database 2. The Marshall Project 3. <i>The New York Times</i> 4. <i>The Washington Post</i>
Tangible and Direct Costs	
Cost: Value of time	
Number of officer-initiated stops	Raw police data
Length of officer-initiated stops	Raw police data
Wage rate of stopped person	Current Population Survey
Cost: Police use of force	
Frequency of police use of force incidents	
Fatal police use of force incidents	Police Scorecard
Nonfatal police use of force incidents (excluding shootings)	Police Scorecard
Average nonfatal police shooting rate	<i>Vice News</i>
Nonfatal police shooting incidents	Police Scorecard, <i>Vice News</i>

Cost	Source(s)
Injury rates	
Moderate injury rate by force type (involves treatment in an emergency department and release without hospitalization or transfer)	CA, NY, and NJ state data; CDC: WISQARS
Severe injury rate by force type (involves initial treatment in an emergency department followed by either hospitalization or transfer for specialized care)	CA, NY, and NJ state data; CDC: WISQARS
Emergency and lifetime medical costs	
Medical costs (moderate injury)	CDC: WISQARS
Medical costs (severe injury)	CDC: WISQARS
Medical costs (death)	CDC: WISQARS
Cost of loss of future work	
Moderate injury	CDC: WISQARS
Serious injury	CDC: WISQARS
Intangible and Direct Costs	
Frequency of police use of force incidents	From above
Value of statistical life	CDC: WISQARS
Quality of life costs	
Moderate injury	CDC: WISQARS
Serious injury	CDC: WISQARS
Tangible and Indirect Costs	
Number of persons bereaved	Center for Victim Research
Cost of bereavement	
Cost of mental health care	Cohen and Miller (1998)
Days absent	Fox et al. (2014)
Presenteeism productivity rate	Fox et al. (2014)
Wage rate of bereaved person	U.S. Bureau of Labor Statistics

More Accurate Estimates of the Costs of Policing

Using available data from 2010 to 2022 and the Monte Carlo simulation, TMI’s research developed more accurate estimates of the costs of policing across thirty cities. Importantly—and as described in the Methodology section above—there is considerable uncertainty in the estimates for costs identified in this Report’s analysis that had been excluded from prior research studies. As discussed above, the estimates generated by the Monte Carlo simulation are spread across a range of plausible values. Table 3 presents the average

annual estimates of this range of plausible values, representing a single best estimate for each city. The table shows the estimated costs of policing in any hypothetical year, set in 2022 dollars. The years for the data used to produce these estimates vary both across datasets (for example, the use of force data and settlement data use different year ranges) and across cities (the years used for Atlanta, Georgia, are not necessarily the same used for New York City). Much of the total costs of policing measured in this Report is driven by the costs of fatal force, which vary based on the number of people killed by law enforcement in any given year.

TABLE 3 Tangible, Intangible, and Total Previously Excluded Annual Costs of Policing (\$) (2013-2019)

Department	Tangible	Intangible	Total Hidden Costs
Atlanta, GA	5,217,160	26,965,053	32,182,213
Austin, TX	10,226,414	54,119,889	64,346,303
Baltimore, MD	12,266,523	49,536,892	61,803,415
Chicago, IL	71,660,671	130,129,954	201,790,625
Cleveland, OH	5,100,063	15,434,609	20,534,672
Dallas, TX	12,632,124	66,857,406	79,489,530
Detroit, MI	8,814,017	17,604,365	26,418,382
Houston, TX	18,707,631	105,452,215	124,159,846
Jacksonville, FL	10,846,632	60,949,396	71,796,028
Long Beach, CA	21,793,318	45,994,417	67,787,735
Los Angeles, CA	66,212,391	174,413,666	240,626,057
Memphis, TN	7,172,539	34,578,828	41,751,367
Milwaukee, WI	8,971,339	29,308,954	38,280,293
Minneapolis, MN	7,652,999	15,373,430	23,026,429
New Orleans, LA	3,420,389	15,282,282	18,702,671
New York City, NY	200,711,615	103,542,842	304,254,457
North Charleston, SC	1,201,525	6,277,462	7,478,987
Oakland, CA	6,679,353	8,210,078	14,889,431
Philadelphia, PA	20,988,179	48,710,543	69,698,722
Phoenix, AZ	32,045,319	171,271,446	203,316,765
Pittsburgh, PA	3,160,708	12,737,557	15,898,265

Department	Tangible	Intangible	Total Hidden Costs
Portland, OR	4,863,375	26,740,825	31,604,200
San Diego, CA	16,364,375	52,225,424	68,589,799
San Francisco, CA	8,645,932	32,592,766	41,238,698
San Jose, CA	8,569,189	41,360,035	49,929,224
Seattle, WA	5,823,648	25,293,142	31,116,790
St. Louis City, MO	11,722,033	70,941,878	82,663,911
St. Paul, MN	4,583,139	22,391,287	26,974,426
Tulsa, OK	9,188,744	49,179,374	58,368,118
Washington, D.C.	14,885,781	31,388,220	46,274,001

Results: Police Misconduct Settlements

The results show that police misconduct settlements add millions of dollars to the costs of policing each year, with considerable variation across cities. The results suggest, for example, that Long Beach, California, spends \$14.3 million annually on police settlements alone. Several large cities spend a sizeable share of their police budgets on settlements: Chicago, with approximately 2.7 million residents, spends close to \$50.1

million; New York City,⁹⁶ with approximately 8.8 million residents, spends about \$182 million; and Philadelphia, with approximately 1.6 million residents, spends \$12.9 million. For perspective, New York City spent roughly \$150 million on rental assistance in 2018 and roughly \$275 million on rental assistance in 2019.⁹⁷ Spending on police misconduct settlements in Chicago is almost double what the city spends on cultural affairs and special events.⁹⁸

TABLE 4 Tangible Costs: Average Annual Costs of Police Misconduct Settlements

Department	Average Settlements Per Year	Mean Yearly Payments (\$)	Years Observed
Atlanta	9	711,828	2014-2020
Austin	1	1,328,258	2011-2018
Baltimore	12	3,824,419	2010-2020
Chicago	151	50,089,271	2010-2019
Cleveland	13	2,721,729	2010-2020
Dallas	3	1,203,511	2012-2020
Detroit	50	6,267,389	2010-2019
Houston	155	1,310,826	2007-2017
Jacksonville	17	711,238	2011-2020
Long Beach	12	14,286,115	2014-2019
Los Angeles	91	31,755,260	2010-2020

Department	Average Settlements Per Year	Mean Yearly Payments (\$)	Years Observed
Memphis	36	1,311,489	2013-2019
Milwaukee	5	4,305,548	2010-2020
Minneapolis	16	4,846,739	2006-2022
New Orleans	4	473,266	2010-2017
New York City	3262	181,959,414	2010-2019
North Charleston	11	349,152	2010-2019
Oakland	13	4,852,961	2012-2021
Philadelphia	136	12,876,519	2010-2020
Phoenix	43	3,578,370	2009-2015
Pittsburgh	5	1,188,503	2017-2022
Portland	8	733,546	2010-2020
San Diego	12	2,295,078	2009-2019
San Francisco	9	2,867,922	2010-2019
San Jose	9	1,333,295	2010-2017
Seattle	9	1,221,272	2010-2020
St. Louis City	--	--	2016-2019
St. Paul	4	574,724	2010-2020
Tulsa	1	1,552,853	2015-2020
Washington, D.C.	25	8,352,894	2005-2019

**Note: Years observed vary based on data availability; data for St. Louis were not available and were not included in the analysis.*

Results: Use of Force

The costs associated with known police violence (both fatal and nonfatal use of force) are sizeable. Table 5 presents descriptive results for the thirty cities in the sample and demonstrates how and by whom this burden is borne. For example, Table 5 shows that police officers in Chicago kill an average of eleven people annually, but this violence leaves an estimated ninety-five people bereaved of that loss.⁹⁹ Additionally, many more people experience non-lethal use of force: as noted in Table 5, about 164 of

these cases in Chicago each year result in injuries requiring documented medical treatment. Each one of these incidents exacts direct and indirect costs on communities in Chicago, while also constituting a substantial cost for the city.

Importantly, even if law enforcement agencies require officers to document their uses of force, these incidents are often underreported,¹⁰⁰ and an unknown number remain undocumented. Thus, these estimates likely represent an undercount of police use of force incidents and consequently an undercount of the associated hidden costs.

TABLE 5 Average Annual Number of People Killed, Bereaved, and Injured from Police Use of Force and Associated Tangible and Intangible Costs (2013-2019)

Department	Killed	Bereaved	Injured	Costs			Total (\$)
				Killed (\$)	Bereaved (\$)	Injured (\$)	
Atlanta	2	20	77	26,362,840	439,679	4,667,866	31,470,385
Austin	4	39	234	51,437,027	881,509	10,699,509	63,018,045
Baltimore	4	39	62	53,445,192	889,215	3,644,589	57,978,996
Chicago	11	95	164	137,188,860	2,141,625	11,088,882	150,419,367
Cleveland	1	12	15	16,519,578	261,103	1,032,262	17,812,943
Dallas	6	52	128	71,415,292	1,169,726	5,701,001	78,286,019
Detroit	2	14	4	19,170,032	311,203	669,759	20,150,994
Houston	9	83	120	115,568,490	1,881,605	5,398,925	122,849,020
Jacksonville	6	51	2	69,488,013	1,140,664	456,112	71,084,789
Long Beach	3	27	234	36,020,055	601,364	16,526,463	53,147,882
Los Angeles	15	137	292	183,120,944	3,091,708	16,964,668	203,177,320
Memphis	3	28	73	36,295,870	619,809	3,524,199	40,439,878
Milwaukee	2	21	79	28,469,538	461,741	5,043,466	33,974,745
Minneapolis	1	9	124	12,204,156	205,573	5,691,154	18,100,883
New Orleans	1	12	20	16,406,299	271,100	1,182,544	17,859,943
New York City	10	91	229	109,978,256	2,055,572	10,261,214	122,295,042
North Charleston	1	5	18	5,907,852	101,329	1,120,654	7,129,835
Oakland	1	7	--	9,485,072	157,545	--	9,642,617
Philadelphia	5	41	4	55,232,721	919,849	669,635	56,822,205
Phoenix	15	140	111	189,642,407	3,161,963	6,934,025	199,738,395
Pittsburgh	1	9	50	12,047,913	204,958	2,456,890	14,709,761
Portland	2	22	1	30,188,679	493,123	188,852	30,870,654
San Diego	4	37	167	50,546,964	843,142	8,846,508	60,236,614
San Francisco	3	24	63	31,942,525	532,305	5,298,977	37,773,807
San Jose	3	29	133	38,734,701	641,926	8,820,295	48,196,922
Seattle	2	20	37	26,558,200	443,287	2,426,580	29,428,067
St. Louis City	6	52	135	72,346,414	1,166,580	9,150,916	82,663,910
St. Paul	2	16	61	22,040,182	361,189	3,998,331	26,399,702
Tulsa	4	34	187	44,251,420	758,540	11,805,305	56,815,265
Washington, D.C.	3	25	57	33,233,851	553,572	2,820,085	36,607,508

**Note: Injury data for Oakland were not available and were not included in the analysis.*

Table 6 displays the tangible and intangible costs associated with fatal police violence. Accounting for the medical costs of treating a fatally injured person, the present value of their lifetime earnings, and the VSL, fatal police killings constitute approximately \$137 million in intangible and tangible costs to the city of Chicago and its residents annually. Table 6 presents two different costs of a life: the present value of lifetime earnings and the VSL. The present value of lifetime earnings refers to the amount of money a person would have earned between the time of their death and retirement. As previously discussed, the VSL is not a direct measure of how much an individual’s life is worth, but rather an aggregate measure of how much money people

are willing to receive for an increase in their risk of dying. Table 6 breaks down these costs by source. Medical costs account for a comparatively small share of these total costs in each city. In Chicago, for example, the results indicate that about \$57,230 was spent on medical services for persons who ultimately died from police use of force. In comparison, the present value of lifetime earnings of persons killed by the police in Chicago is estimated to be \$16.7 million (in 2019 dollars). The intangible costs far outweigh these tangible costs associated with fatal police violence: the estimates indicate that the VSL of police killings in Chicago is more than \$120 million annually.

TABLE 6 Average Annual Number of People Killed from Police Use of Force and Related Tangible and Intangible Costs

Department	Killed	Costs			Total (\$)	Years Observed
		Medical Costs (\$)	Present Value of Lifetime Earnings (\$)	Value of Statistical Life (\$)		
Atlanta	2	11,726	3,409,261	22,941,854	26,362,841	2010-2019
Austin	4	23,563	6,038,225	45,375,239	51,437,027	2010-2019
Baltimore	4	23,731	7,014,949	46,406,511	53,445,191	2010-2019
Chicago	11	57,230	16,719,966	120,411,664	137,188,860	2010-2019
Cleveland	1	7,002	1,987,552	14,525,024	16,519,578	2010-2019
Dallas	6	31,269	9,158,492	62,225,532	71,415,293	2010-2019
Detroit	2	8,305	2,198,093	16,963,634	19,170,032	2010-2019
Houston	9	50,315	14,462,570	101,055,605	115,568,490	2010-2019
Jacksonville	6	30,487	8,944,537	60,512,989	69,488,013	2015-2016
Long Beach	3	16,059	4,591,433	31,412,563	36,020,055	2015-2019

Department	Killed	Costs			Total (\$)	Years Observed
		Medical Costs (\$)	Present Value of Lifetime Earnings (\$)	Value of Statistical Life (\$)		
Los Angeles	15	82,635	23,153,700	159,884,609	183,120,944	2010-2019
Memphis	3	16,535	4,616,807	31,662,528	36,295,870	2010-2019
Milwaukee	2	12,320	3,534,945	24,922,273	28,469,538	2010-2019
Minneapolis	1	5,490	1,478,642	10,720,024	12,204,156	2013-2019
New Orleans	1	7,300	2,130,302	14,268,698	16,406,300	2010-2019
New York City	10	54,874	14,727,550	95,195,832	109,978,256	2010-2019
North Charleston	1	2,710	600,166	5,304,976	5,907,852	2013-2019
Oakland	1	4,197	1,270,797	8,210,078	9,485,072	2013-2019
Philadelphia	5	24,579	7,138,279	48,069,862	55,232,720	2010-2016
Phoenix	15	84,427	24,291,890	165,266,090	189,642,407	2010-2019
Pittsburgh	1	5,472	1,342,441	10,700,000	12,047,913	2016-2019
Portland	2	13,166	3,615,381	26,560,131	30,188,678	2010-2016
San Diego	4	22,445	5,757,116	44,767,402	50,546,963	2010-2019
San Francisco	3	14,220	4,116,559	27,811,746	31,942,525	2010-2019
San Jose	3	17,198	5,075,286	33,642,217	38,734,701	2010-2019
Seattle	2	11,847	3,373,363	23,172,990	26,558,200	2010-2019
St. Louis City	6	31,269	9,400,860	62,914,286	72,346,415	2010-2019
St. Paul	2	9,664	3,131,414	18,899,104	22,040,182	2013-2019
Tulsa	4	20,313	5,301,968	38,929,140	44,251,421	2014-2019
Washington, D.C.	3	14,853	4,176,141	29,042,857	33,233,851	2011-2019

**Note: Years observed vary based on data availability.*

Furthermore, each killing by police leaves several more people bereaved. The bereaved may take time off work, become less productive when they return to work, or require treatment for mental health issues following a loved one’s killing. Table 7 displays estimates of these costs. Again using

Chicago as an example, the analysis estimates that the annual cost of missed work for the ninety-five bereaved persons is \$120,519; the reduced productivity following their return to work costs \$1.6 million; and their mental health treatment costs \$415,432.

TABLE 7 Average Annual Number of Bereaved Persons from Police Use of Force and Related Costs

Department	Bereaved	Costs				Years Observed
		Absenteeism (\$)	Presenteeism (\$)	Mental Health (\$)	Total (\$)	
Atlanta	20	24,737	329,631	85,311	439,679	2010-2019
Austin	39	49,663	660,600	171,246	881,509	2010-2019
Baltimore	39	49,934	666,864	172,418	889,215	2010-2019
Chicago	95	120,519	1,605,673	415,432	2,141,625	2010-2019
Cleveland	12	14,694	195,630	50,779	261,103	2010-2019
Dallas	52	65,828	877,207	226,691	1,169,726	2010-2019
Detroit	14	17,555	233,351	60,296	311,203	2010-2019
Houston	83	105,939	1,410,730	364,936	1,881,605	2010-2019
Jacksonville	51	64,276	855,257	221,132	1,140,664	2015-2016
Long Beach	27	33,862	450,798	116,704	601,364	2015-2019
Los Angeles	137	174,055	2,318,206	599,446	3,091,708	2010-2019
Memphis	28	34,874	464,805	120,130	619,809	2010-2019
Milwaukee	21	25,954	346,363	89,424	461,741	2010-2019
Minneapolis	9	11,568	154,141	39,864	205,573	2013-2019
New Orleans	12	15,240	203,106	52,755	271,100	2010-2019
New York City	91	115,714	1,541,571	398,287	2,055,572	2010-2019
North Charleston	5	5,708	75,980	19,641	101,329	2013-2019
Oakland	7	8,864	118,163	30,518	157,545	2013-2019
Philadelphia	41	51,732	689,735	178,381	919,849	2010-2016
Phoenix	140	177,946	2,371,011	613,006	3,161,963	2010-2019
Pittsburgh	9	11,553	153,713	39,693	204,958	2016-2019
Portland	22	27,762	369,882	95,479	493,123	2010-2016

Department	Bereaved	Costs				Years Observed
		Absenteeism (\$)	Presenteeism (\$)	Mental Health (\$)	Total (\$)	
San Diego	37	47,482	632,280	163,380	843,142	2010-2019
San Francisco	24	29,991	399,214	103,100	532,305	2010-2019
San Jose	29	36,075	481,231	124,620	641,926	2010-2019
Seattle	20	24,899	332,549	85,838	443,287	2010-2019
St. Louis City	52	65,636	874,214	226,730	1,166,580	2010-2019
St. Paul	16	20,361	270,587	70,241	361,189	2013-2019
Tulsa	34	42,664	568,659	147,217	758,540	2014-2019
Washington, D.C.	25	31,128	414,791	107,653	553,572	2011-2019

**Note: Years observed vary based on data availability.*

Police use of force incidents can also result in injuries and considerable associated costs, as shown in Table 8. In Chicago, an average of 164 police use of force incidents each year result in injuries with tangible and intangible costs. The simulations suggest that annual medical costs associated with those incidents are approximately \$1.2 million, while the costs of reduced labor force productivity are estimated at \$166,775. The intangible costs of

injuries are much larger: the quality of life costs of these injuries in Chicago average \$9.7 million per year.

Again, because of officers’ failure to document all uses of force, which leads to underreporting, as well as legal and resource barriers to filing suits challenging officers’ actions, these estimates are an undercount of total costs.

TABLE 8 Average Annual Number of Persons Injured¹⁰¹ and Associated Costs

Department	Injured	Costs			
		Medical (\$)	Work Loss (\$)	Quality of Life (\$)	Total (\$)
Atlanta	77	566,247	78,419	4,023,199	4,667,865
Austin	234	1,717,023	237,836	8,744,650	10,699,509
Baltimore	62	451,682	62,526	3,130,381	3,644,589
Chicago	164	1,203,816	166,775	9,718,290	11,088,881
Cleveland	15	107,760	14,917	909,585	1,032,262
Dallas	128	939,113	130,013	4,631,874	5,701,000
Detroit	4	25,497	3,531	640,731	669,759
Houston	120	880,517	121,798	4,396,610	5,398,925
Jacksonville	2	17,301	2,404	436,407	456,112

Department	Injured	Costs			
		Medical (\$)	Work Loss (\$)	Quality of Life (\$)	Total (\$)
Long Beach	234	1,707,200	237,409	14,581,854	16,526,463
Los Angeles	292	2,139,007	296,604	14,529,057	16,964,668
Memphis	73	533,842	74,057	2,916,300	3,524,199
Milwaukee	79	576,901	79,884	4,386,681	5,043,466
Minneapolis	124	911,505	126,242	4,653,406	5,691,153
New Orleans	20	148,423	20,538	1,013,584	1,182,545
New York City	229	1,681,616	232,589	8,347,010	10,261,215
North Charleston	18	130,093	18,075	972,486	1,120,654
Oakland*	--	--	--	--	--
Philadelphia	4	25,421	3,533	640,681	669,635
Phoenix	111	815,624	113,045	6,005,356	6,934,025
Pittsburgh	50	368,311	51,022	2,037,557	2,456,890
Portland	1	7,163	996	180,694	188,853
San Diego	167	1,219,281	169,205	7,458,022	8,846,508
San Francisco	63	454,526	63,431	4,781,020	5,298,977
San Jose	133	967,910	134,567	7,717,818	8,820,295
Seattle	37	269,141	37,287	2,120,152	2,426,580
St. Louis City	135	986,663	136,661	8,027,592	9,150,916
St. Paul	61	444,585	61,563	3,492,183	3,998,331
Tulsa	187	1,365,248	189,822	10,250,234	11,805,304
Washington, D.C.	57	416,890	57,832	2,345,363	2,820,085

**Note: Injury data for Oakland were not available and were not included in the analysis.*

Results: Value of Time

Table 9 displays the estimated value of people’s time spent during stops by the police in a subset of cities. Although all of the estimates in this Report have limits, it is worth stressing that TMI’s estimates of the costs of people’s time during police stops focus narrowly on **police-initiated stops that**

do not result in a ticket, court summons, or arrest. Other costs stemming from police stops are not included. Notably, stops that do result in a law enforcement action, such as a ticket, do not necessarily improve public safety,¹⁰² and they also have significant costs that are not included in this analysis. Furthermore, this Report’s analysis does not account for any intangible costs associated with

these stops, such as the dignitary or quality of life costs. Finally, the analysis cannot account for either the tangible or intangible *downstream costs* of police stops that do result in a ticket, court summons, or arrest, such as those stemming from the detention, prosecution, and/or incarceration of the person stopped. Each step of this process incurs direct criminal legal costs and both direct/indirect and tangible/intangible costs on the detained and/or incarcerated person as well as their family, friends, and communities. Stops may incur even more costs if the person is wrongfully detained, arrested, or prosecuted and sues in civil court.

Even with the omission of these intangible costs and tangible/intangible downstream costs, the results suggest that, in some cities, the value of stopped persons’ time can exceed a million dollars per year. TMI estimates that, in 2017, Chicago Police initiated over 77,000 stops not resulting in tickets, summonses, or arrests. These stops used almost 50,000 hours’ worth of stopped persons’ time, valued at nearly \$1.3 million. In comparison, San Diego Police officers initiated nearly 346,000 unproductive stops in 2019, accounting for over 218,000 hours of stopped persons’ time, valued at \$6.1 million.

TABLE 9 Value of Stopped Persons’ Time Per Year

Department	Unproductive Police-Initiated Stops	Time in Stops (Hours)	Costs of Stopped Persons’ Time (\$)	Year
Chicago	77,630	48,997	1,281,989	2017
Denver	122,180	77,117	2,217,952	2017
Long Beach	20,689	13,055	353,738	2019
Los Angeles	332,902	210,095	5,693,478	2019
Minneapolis	4,452	2,810	78,808	2019
New Orleans	26,984	17,032	369,459	2017
Oakland	17,399	10,978	393,853	2017
San Diego	345,955	218,332	6,058,108	2019
San Francisco	26,369	16,643	596,969	2017
San Jose	15,702	9,908	399,007	2017
Seattle	22,742	14,351	467,452	2015
Washington, D.C.	59,095	37,295	1,313,599	2019

**Note: Years observed vary based on data availability.*

Results: Tangible and Intangible Costs

Table 10 summarizes TMI’s findings that identify the annual total tangible and intangible costs associated with policing. The results demonstrate that the true burden of policing, in terms of both tangible and intangible costs, far surpasses what might be inferred from police budgets. The hidden tangible costs of policing in Chicago, for example, average \$71.7 million per year, which greatly

exceeds the \$18.1 million the city invested in 2019 in One Summer Chicago—a summer employment program for young people that has proven to be cost-beneficial by reducing reported crime.¹⁰³ Moreover, intangible costs far exceed tangible ones, although they cannot be directly compared to tangible or budgetary costs. For example, the combined value ascribed to injury and loss of life due to police use of force in Chicago is \$130 million per year, about 1.8 times greater than the estimated hidden tangible costs of policing.

TABLE 10 Tangible, Intangible, and Total Previously Excluded Annual Costs of Policing (\$) (2013-2019)

Department	Tangible	Intangible	Total Hidden Costs
Atlanta	5,217,160	26,965,053	32,182,213
Austin	10,226,414	54,119,889	64,346,303
Baltimore	12,266,523	49,536,892	61,803,415
Chicago	71,660,671	130,129,954	201,790,625
Cleveland	5,100,063	15,434,609	20,534,672
Dallas	12,632,124	66,857,406	79,489,530
Detroit	8,814,017	17,604,365	26,418,382
Houston	18,707,631	105,452,215	124,159,846
Jacksonville	10,846,632	60,949,396	71,796,028
Long Beach	21,793,318	45,994,417	67,787,735
Los Angeles	66,212,391	174,413,666	240,626,057
Memphis	7,172,539	34,578,828	41,751,367
Milwaukee	8,971,339	29,308,954	38,280,293
Minneapolis	7,652,999	15,373,430	23,026,429
New Orleans	3,420,389	15,282,282	18,702,671
New York City	200,711,615	103,542,842	304,254,457
North Charleston	1,201,525	6,277,462	7,478,987
Oakland	6,679,353	8,210,078	14,889,431
Philadelphia	20,988,179	48,710,543	69,698,722
Phoenix	32,045,319	171,271,446	203,316,765
Pittsburgh	3,160,708	12,737,557	15,898,265

Department	Tangible	Intangible	Total Hidden Costs
Portland	4,863,375	26,740,825	31,604,200
San Diego	16,364,375	52,225,424	68,589,799
San Francisco	8,645,932	32,592,766	41,238,698
San Jose	8,569,189	41,360,035	49,929,224
Seattle	5,823,648	25,293,142	31,116,790
St. Louis City	11,722,033	70,941,878	82,663,911
St. Paul	4,583,139	22,391,287	26,974,426
Tulsa	9,188,744	49,179,374	58,368,118
Washington, D.C.	14,885,781	31,388,220	46,274,001

Discussion and Conclusion

Across the cities in this sample, the previously excluded costs of policing often exceed other sizeable budget expenditures. In Tulsa, Oklahoma, the results suggest that the previously excluded costs of policing total \$58.4 million per year, with \$9.2 million in tangible costs and \$49.2 million in intangible costs. Comparatively, the city’s Fiscal Year 2020 budget for its entire Parks and Recreation Department—which oversees 135 parks, eighty-eight playgrounds, 186 sports fields, and five swimming pools—amounted to \$20.2 million, while spending on transit amounted to \$10.8 million.¹⁰⁴

The results suggest that the previously excluded costs of policing in North Charleston, South Carolina, average nearly \$7.5 million per year: \$1.2 million in tangible costs and \$6.3 million in intangible costs. This stands in stark contrast to the amount spent on payroll costs for the city’s Recreation Department (\$5.75 million) and for its Cultural Arts Department (\$605,000) in Fiscal Year 2019-2020.¹⁰⁵ In New York City, these previously excluded policing costs amount to \$304.3 million per year, \$200.7 million of which are tangible. That stands in contrast to the \$164 million spent on the New York City Summer Youth Employment Program (SYEP) in 2019.¹⁰⁶ Part III of this Report discusses why such youth employment

programs are among the most cost-beneficial ways of improving public safety, particularly for young people at risk of criminal legal involvement and violent victimization.

TMI’s estimates provide a fuller and more accurate accounting of the true costs of policing, although they remain incomplete. Further research is needed to understand the complete costs of policing on the people whom officers encounter and on broader communities.

TMI’s cost estimates also provide a helpful reference point when considering additional public safety strategies that cities across the country have begun to employ, such as using unarmed responders to address certain 911 calls. Part II of this Report compares TMI’s estimates of the true costs of policing with estimates of the costs of community responders in the same cities. Finally, Part III presents BCAs of investments in the social safety net, including social welfare programs like food aid, cash aid, housing assistance, summer youth employment programs, childhood education, and health care, as well as improvements to physical infrastructure and public spaces. The investments considered in Part III promote safety without generating the harms of policing that can lead to sizeable tangible and intangible costs.

THE VALUE OF COMMUNITY RESPONDERS



Freedom House paramedics stand in front of an ambulance. *Detre Library Archives*

Introduction

During the 1970s, John Moon, a Black man, worked as a hospital orderly in Pittsburgh, Pennsylvania.¹⁰⁷ One evening while on duty, he witnessed two young Black men rushing into the hospital with a critically injured patient. He was struck that, unlike him, the two men were not orderlies but were trained to provide lifesaving aid. Moon later learned that

the paramedics were with Freedom House, the first emergency medical services (EMS) program in the United States, founded in 1967. Freedom House had deep roots in Pittsburgh's Hill District, a predominantly Black community. A Black-led job training program created Freedom House and recruited most of its staff from the local community. Trained paramedics staffed the organization, which pioneered the EMS model used today.¹⁰⁸

Black first responders at Freedom House provided emergency paramedicine that met a critical need at the intersection of public safety and public health. Prior to Freedom House, the police, firefighters, or local funeral homes often provided emergency transportation to hospitals.¹⁰⁹ Treatment was inadequate, as officers sometimes misclassified medical emergencies as intoxication, transported injured individuals unsafely, or mishandled crash victims in ways that caused further harm. It was widely reported that officers tossed injured people into cars and abandoned people on the street without care.¹¹⁰ A 1965 report estimated that about 50,000 people died that year from car accidents—deaths that might have been prevented with care provided by Freedom House, which was created two years later. In its eight-year tenure, Freedom House provided quality care during transport to the hospital 50,000 times.¹¹¹

At the same time, structural racism and implicit and explicit racial bias caused Black communities to face the worst-quality care in many instances.¹¹² For example, in 1965, when Mitchell Brown was seventeen years old, he returned home and found his mother lying unresponsive on the floor.¹¹³ He called 911, hoping that the police would take her to the hospital. Officers assumed his mother was drunk and withheld aid, though she was actually suffering a cerebral hemorrhage. At Brown's insistence, officers eventually took her to the hospital but, still believing she was drunk, delayed her care by an hour. Sadly, she passed away days later. Incidents like this deepened distrust of the police in the 1960s and 1970s. That distrust continues today, keeping many Black people from calling 911 for EMS.

Freedom House's innovations revolutionized emergency care: paramedics rode with patients in the ambulance and were trained to start intravenous therapy (IVs), intubate patients, and perform cardiopulmonary resuscitation (CPR).

These innovations fundamentally transformed public safety in Black communities, replacing failed police responses to medical crises with effective emergency care that kept residents healthier and safer. This example of Black emergency responders creating solutions to public safety challenges within their communities demonstrates how community-centered solutions can transform the health and well-being of people across the nation. The founders of Freedom House understood that community members must have a trusted ally to call for aid, protection, or information in times of crisis. The early Freedom House model is an exemplar of how public safety requires providing communities with emergency responders who can quickly and efficiently answer calls for service in a manner that makes them feel safe and properly attended to.

Unfortunately, the primary mission of police—to enforce penal laws—is frequently in tension with, and not responsive to, many calls for emergency assistance. In many Black communities, residents—especially those most affected by a lack of public safety or most likely to be victimized—hesitate to call the police, whom they fear might cause harm to their loved ones or neighbors.¹¹⁴ Far too often, police responses to calls related to welfare checks, nuisance complaints, persons in emotional or mental health distress, persons with physical disabilities, domestic violence, and community conflict leave callers, family members, or the larger community with greater physical and psychological harm.¹¹⁵ This problem is especially severe for Black people who also face other intersecting vulnerabilities. For example, unhoused individuals, sex workers, and people experiencing mental illness are disproportionately more likely to suffer physical, sexual, and even lethal violence or misconduct at the hands of police.¹¹⁶

The violence and coercive power at the core of policing are not required for the vast majority of community calls for service. Contrary to media

depictions and public perception, police have limited ability to prevent or stop crimes when emergency aid is requested.¹¹⁷ Only a small subset of 911 calls concern an active incident or one that could be solved by the presence of an armed member of law enforcement.¹¹⁸ In reality, many calls for service to which the police are currently deployed—such as motor vehicle accidents or other incidents that have already occurred, residential burglary alarms, and complaints regarding suspicious noises or persons—do not require an armed person to respond.¹¹⁹ Estimates vary across cities, but between one third and one half of all 911 calls are these types of calls to which armed officers are not particularly suited to respond, and the percentage may be much higher in some cities.¹²⁰

This part of the Report describes a variety of community responder models and what makes them unique. It also identifies the range of services that community responder programs are designed to provide. Part II includes descriptions and social science evaluations of the effectiveness of nationally prominent community responder programs. This empirical research of highly studied community responder programs informed the inputs used in TMI’s Monte Carlo simulations to predict the relative cost savings of community responder programs over traditional policing models in the identified cities. While Part I outlined the costs of policing to taxpayers, families, communities, and individuals, Part II focuses solely on comparing the taxpayer costs of traditional policing to the taxpayer costs of community responder programs. This comparison therefore produces conservative estimates of cost savings from community responder programs because it does not include the psychological and dignitary harms to individuals who experience police encounters or other harms to their communities.

Defining Community Responders and How They Differ from Police

Community responders are unarmed, nonpolice personnel who are trained to respond to both emergency and non-emergency calls for service.¹²¹ The motivating logic behind community responder programs is simple: policing can be an inefficient, ineffective, and costly response to many public safety needs and often exacerbates existing racial harms.¹²²

By their own admission, police officers are ill-equipped to respond to many of the emergency calls for service that they receive.¹²³ The training that officers receive in the academy and sporadically throughout their careers does not adequately prepare them to respond to 911 calls involving mental health, drug or alcohol dependency, youth issues, homelessness, or domestic conflict.¹²⁴ Police training also does little to help with routine calls—like false burglary alarms or traffic collisions—that could be handled more effectively by community responders.

As Dr. Micol Seigel notes, police training prepares officers to be “violence workers,” implicitly or explicitly relying on coercion and violence to resolve issues.¹²⁵ Even the standard equipment on an officer’s belt—a gun, a Taser, a baton, handcuffs, zip ties, and pepper spray—are tools of violence, coercion, and control.¹²⁶ The militarization of police expands far beyond this basic gear. The Department of Defense is authorized to transfer “excess” equipment (such as vehicles, weapons, and gear) to federal and state law enforcement agencies.¹²⁷ Through the federal 1033 Program and similar initiatives, local police departments receive military weapons and tactics, which they most frequently use on Black and Latinx communities.¹²⁸

When responding to calls for service, police officers often rely on coercion with the potential of violence.



A vehicle for the Support Team Assisted Response (STAR) program in Denver, Colorado. Photo courtesy of STAR

In many cases, violence is *unnecessary* because the situation could be resolved without force. As discussed in Part I, police officers’ responses can also be *costly*, both in lost labor productivity and in the physical harms that can happen because of a police encounter. Furthermore, police coercion is *ineffective* because it does not address the underlying causes that prompted the emergency call in the first place. Finally, police responses can be profoundly *racialized* and harmful, as Black people and other communities of color are disproportionately targeted in 911 calls and other police encounters. Evidence shows that militarizing the police does little to improve public safety and is linked to higher rates of lethal force against Black people.¹²⁹

Recognizing that violence is ineffective when responding to people with behavioral health needs, many police departments require some officers to undergo Crisis Intervention Training (CIT). CIT is designed to improve officers’ ability to identify

persons with behavioral health issues, respond with compassion and care, and connect them to resources in the community.¹³⁰ Unfortunately, after decades of both voluntary and compulsory CIT, research studies have found that CIT does not improve police interactions with people experiencing behavioral health crises, who still make up a disproportionate share of those killed or injured by police.¹³¹

As an alternative, a growing body of academic research and program evaluations suggest that cities advance community safety by deploying unarmed, nonpolice responders to 911 calls. Established and piloted community responder programs in several cities—such as in San Francisco, California; Denver, Colorado; Los Angeles, California; Brooklyn, New York; Durham, North Carolina; Ithaca, New York; and Atlanta, Georgia—provide models that other local governments can adapt and build upon.¹³² Community responder programs include a range

of individuals who have the training, temperament, and tools to assist community members with their safety concerns without relying on the threat of violence or coercion. The programs may include emergency medical technicians (EMTs), paramedics, mental health clinicians, mediation specialists, social workers, case managers, unarmed traffic enforcement officers, and parent volunteers. Table 11 outlines key functions of community responders and the specific responsibilities linked to each position.

One example of a community responder program is the use of trained mediators in Portland, Oregon, to defuse conflicts between landlords and tenants. If these conflicts were instead addressed through policing, they may produce more noise complaints, violence, and potentially even additional burdens on the legal system.¹³³ Portland also deploys mental health clinicians working with social workers, case managers, or peer responders to attend to individuals’ immediate behavioral health needs and to connect them to wraparound care to address the root causes.¹³⁴

Community responders may also include relatively novel positions, such as civilian crash investigators and civilian report technicians who can respond to motor vehicle collisions or burglary alarms, which constitute a sizeable share of all calls for service.¹³⁵ Some localities in Colorado and North Carolina employ civilian crash or report technicians to investigate traffic collisions, respond to residential and commercial burglary alarms, collect and process evidence, and testify in court as needed.¹³⁶ A 2021 study of nine law enforcement agencies estimated that seven percent of 911 calls concern alarms, much higher than the one percent of calls about incidents concerning mental illness.¹³⁷ Given that calls related to alarms are approximately seven percent of requests and take police officers an average of 12.3 minutes to resolve, dispatching community responders to alarm calls could yield considerable savings in terms of police time.¹³⁸ Although the deployment of these types of community responders is less common than community responders for behavioral health issues, their potential impact is significant.

An EMS medic takes the temperature of a man on August 17, 2021, in Houston, Texas. Photo by John Moore/Getty Images



TABLE 11 Examples of Community Responder Roles and Job Responsibilities

Mental Health Crisis Responder (Portland, Oregon)¹³⁹

- Provide crisis intervention to persons with sub-acute mental health and substance use disorder conditions
- Conduct professional assessments in mental health evaluations
- Implement behavioral interventions, such as behavioral activation, problem-solving treatment, motivational interviewing, and de-escalation techniques
- Provide information and referral services
- Provide brief supportive counseling to those in the emergency department

Community Health Worker (Portland, Oregon)¹⁴⁰

- Provide crisis intervention to persons with sub-acute mental health and substance use disorder conditions
- Coordinate care for individuals in need of support with health care, housing, and other services (e.g., submit applications for housing or health insurance and schedule appointments with service agencies)
- Help clients make informed decisions and advocate for their clinical status and treatment options
- Proactively support patients to keep track of their progress and ensure patient satisfaction; assess and address motivational and psychosocial issues; and engage the services of a Peer Support Specialist for emotional support
- Facilitate access to social services through outreach, community education, informal counseling, social support, and advocacy

Community Health Medical Responder (EMT) (Portland, Oregon)¹⁴¹

- Conduct physical assessments and social and behavioral determinants of health assessments
- Provide medical care based on assessment findings (e.g., opening and maintaining airways, ventilating patients, administering CPR, and providing emergency medical care of simple and multiple-system trauma, such as controlling hemorrhage, bandaging wounds, and manually stabilizing injured extremities)
- Use medical equipment, such as airway equipment/airway bag, splints, bandages, and medications
- Determine if the scene is safe, assess the need for and request assistance, and identify the mechanism of injury or nature of illness and the total number of patients

Peer Support Specialist (Portland, Oregon)¹⁴²

- Have lived experience with mental health or substance use disorder conditions to support individuals with similar conditions
- Provide crisis intervention and support to individuals experiencing distress
- Meet with individuals being served in the community and/or their homes to establish and maintain a positive and trusting relationship that is person-centered, strength-based, and trauma-informed
- Conduct follow-up and assist individuals with identifying, engaging, and navigating various community resources and external agency services
- Document support services in a program database in compliance with policies, program procedures, and local, state, and federal regulations
- Act as an advocate when appropriate

Mediation Response Unit (Dayton, Ohio)¹⁴³

- Respond to and follow up with individuals who are experiencing a low-emergency crisis and are interested in mediation/conflict resolution
- Create a constructive environment that allows clients to talk with each other and express their concerns, to listen to each other, and to make decisions about their situation
- Assist in the resolution of conflict and disputes between family, peer groups, and community members
- Assist in the resolution of noise complaints, neighbor/roommate disputes, barking dogs, loitering, unruly juveniles, and other interpersonal conflicts
- Provide intense case management follow-up as needed
- Develop referral sources and conduct mediations and trainings

Civilian Report Technician (Denver, Colorado)¹⁴⁴

- Respond to traffic crash calls for service, investigate crashes, write reports, interview victims/witnesses, conduct neighborhood surveys, collect evidence, testify in court, and conduct other activities related to the crash
- Respond to calls for service related to property crime; locate and interview complainants, victims, and witnesses; gather evidence and information; draw diagrams; take photographs; write reports; document investigations; and conduct follow-up investigation of cases as required
- Conduct public education about relevant laws, statutes, ordinances, codes, crime prevention strategies, rules, and regulations

Evaluating Community Responder Programs

Few community responder programs have been systematically evaluated by social science researchers. However, the two most widely studied community responder programs are the Crisis Assistance Helping Out On The Streets (CAHOOTS) program in Eugene, Oregon, and the Support Team Assisted Response (STAR) program in Denver, Colorado.

CAHOOTS, the oldest community responder program in the country, offers the clearest evidence that community responder models can manage a high volume of community calls for service while reducing the incidence of arrests and/or police violence. CAHOOTS deploys teams that include one health care worker and one crisis worker to address calls related to community disputes, behavioral health problems, welfare checks, and intoxication.

Following the CAHOOTS model, Denver launched a one-year pilot of the STAR program. Denver began deploying two-person teams consisting of a mental health clinician and a paramedic/EMT to downtown districts to respond to calls for service related to behavioral health, homelessness, and related quality of life issues.¹⁴⁵ As a pilot, the STAR teams responded to about six incidents during each eight-hour shift from 10 a.m. to 6 p.m., Monday through Friday.¹⁴⁶ In a “quasi-experimental” study, researchers found that the program was effective at improving public safety. Compared to control areas, treatment areas saw a statistically significant thirty-four percent reduction in reports of low-level crimes, such as intoxication, indecent exposure, trespassing, and improper syringe disposal, and a fourteen percent reduction in crime overall.¹⁴⁷ Within the initial six months of the pilot phase, researchers concluded that STAR prevented 1,376 offenses, such as trespassing, public disorder, and resisting arrest.¹⁴⁸ The researchers identified two

factors explaining the program’s effectiveness in reducing 911 calls: STAR team members were able to respond without the involvement of law enforcement, and they prevented future incidents by addressing the underlying causes of reported incidents.¹⁴⁹

Costs of Deploying Community Responders

The successful deployment of community responders and the evidence that they can safely and effectively respond to a growing share of 911 calls have significant implications for the future of public safety. In addition to being effective at addressing and preventing targeted criminalized activities (such as trespassing, public disorder, and resisting arrest), the STAR program was also shown to provide cost savings.¹⁵⁰ Based on the STAR program, the direct costs of police serving as the first responders to crises related to mental health and substance use were over four times larger than the direct costs associated with a community responder model, and the savings were in the reduction in arrests. These cost savings are attributed largely to police officers’ compensation, which is among the highest of local government employees, particularly when accounting for overtime and fringe benefits.¹⁵¹ An estimated ninety-six percent of municipal police budgets in the United States are spent on operational costs, primarily personnel costs.¹⁵² Police officers earn significantly more per year than the average community responder. Considering that most community responder models deploy an EMT and a community clinician, each team is more cost-effective than two patrol officers.

Nevertheless, most existing community responder programs are underfunded and understaffed relative to the volume of 911 calls. CAHOOTS, for example, responds to twenty percent of all calls for service while running on a budget of just \$2.1 million—a mere two percent of the total

amount spent on law enforcement in Eugene and Springfield, Oregon.¹⁵³ While program staff have recently requested additional funding to expand CAHOOTS services, demand exceeds capacity. In only a handful of cities do community responder programs operate every day and across the entire city. One of these few examples is Albuquerque, New Mexico, which expanded its community responder program to twenty-four hours per day, seven days per week in 2023.¹⁵⁴

Estimated Cost Savings from Broader Expansion of Community Responders

Since community responder programs are largely underfunded and are unable to respond to more calls for service due to insufficient capacity, this Report employs the Monte Carlo simulation method to estimate the amount of cost savings for local governments through the generalized implementation of community responders. This section explains the theoretical assumptions built into the Monte Carlo simulation model utilized by TMI in this Report and the rationale for those assumptions.

Building on a study led by Dr. Greg Midgette, this Report relies on a simplified model of how an emergency response system might function.¹⁵⁵ The model envisions municipalities employing two-person responder teams drawn from relevant fields, such as paramedics, EMTs, community health nurses, behavioral health specialists, civilian crash investigators, and civilian report technicians. This community responder team (CRT) would respond to 911 calls that are not likely to result in an arrest or a citation. Municipalities incur personnel costs for the CRT from the initial dispatch until the incident is resolved.

The model informing this analysis assumes that capital costs for the CRT and police are comparable, so these costs are excluded from the estimates. The largest capital costs for municipal police

departments are associated with the buildings that house police departments and precincts, as well as automobiles used by officers. TMI does not anticipate much difference in these costs under a CRT program. Although there are capital costs associated with police weaponry (such as service guns), they constitute a relatively small fraction of police capital costs and may be offset by equipment used by CRTs.

The model used in this analysis also excludes costs that may follow a CRT intervention, such as increased use of health care, housing, and social welfare services. It likewise omits downstream police labor costs—like those related to investigations, administrative processing of the accused person, property control, and court testimony by police personnel—as well as the costs of incarceration. As the Midgette study highlights, downstream police labor costs are less likely to stem from the relatively low-level, non-emergency calls to which CRTs may respond, and these costs may approximate the time CRTs spend on case management or conflict mediation.

Midgette’s model, used as a basis in this Report, assumes that CRTs generally take the same amount of time to resolve calls as police. While this assumption is plausible for some calls (such as alarms), it may be less so for others. For example, mediators incorporated into CRTs may spend far more time creating the conditions for dialogue between parties in conflict, allowing them to explain events from their perspectives, and attempting to resolve the conflict, whereas police officers may simply warn one or both parties of potential law enforcement actions or conduct arrests. Similarly, mental health clinicians and community health specialists may spend considerably more time on a call connecting an unhoused person to services, compared to an officer who may force a person to “move along.” However, as community responders gradually build networks of trust and as more

resources become available, they may require less time to resolve conflicts and connect individuals to appropriate services. Therefore, TMI ran three distinct versions of the model:

1. CRTs taking up to twice as long as police officers to respond to and resolve calls for service (i.e., a conservative model);
2. CRTs taking the same amount of time as police; and
3. CRTs taking as long as the average response times reported in published research.

By employing three different versions of cost estimates with varying assumptions of time, the model used in this analysis documents the sensitivity of the cost analysis to the comparative estimates of the amount of time it takes CRTs to resolve calls for service, relative to police officers.

The model uses data from the Bureau of Labor Statistics (BLS) to estimate the regular wages of police officers and municipal personnel who may staff CRTs. It assumes that only people in nonmanagerial roles respond to calls for service. For police officers, these are personnel occupying the position of sergeant and below. To address considerable differences in fringe benefits and gross pay, the analysis uses BLS data from a set of municipalities (Baltimore, Baton Rouge, Berkeley, Boston, Hartford, Long Beach, Los Angeles, Louisville, Oakland, Philadelphia, Phoenix, San Antonio, San Diego, San Francisco, and San Jose) to estimate the gross pay rate of police officers and other municipal employees. Finally, the analysis uses compensation data from secondary school teachers to estimate the extent of cost savings if localities were to compensate CRT staff at a professional rate.

CRTs are unarmed¹⁵⁶ and designed and trained to connect people with services,¹⁵⁷ unlike law

enforcement officers who are authorized to enforce laws and use force and coercion to gain compliance. Some CRT programs are entirely consent-based,¹⁵⁸ and the use of coercion would be inconsistent with their protocol. Therefore, this Report’s analysis assumes that the transition to CRTs would result in a reduction in the fatal use of police force, and it includes estimates of associated cost savings in the model.¹⁵⁹ Fatal killings by police and non-lethal forms of police violence contribute significantly to the hidden costs of policing discussed in Part I. For this Report, the model considers only the tangible costs of police violence. The model also assumes that cities that transition to CRTs would see a reduction in the number and award amounts of legal settlements against them for police misconduct. This is because, as noted above, TMI expects that limiting police officer engagement in low-level offenses would lead to fewer incidents of lethal and non-lethal force and potentially fewer racial and ethnic disparities in police encounters.

Data and Methodology

Using the Monte Carlo Simulation to Develop Reliable Estimates Despite Uncertainty and Variability in Data

This Report endeavors to estimate the savings that can accrue when cities deploy CRTs rather than police. Producing such an estimate, however, is difficult and highly uncertain. As with the analysis in Part I, research does not always provide the high-quality, specific data or results from analyses that are needed to estimate certain costs with a high level of precision. For example, data such as the amount of time it takes to respond to 911 calls and the amount of wages that municipal employees are paid are central to the model. However, police departments do not routinely make granular data on response times to 911 calls publicly available, and high-quality data on police compensation for large U.S. cities are typically available only

after researchers and reporters file Freedom of Information Act requests. Some departments might publish officers’ regular wages but omit the (sometimes significant) overtime wages officers receive.

In addition to such limitations in raw data, research does not always provide clear or consistent evidence of the relationships or impacts that are important for estimating the potential cost savings of CRTs. As noted above, a recent evaluation of Denver’s STAR program estimated that the deployment of community responders to 911 calls for a range of public safety issues resulted in a thirty-four percent reduction in such calls.¹⁶⁰ However, there was some uncertainty in the estimate: the estimated reduction ranged from twenty-four percent to forty-two percent in ninety-five out of 100 hypothetical experiments that were conducted. A reliable accounting of costs would need to incorporate this variability.

To account for this uncertainty and variability, TMI employed the same statistical methodology used in Part I to more accurately estimate the costs of policing, a Monte Carlo simulation. Monte Carlo simulations first establish a range of possible values for inputs to a model. In the model used here, the effect of CRTs on nuisance offenses ranges from a twenty-four percent reduction to a forty-two percent reduction ninety-five out of 100 times, so the Monte Carlo simulation randomly selected a value from twenty-four percent to forty-two percent. Importantly, however, the results from previous empirical studies, representing the best available estimate, suggest that a thirty-four percent reduction is *the most likely* effect of CRTs on nuisance offenses. The Monte Carlo simulation employed here incorporated the fact that thirty-four percent is the most likely value, as well as the uncertainty in the true value and the possibility of variability in the effect of CRTs on nuisance calls in reality. The model did this for a wide range of inputs

that are needed to generate an estimate of the potential cost savings of CRTs.

A second key component of Monte Carlo simulations is repetition. The simulation repeated this process of randomly assigning inputs to the model to generate potential cost savings 100,000 times. This produced a *distribution* of cost savings, allowing researchers to make statements about both their best guess and their uncertainty.

Data Sources Used in the Monte Carlo Simulation

This analysis estimated police response times to 911 calls using local police department data, where possible, supplemented by published research studies when local data were unavailable. Compensation estimates relied on municipal data, with BLS figures used when local data were missing. To supplement the analysis of the frequently excluded costs of policing described in Part I of this Report, TMI incorporated data from several sources, including the U.S. Census Bureau, news outlets, academic research, the Police Scorecard, and not-for-profit organizations such as The Marshall Project and TMI’s National Police Funding Database. Table 14 in the Appendix summarizes the data sources. Researchers scrubbed all data used in this analysis to address inaccuracies and standardized the scrubbed data before adding it to the model.

Results

In each of the forty-three cities in Table 12, the model predicted that shifting to CRTs would generate substantial taxpayer cost savings. Annual savings range across cities from \$327,722 in Burlington to more than \$180.8 million in New York City. Implementing a community responder program could save \$96.7 million in Chicago through reduced police labor offset by the labor of community responders, reduced use of force

by the police, and fewer settlements because of reduced use of excessive force by law enforcement. In Los Angeles, the savings from transitioning to a community responder approach are estimated to amount to \$51.2 million. The transition to CRTs in small and mid-sized cities would yield more modest but still considerable savings driven by the same factors (reduced amount of police labor, reduced use of excessive force by police, and fewer settlements). For example, the model estimated that Tulsa could experience \$10.4 million in savings from the transition to CRTs, and North Charleston could save \$2.7 million.

When at least fifty-one percent of the Monte Carlo simulations for a CRT program in a municipality produced cost savings, the results indicate that it is “more likely than not” that a transition to CRTs would save taxpayers money. When at least eighty percent of the Monte Carlo simulations for a CRT program in a municipality produced cost savings, the results indicate that it is “highly likely” that a transition to CRTs would save taxpayers money. Thirty-eight cities in this sample are highly likely to generate taxpayer savings, and five cities are more likely than not to generate cost savings as well (see Table 12).

TABLE 12 Annual Cost Savings from Community Responder Teams at Status Quo Pay (Gross Pay Rate)

Department	Estimated Savings (\$)				Simulations	Confidence
	Responder Pay	Force	Settlements	Total		
Atlanta, GA	5,559,659	3,617,937	278,458	9,456,053	82%	Highly Likely
Austin, TX	5,468,828	6,240,175	429,059	12,138,062	95%	Highly Likely
Baltimore, MD	18,433,941	3,560,553	1,560,412	23,554,907	92%	Highly Likely
Baton Rouge, LA	959,518	2,886,647	127,308	3,973,473	82%	Highly Likely
Berkeley, CA	1,647,139	--	--	1,647,139	100%	Highly Likely
Boston, MA	10,500,357	1,265,598	615,979	12,381,933	86%	Highly Likely
Burlington, VT	327,722	--	--	327,722	62%	More Likely Than Not
Charleston, SC	1,159,424	--	--	1,159,424	70%	More Likely Than Not
Charlotte, NC	3,709,893	--	--	3,709,893	94%	Highly Likely
Chicago, IL	65,179,085	8,115,429	23,440,289	96,734,803	93%	Highly Likely
Cincinnati, OH	4,019,292	2,607,803	89,346	6,716,442	89%	Highly Likely
Columbus, OH	7,238,038	3,129,328	245,656	10,613,021	89%	Highly Likely
Dallas, TX	2,113,721	5,053,731	442,070	7,609,521	84%	Highly Likely
Denver, CO	4,498,088	4,641,193	--	9,139,280	88%	Highly Likely
Detroit, MI	4,969,230	1,223,602	2,600,900	8,793,732	83%	Highly Likely
Durham, NC	2,355,240	1,969,411	--	4,324,651	96%	Highly Likely

Department	Estimated Savings (\$)				Simulations	Confidence
	Responder Pay	Force	Settlements	Total		
El Paso, NM	2,182,054	1,744,811	--	3,926,865	76%	More Likely Than Not
Fort Lauderdale, FL	3,627,252	--	--	3,627,252	100%	Highly Likely
Fort Worth, TX	4,011,977	3,563,167	--	7,575,144	83%	Highly Likely
Greensboro, NC	1,212,876	--	--	1,212,876	89%	Highly Likely
Houston, TX	13,551,599	5,575,212	523,255	19,650,066	94%	Highly Likely
Indianapolis, IN	6,043,423	--	--	6,043,423	97%	Highly Likely
Little Rock, AR	561,686	1,660,113	33,733	2,255,533	75%	More Likely Than Not
Long Beach, CA	17,508,922	7,476,042	5,936,146	30,921,110	95%	Highly Likely
Los Angeles, CA	29,403,187	8,441,235	13,367,621	51,212,043	96%	Highly Likely
Minneapolis, MN	650,754	3,578,723	2,155,602	6,385,078	85%	Highly Likely
New Orleans, LA	3,360,909	1,238,302	189,330	4,788,541	78%	More Likely Than Not
New York City, NY	88,722,559	8,531,489	83,554,245	180,808,293	98%	Highly Likely
N. Charleston, SC	1,541,384	993,277	131,384	2,666,045	81%	Highly Likely
Oakland, CA	10,294,977	375,514	2,419,831	13,090,321	87%	Highly Likely
Phoenix, AZ	13,011,838	7,363,790	1,388,697	21,764,325	91%	Highly Likely
Pittsburgh, PA	2,750,156	2,312,195	441,797	5,504,148	89%	Highly Likely
Portland, OR	4,424,243	1,565,147	293,138	6,282,528	88%	Highly Likely
San Antonio, TX	17,397,740	4,652,045	--	22,049,786	94%	Highly Likely
San Diego, CA	13,743,127	5,264,684	965,921	19,973,733	95%	Highly Likely
San Francisco, CA	21,901,430	3,442,795	1,147,837	26,492,062	98%	Highly Likely
San Jose, CA	10,107,091	5,302,922	592,078	16,002,090	96%	Highly Likely
Seattle, WA	6,167,243	1,485,965	486,888	8,140,096	87%	Highly Likely
St. Louis City, MO	3,674,189	6,367,194	--	10,041,382	84%	Highly Likely
St. Paul, MN	3,242,588	3,352,359	223,534	6,818,481	86%	Highly Likely
Tulsa, OK	3,325,607	6,435,898	637,982	10,399,487	83%	Highly Likely
Washington, D.C.	10,994,824	3,005,160	3,562,113	17,562,097	81%	Highly Likely
Wilmington, DE	2,064,996	1,061,850	--	3,126,846	94%	Highly Likely

**Note: -- indicates that data were not available.*

As Table 12 shows, a large portion of the cost savings from CRTs stems from the higher wages of police officers compared to community responders. TMI also analyzed another version of the model in which CRT members are paid wages equivalent to those of secondary school teachers in their city. For example, in Chicago, police officers’ regular wages are 1.8 times higher than the wages of people working in roles that might staff CRTs, and their gross wages are 2.2 times higher. Paying CRT members the wages that secondary school teachers in Chicago earn, however, significantly narrows the gap: the disparity in regular wages falls to 1.03 times, and the disparity in gross wages falls to 1.15 times. Importantly, there are a handful of cities (identified in Table 15 in the Appendix) where paying CRT members an amount equivalent to teachers’ salaries would mean paying them more, on average, than police officers.

Table 13 displays the cost savings of CRT programs with community responders compensated at

the same rate as entry-level teachers in each municipality, using gross wages. Although the size of potential savings is smaller than in Table 12, the overall results are the same: in every city in the analysis except Burlington, it is more likely than not that CRTs with either standard or enhanced wages would produce cost savings compared to the status quo, in which only armed police officers respond to all 911 calls. In Burlington, CRTs are likely to produce cost savings to taxpayers under the status quo wage structure, but not with enhanced wages. Under the enhanced compensation structure, Los Angeles could save \$39.9 million, Chicago \$57.6 million, and New York City \$126 million annually. TMI estimates that smaller cities like Tulsa and North Charleson could save \$8.9 million and \$1.5 million, respectively, each year. In summary, many cities can raise the overall compensation of CRT members to more closely align with the value of their work and contributions to community safety and well-being without eliminating cost savings.

TABLE 13 Annual Cost Savings from Community Responder Teams at Enhanced Pay (Gross Pay Rate)

Department	Estimated Savings (\$)				Simu- lations	Confidence
	Responder Pay	Force	Settlements	Total		
Atlanta	1,505,091	3,617,937	278,458	5,401,485	75%	More Likely Than Not
Austin	3,892,395	6,240,175	429,059	10,561,629	93%	Highly Likely
Baltimore	8,167,046	3,560,553	1,560,412	13,288,012	86%	Highly Likely
Baton Rouge	379,940	2,886,647	127,308	3,393,896	79%	More Likely Than Not
Berkeley	1,052,065	--	--	1,052,065	98%	Highly Likely
Boston	3,751,187	1,265,598	615,979	5,632,763	77%	More Likely Than Not
Burlington	38,333	--	--	38,333	45%	Not Likely
Charleston	265,319	--	--	265,319	53%	More Likely Than Not
Charlotte	2,879,208	--	--	2,879,208	85%	Highly Likely
Chicago	26,047,570	8,115,429	23,440,289	57,603,288	89%	Highly Likely
Cincinnati	2,160,065	2,607,803	89,346	4,857,214	84%	Highly Likely

Department	Estimated Savings (\$)				Simulations	Confidence
	Responder Pay	Force	Settlements	Total		
Columbus	3,849,781	3,129,328	245,656	7,224,764	85%	Highly Likely
Dallas	1,524,888	5,053,731	442,070	7,020,689	82%	Highly Likely
Denver	3,594,756	4,641,193	--	8,235,948	85%	Highly Likely
Detroit	1,809,618	1,223,602	2,600,900	5,634,121	77%	More Likely Than Not
Durham	1,497,218	1,969,411	--	3,466,629	93%	Highly Likely
El Paso	810,221	1,744,811	--	2,555,032	71%	More Likely Than Not
Fort Lauderdale	2,565,943	--	--	2,565,943	99%	Highly Likely
Fort Worth	2,886,727	3,563,167	--	6,449,894	79%	More Likely Than Not
Greensboro	959,757	--	--	959,757	77%	More Likely Than Not
Houston	8,244,106	5,575,212	523,255	14,342,574	88%	Highly Likely
Indianapolis	4,216,986	--	--	4,216,986	89%	Highly Likely
Little Rock	218,665	1,660,113	33,733	1,912,512	73%	More Likely Than Not
Long Beach	10,718,195	7,476,042	5,936,146	24,130,383	92%	Highly Likely
Los Angeles	18,053,090	8,441,235	13,367,621	39,861,946	94%	Highly Likely
Minneapolis	415,500	3,578,723	2,155,602	6,149,824	84%	Highly Likely
New Orleans	1,728,202	1,238,302	189,330	3,155,834	70%	More Likely Than Not
New York City	33,956,767	8,531,489	83,554,245	126,042,500	96%	Highly Likely
North Charleston	328,170	993,277	131,384	1,452,831	75%	More Likely Than Not
Oakland	6,530,259	375,514	2,419,831	9,325,603	81%	Highly Likely
Phoenix	9,961,742	7,363,790	1,388,697	18,714,229	88%	Highly Likely
Pittsburgh	846,412	2,312,195	441,797	3,600,404	86%	Highly Likely
Portland	2,446,914	1,565,147	293,138	4,305,199	81%	Highly Likely
San Antonio	11,487,915	4,652,045	--	16,139,960	87%	Highly Likely
San Diego	5,968,425	5,264,684	965,921	12,199,030	91%	Highly Likely
San Francisco	14,231,282	3,442,795	1,147,837	18,821,914	94%	Highly Likely
San Jose	6,902,880	5,302,922	592,078	12,797,879	93%	Highly Likely
Seattle	3,673,989	1,485,965	486,888	5,646,842	81%	Highly Likely
St. Louis City	1,966,851	6,367,194	--	8,334,045	81%	Highly Likely
St. Paul	2,036,724	3,352,359	223,534	5,612,616	82%	Highly Likely
Tulsa	1,794,075	6,435,898	637,982	8,867,955	81%	Highly Likely
Washington, D.C.	4,384,518	3,005,160	3,562,113	10,951,792	75%	More Likely Than Not
Wilmington	1,061,134	1,061,850	--	2,122,985	89%	Highly Likely

**Note: -- indicates that data were not available.*

Discussion and Conclusion

The analysis shows compelling evidence that the implementation of CRTs is likely to save money for local governments. These savings, which could exceed \$10 million per year in several cities, come from reductions in labor costs as well as reductions in the costs associated with police use of force and settlements of lawsuits against police officers. The model used in this Report builds off existing cost-benefit models, but with a more comprehensive accounting of the hidden costs of policing.¹⁶¹

While most cost savings are generated from labor costs, there are also considerable savings from reductions in police use of excessive force, the frequency of settlements, and the size of settlement payouts. These savings are particularly notable in cities with frequent use of force cases and settlements, along with large average settlement payouts, such as New York City (with estimated annual savings of \$83.6 million in reduced settlements), Chicago (\$23.4 million), and Los Angeles (\$13.4 million). However, the results are robust even excluding these savings. In evaluating research in this area, no studies have rigorously analyzed the effects that CRTs might have on police use of force or misconduct settlements. Accordingly, TMI’s estimation of CRTs’ impact on these outcomes is speculative. Although existing qualitative evidence suggests that it is possible for CRTs to cause a reduction in police use of force and settlements of lawsuits against police officers, it is worth emphasizing that cities can expect to save money from the deployment of CRTs even if these outcomes are not achieved.

Importantly, TMI finds that cities may reasonably expect cost savings even if they enhance the salaries of CRT members to be more consistent with other public servants, namely public school teachers. One version of the model assumes that CRT members are paid at their current rate, which is a fraction of police officers’ salaries. Such a disparity is both untenable and unjust: untenable because CRT members will need to be compensated for the additional burdens of responding to 911 calls in an emergency setting, and unjust because their compensation should be higher to reflect their significant contributions to public health and public safety. Indeed, recent scholarship posits that “public safety is most effectively promoted by investments that confront the root causes of violence and other public safety issues, have legitimacy in the community, and work to supplant rather than support carceral techniques of social control.”¹⁶² Community responder programs promote community safety in a manner that may more effectively address the root causes of violence and conflict than traditional law enforcement, and their salaries should reflect the value of their work to society.

Beyond cost savings, evidence to support the effectiveness of CRTs is growing. The evaluation of the STAR program in Denver showed that having CRTs respond to specific calls for service reduced the frequency of those offenses being committed.¹⁶³ Meanwhile, prior TMI research demonstrates that increasing the number of police officers in segregated, predominantly Black neighborhoods may increase the number of homicides.¹⁶⁴ More research is needed to evaluate the effectiveness of community responders as compared to traditional law enforcement, but initial evidence suggests that CRTs are a promising alternative.



Members of the group Brownsville In Violence Out stand in Brooklyn, New York. Photo courtesy Dushoun “Bigga” Almond

PART III

INVESTING IN PEOPLE, COMMUNITIES, AND THE SOCIAL SAFETY NET

Introduction

On a chilly day in April 2021 in the Brownsville neighborhood of Brooklyn, New York, a car pulled up to a corner and a crying, intoxicated, and screaming woman was pushed out of it.¹⁶⁵ The twenty-three-year-old Black woman, Alicia, had no money and no identification. She was living with paranoid schizophrenia. Almost immediately, outreach workers from We Build the Block—a Black-led, community-based organization—brought the young woman food, helped her navigate the

city’s mental health hotline, and eventually drove her to an intake center for shelter. Outreach workers believed that providing Alicia with food, transportation, and shelter likely prevented a public safety incident. Alicia initially insisted on going to Rite Aid, where her mental state may have drawn law enforcement attention and led to an arrest or the use of force to constrain her.¹⁶⁶

We Build the Block’s interaction with Alicia that afternoon was not the first or the last time a community-based organization in Brownsville

provided care and support to a person in crisis, resolving a potentially explosive situation that may otherwise have led to police involvement. A group called Brownsville In Violence Out (BIVO)¹⁶⁷ disrupts disputes that could escalate into violence. This is possible because the group’s leader, “Bigga,” is trusted in the community, and people believe that he is there to support them and keep them safe.

Bigga’s actions prevent violence and concretely improve public safety in his community—in contrast to law enforcement’s traditional approaches to violence. For years, the New York City Police Department (NYPD) relied on the racially discriminatory practice of stop and frisk. Under this practice, officers stopped, questioned, and frisked over 5.2 million New Yorkers from 2002 to 2024 in search of illegal weapons and other contraband without sufficient evidence of criminal conduct.¹⁶⁸ In every year for which the NYPD reported racial data on these stops, over fifty percent of the people stopped were Black New Yorkers.¹⁶⁹ A federal court found this practice of racial profiling to violate the constitutional rights of countless individuals in New York City.¹⁷⁰ Although the NYPD has been under a federal court monitorship for over a decade to ensure officers’ compliance with state and federal law, recent court filings indicate that the NYPD’s unlawful stop-and-frisk practices persist.¹⁷¹

In the course of removing from the streets a gun that someone had not lawfully obtained or maintained, the NYPD would likely arrest that person, leading to criminal prosecution and incarceration in prison. In contrast, a community-based group like BIVO reduces the presence and use of guns in communities by relying on experienced and known volunteers with an inspired desire to keep their own community safe. The NYPD’s punitive approach costs taxpayers considerably more money, while also exacting

potentially devastating, long-term consequences on individuals and their families.¹⁷²

Fortunately for Alicia, she encountered a community-based organization rather than the police. Her incident took place within a two-block stretch of Brownsville in which 911 calls are directed to outreach workers like Bigga several times a year.¹⁷³ We Build the Block and BIVO disrupt the policing status quo by having unarmed civilians respond to public safety concerns. These community responders rely on the trust they have cultivated with local stakeholders, connections to other service providers, and their own experiences with the criminal legal system to prevent violence and other forms of crime.¹⁷⁴ In fact, the community responders often intervene *before* calls are placed to 911 or *before* public safety issues escalate to that point. Community responders in Brownsville and elsewhere endeavor to provide people with the resources and assistance they need, such as access to food, shelter, transportation, identification, employment, or health care. Outreach workers at community-based organizations like BIVO and We Build the Block understand that access to these resources can proactively prevent law enforcement involvement.

Part III of this Report explains how investing in and strengthening the social safety net, by helping people meet basic needs like food, shelter, and health care, can improve public safety. Community investments, such as sufficient lighting in public spaces, building remediations and renovations, and community gardens, also improve public safety. Furthermore, many of these strategies are more cost-beneficial than policing. Part III begins by discussing the role of anti-Black racism in underfunding and limiting the scope of the social safety net in the United States. It then provides a review of empirical studies documenting the public safety benefits and (where data permit) the relative costs and benefits of financial assistance, housing

assistance, summer youth employment, early childhood education, and health care. This section also reviews the empirical research on the relative costs and benefits of investments in the physical infrastructure of communities (namely, greening projects, streetlights, and the remediation of abandoned housing). It concludes with a discussion of how communities and local governments can use this research to identify solutions that address the distinctive challenges of their locality, while respecting the dignity and humanity of all residents.

The social safety net and community investments promote public safety.

By improving public safety, investments designed to support certain populations in specific ways may pay for themselves entirely. For example, programs to support the nutrition of young children and pregnant people or to support the health care needs of low-income young men with mental health conditions may yield savings by reducing costs from the criminal legal system and increasing the productivity of service recipients.¹⁷⁵ Federal social safety net programs provide the bulk of such support in the United States.¹⁷⁶ The largest programs with empirical evidence of improving public safety include cash aid (e.g., Supplemental Security Income [SSI] and Temporary Assistance for Needy Families [TANF]), health care (e.g., Medicaid and the Children’s Health Insurance Program [CHIP]), food and nutrition assistance (e.g., Supplemental Nutrition Assistance Program [SNAP], Special Supplemental Nutrition Program for Women, Infants, and Children [WIC], and free/reduced-priced school meals), shelter assistance (e.g., Section 8 housing vouchers), and education assistance (e.g., Pell Grants).

Although the United States spends a considerable amount of money on social safety net programs, the share of money given directly to low-income families is small, consisting of only twenty-two percent of

federal assistance in 2020.¹⁷⁷ In addition, the United States provides far less support to households through the social safety net than other advanced democracies do.¹⁷⁸ Despite having the highest relative poverty rate among member nations of the Organization for Economic Co-operation and Development (OECD), at nearly seventeen percent, the United States ranks twentieth out of twenty-four countries in social expenditures as a share of gross domestic product (GDP).¹⁷⁹ The United States’ total social expenditures are approximately 4.2% of its GDP when health care spending for low-income persons is included, which is a fraction of the roughly \$877 billion spent on defense and not much more than the roughly \$150 billion spent on police, law enforcement, and local public safety.¹⁸⁰ While this Report does not review in depth the rationale behind this disparity of expenditures, historian Michael Katz provides a good discussion of why the United States’ social welfare spending is so low in his books *The Undeserving Poor* and *The Price of Citizenship*.¹⁸¹

Many research studies highlight the role of anti-Black racism as a driving force behind the underfunding of the social safety net and other public services in the United States.¹⁸² Historical research documents how the exclusion of Black people from early welfare and anti-poverty programs in the New Deal was important for their passage and implementation. Racial segregationists dominated Congress in the 1930s and explicitly designed anti-poverty programs to exclude Black people. For example, one New Deal-era program, the National Recovery Administration, was created to improve wages and labor standards.¹⁸³ However, policymakers consciously crafted this program to exclude workers in the agricultural and domestic sectors, which represented seventy-five percent of all working Black people at the time.¹⁸⁴ Similarly, the famed Tennessee Valley Authority excluded Black people from working in clerical jobs, living in its new model town, and studying in its vocational

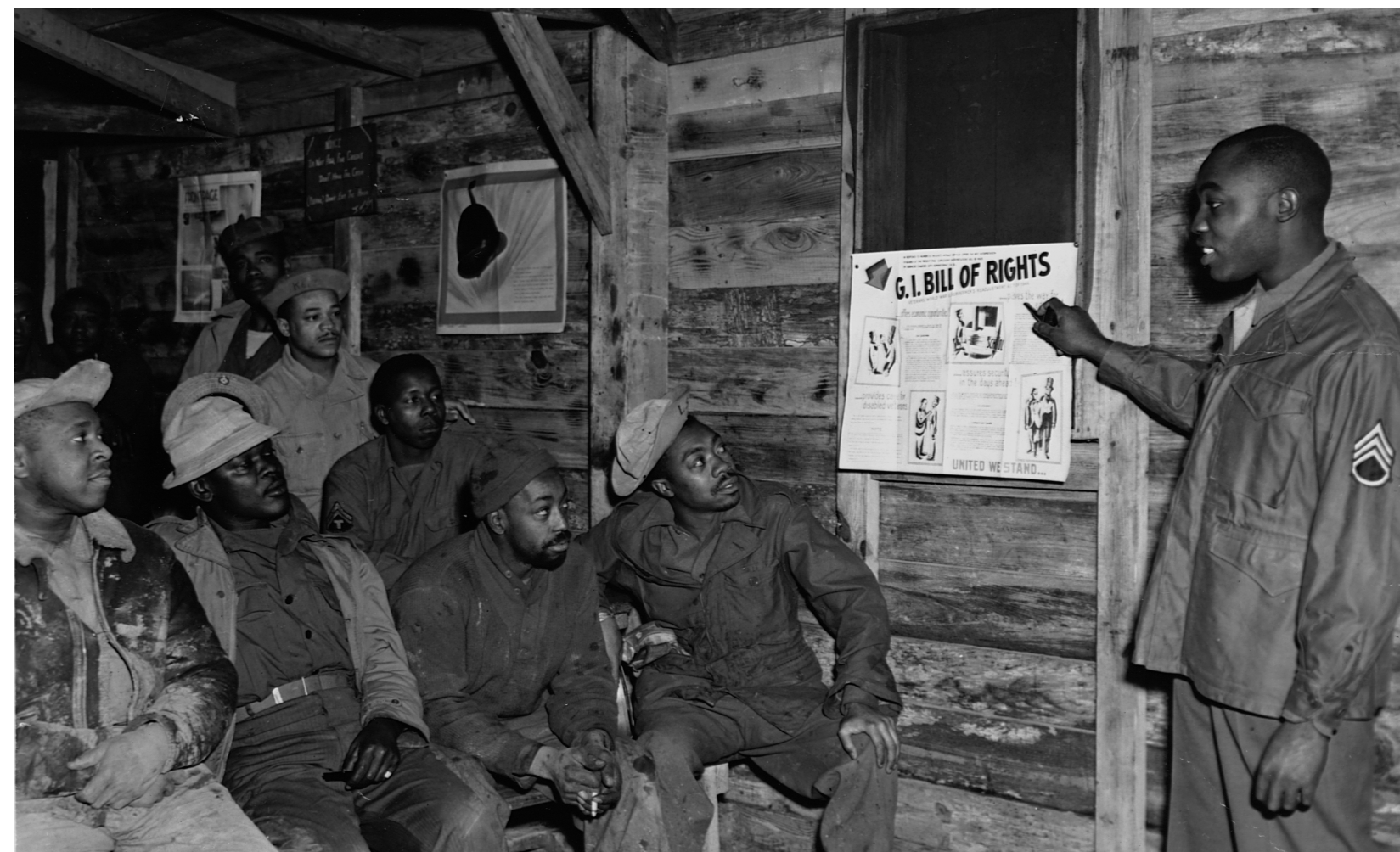
schools. This exclusion forced Black people into the lowest-paying, least-skilled jobs.¹⁸⁵

Anti-Black racism also affected the war on poverty and its evolution into the war on drugs. Many war on poverty programs were designed to address the exclusion of Black people from New Deal and GI Bill programs that had lifted millions of white people out of poverty and secured their suburban, middle-class lifestyles.¹⁸⁶ Yet, while the federal government was providing Black communities with job training and other programs, white policymakers across the political spectrum thought of Black poverty as pathological, unchangeable, and rooted in Black culture.¹⁸⁷ Rather than viewing young Black men as citizens to be served and uplifted by government programs, many policymakers saw them as a problem to be addressed. Accordingly, several anti-poverty programs were inextricably tied to

anti-delinquency programs, surveillance, and social control in ways that were absent in the GI Bill and New Deal programs. These discriminatory views of Black people grew stronger in the wake of Black civil rights mobilizations and the urban rebellions that followed racially charged instances of police brutality or killings of prominent Black leaders. Over time, the federal anti-poverty programs dissipated, and policymakers paired their punitive features with harsh sentencing laws and the targeted policing of Black communities.¹⁸⁸

Quantitative research confirms this historical analysis. As social aid programs became increasingly associated with Black people, white people became less likely to support the programs.¹⁸⁹ This trend corroborated and reinforced racially biased stereotypes portraying Black people as lazy and undeserving of aid.¹⁹⁰

Staff Sergeant Herbert Ellison explains the G.I. Bill of Rights to a group of Black workers circa 1944.
Photo by Library of Congress/Corbis/VCG via Getty Images



While the shortcomings of the United States’ flawed welfare system affect Americans of all races and ethnicities, the impacts are most pronounced for Black people. The United States has some of the highest rates of childhood poverty and infant mortality among wealthy democratic nations.¹⁹¹ This public health crisis has profound implications for Americans’ educational attainment, labor market productivity, life satisfaction, health, and future criminal legal involvement.¹⁹² A robust social safety net could lower rates of childhood poverty, infant mortality, homelessness, and other forms of socioeconomic deprivation, all of which disproportionately impact Black people.¹⁹³ In an economic analysis comparing the generosity of the U.S. social safety net and that of western European countries, the racial diversity of the United States emerged as the most powerful explanatory difference.¹⁹⁴ U.S. voters’ perception that social safety net programs will primarily benefit Black people, even though that is untrue, weakens political support for such programs.¹⁹⁵ Critically, and as detailed below, social ills that disproportionately affect Black people—such as segregation, poor health, pollution, and blighted communities—also fuel people’s contact with the criminal legal system.

The following section summarizes the empirical research literature that establishes how social welfare programs reduce people’s contact with the criminal legal system, often in a cost-beneficial

manner. Importantly, these studies use various methods of accounting for the impacts of social welfare policies on “crime.”ⁱ Some studies include both tangible and intangible costs associated with crime in their analysis, while others include only tangible benefits. The studies also rely on different methods to estimate the social costs of crime.¹⁹⁶ Throughout the discussion of the research literature, this Report notes which costs are included in the reported studies. TMI cautions against direct comparisons of benefit-cost ratios because of the significant variability in methods of calculating the costs of crime and the benefits of social welfare programs.

A benefit-cost ratio (the dollar amount of benefits over the dollar amount of costs) of greater than two means the benefits are substantially greater than the costs. A benefit-cost ratio of greater than one means the benefits are greater than the costs. A benefit-cost ratio of less than one means the costs assessed are greater than the benefits received. Notably, even for the social safety net interventions discussed below that have a benefit-cost ratio of less than one, existing studies demonstrate that those interventions are nevertheless effective in promoting community safety. In some instances where prior research does not provide data to calculate a benefit-cost ratio, this Report includes only the cost savings of those programs.

The Social Safety Net

A large body of research demonstrates that financial assistance, especially to families vulnerable to and experiencing poverty, improves public safety. This is true of financial aid in multiple forms: in-kind financial assistance such as SNAP, direct financial assistance through TANF, refundable tax credits like the Earned Income Tax Credit, and emergency and temporary financial assistance to families under stress.

Food Aid for Children

The majority of food aid in the United States is distributed through SNAP, and most studies on the effects of food aid focus on SNAP.¹⁹⁷ Notably, SNAP has not eliminated food insecurity for children in the United States: 7.6% of households with children have food-insecure children (6.8% have low food security, while 0.8% have very low food security).¹⁹⁸ It is also uncertain whether all children receive adequate food during the summer because over twenty-nine million U.S. children receive free or reduced-price lunch during the school year, but only 13.8% of those children receive food assistance during the summer months.¹⁹⁹

The provision of food aid, particularly to developing children, increases public safety.²⁰⁰ A study on the rollout of the Food Stamp Program (later renamed SNAP) in the late 1960s and early 1970s in North Carolina offers the best available evidence on the positive effects on long-term public safety derived from food aid to young children and pregnant women.²⁰¹ This study found that for each year the Food Stamp Program was available to young children (from in-utero to the age of five), their likelihood of a criminal conviction by the age of twenty-four dropped by 0.23 percentage points, or 2.5%.²⁰² Importantly, the effects of SNAP on public safety were greatest for offenses with the highest social costs—such as violent felonies—

and were substantially larger for people of color, who had a total reduction of eleven percentage points. The effect of SNAP in reducing the probability of criminal offenses is likely a product of improved physiological functions from good nutrition. Conversely, past research suggests that neuropsychological deficits developed in early childhood (potentially because of poor nutrition) can undermine public safety.²⁰³

Overall, the researchers estimated that the Food Stamp Program reduced the tangible costs (e.g., crime victim costs and criminal legal system costs) and intangible costs (e.g., pain and suffering costs) of crime by \$230 billion to \$510 billion (in 2015 dollars).²⁰⁴ Since the program represents a transfer of money from taxpayers to benefit recipients, the researchers did not consider the transfer of funds itself as a cost in their analysis, but they noted that funding administrative and other costs requires *distortionary* taxes (taxes, like those on cigarettes and alcohol, that cause individuals to change their behavior to avoid paying them). The distortionary taxes associated with the administrative and other Food Stamp Program costs were estimated to be between \$14 billion and \$35 billion in 2015 dollars. They also noted that receiving food stamps may be a disincentive to participate in the labor market, resulting in an estimated cost of \$63 billion to \$80 billion in 2015 dollars. Nevertheless, weighing the estimated benefits against the costs implies a **benefit-cost ratio of between 2.0 and 6.6 for the program, meaning the benefits are substantially greater than the costs.**

Research also finds that altering the timing of benefit payments can improve public safety. Specifically, one study estimated that staggering payments—thereby smoothing the income available to households over the course of a month—reduces theft at grocery stores by 20.9%.²⁰⁵ This change provides cost savings: researchers found that implementing this staggered approach in one

ⁱ “Crime” is often used as the sole measure to evaluate the success of public safety programs. This Report relies on studies that use this measure because those are the data sources and research currently available. However, the author notes that “crime” is a social construct reflecting the decisions and choices of officials and actors in the criminal legal system, as well as people involved in incidents reported through calls to 911. Namely, the concept of “crime” is the result of legislative decisions to criminalize certain conduct, decisions from policymakers to prioritize law enforcement activity regarding certain violations (whether by geography, issue, or other parameters), decisions by people to report certain incidents to 911, decisions by officers in individual incidents to take enforcement actions such as making an arrest, and decisions by other actors such as prosecutors and judges. Reported crime does not capture all conduct that meets the elements of a “crime,” and some issues (such as sexual assaults) are vastly underreported. In research, the term “crime” is often discussed as an issue of individual responsibility, without consideration of the important influences of structural forces such as the system actors discussed above. This focus on individual responsibility also influences solutions as interventions for people involved in the system, rather than broader changes to the system or by system actors. This Report references “crime” at times because it is the term used in the research cited, but the author recognizes the need for structural solutions and the critical role of system actors, which are often more powerful than individuals involved in incidents. Interventions for individuals can also be helpful, particularly if they recognize a person’s humanity and are focused on addressing the root causes of issues leading to system involvement rather than mere punishment.



A student carries his breakfast tray on the first day of school in Houston, Texas, on August 12, 2026. Photo by Melissa Phillip/Houston Chronicle via Getty Images

location cost \$294,010, while reducing theft at local grocery stores worth over \$1.4 million.²⁰⁶

Food Aid for Formerly Incarcerated Persons

The public safety consequences of food insecurity are not limited to families with children. One source of food instability in the United States is the legislative reform that imposed a lifetime ban on food aid and cash assistance for those convicted of a drug-related felony.²⁰⁷ Although states have the power to reject this ban, only twenty-eight states and the District of Columbia have entirely opted out, while South Carolina maintains a full ban on SNAP benefits for people with felony drug convictions and twenty-one states have some modified version of this ban.²⁰⁸ Research demonstrates that federal SNAP prohibition contributes to the likelihood that people with felony drug convictions will have additional encounters with the criminal legal system.²⁰⁹ As noted, financial insecurity—particularly food insecurity—can push people toward criminal conduct and thus interactions with police, and formerly incarcerated people are far more likely to experience food insecurity than others.²¹⁰

Many people who have been incarcerated depend on food aid: seventy percent of people who spend time in prison or jail have used SNAP in the past, and SNAP benefits constitute twenty percent of male recipients' total income.²¹¹ In Boston, Massachusetts, a state that repealed the ban on SNAP eligibility, seventy-four percent of respondents in one study received SNAP within two months of their release from prison.²¹² Another study found that Florida's decision to extend the ban on SNAP eligibility to persons with drug trafficking offenses increased criminal legal contact by nine percentage points, or ninety percent, relative to the baseline recidivism rate of 16.4%.²¹³ A large study similarly suggested that the SNAP prohibition increased additional criminal legal contact in California (by 1.5% within five years of conviction), with effects larger in

populous, diverse counties and concentrated among non-white Hispanic and Black men.²¹⁴

An analysis of Florida's SNAP prohibition found that it increased the rate of criminalized activities and behaviors that can help low-income people manage when there is insufficient money to maintain their household (such as property crimes, selling/manufacturing/distributing drugs, fraud, forgery, racketeering, prostitution, counterfeiting, and other related crimes), leading to increased recurring criminal legal contact. The financial consequences are substantial: researchers conservatively estimated that the SNAP ban costs the state \$3,700 per banned person (including both the costs associated with incarceration, as well as the tangible and intangible costs of crime).²¹⁵ Since the government saved only \$1,800 per banned person by prohibiting SNAP, **the benefit-cost ratio of such SNAP bans is 0.48, meaning the costs of restricting food aid are substantially greater than the benefits.** Thus, restricting food aid through SNAP bans is not cost-beneficial and does not promote safety. It is reasonable to infer that the alternative of **providing SNAP to formerly incarcerated individuals has a benefit-cost ratio of 2.1, indicating that the benefits to society equate to more than double the costs of the program.**

Cash Aid: Supplemental Security Income

Cash aid comes in several forms in the United States. Excluding tax credits, the two largest programs are SSI and TANF. SSI offers cash assistance to slightly over one million low-income children with disabilities and to 6.2 million low-income adults with disabilities, while TANF provides time-limited aid to unemployed or underemployed families with children.²¹⁶ Research suggests that receipt or nonreceipt of SSI benefits affects the likelihood of contact with the criminal legal system.²¹⁷ One study explored the impacts of the Personal Responsibility and Work Opportunity

Reconciliation Act of 1996 (PRWORA, Public Law 104-193) and its changes to SSI eligibility on the behavior of young people and their involvement in the criminal legal system.²¹⁸ The PRWORA increased the scrutiny of SSI eligibility, which in practice meant that young people who enrolled in SSI after the law passed were less likely to continue receiving benefits after the age of eighteen, when SSI recipients are re-evaluated to determine their continued eligibility for SSI benefits as adults. In fact, young people who turned eighteen after the law went into effect were forty percent less likely than those who turned eighteen prior to the PRWORA to receive SSI benefits as adults, with a potential loss of approximately \$10,000 in annual benefits.

The consequences were significant. Young people subject to post-PRWORA SSI eligibility requirements received 0.45 percentage points (or twenty percent) more criminal charges over two decades and were 2.9 percentage points (or sixty percent) more likely to be incarcerated in a given year. The effects were concentrated among offenses that could supplement their loss of household income.²¹⁹ Importantly, this change in determining SSI eligibility appears to have spurred more first-time contact with the criminal legal system by young people who otherwise would not have had such contact.

The negative consequences of losing access to SSI benefits affected certain groups differently but overall exposed already-vulnerable people to even more harm. For example, the increased likelihood of incarceration was disproportionately higher for Black youth and youth with low parent earnings, thus exacerbating existing inequalities. The effect of SSI removal on men was concentrated in more charges for burglary, drug distribution, criminal trespass, and resisting arrest or other obstruction of government. For men, SSI removal increased the annual likelihood of incarceration from 7.2 to

10.8 percentage points (a fifty percent increase).²²⁰ The effect of SSI removal on criminal charges for women was greater than for men and exclusive to charges that might provide some financial gain, such as theft, fraud, or prostitution—potentially reflecting survival conduct.²²¹ Removing access to SSI benefits increased the annual likelihood of incarceration for women from 0.7 to 2.4 percentage points (a 242% increase).

Overall, eliminating SSI benefits is not cost-beneficial, while providing SSI benefits *is* cost-beneficial for both recipients and public safety. Removing SSI benefits may encourage some former recipients to find employment and reduce the governmental costs of providing aid, for a collective benefit of \$46,400 (in 1996 dollars). However, each removal of SSI benefits costs \$126,600: \$10,800 in police and court costs, \$30,200 in incarceration costs, and \$85,600 in both tangible and intangible costs to victims. Removing access to SSI benefits, therefore, is not cost-beneficial, with a benefit-cost ratio of 0.37, meaning the benefits are substantially less than the costs. Conversely, it is reasonable to infer that **providing SSI benefits is substantially cost-beneficial, with a benefit-cost ratio of 2.7, meaning the benefits are substantially greater than the costs.**²²²

Housing Assistance: Emergency Financial Aid for Housing

Like food, shelter is a fundamental human need. Unfortunately, homelessness and housing instability are relatively prevalent in the United States, and disproportionately impact Black people.²²³ The number of unhoused people on any given night has risen by 30,000 since a low of about 550,000 in 2016, after steadily declining during the prior decade.²²⁴ Over the course of a year, approximately two million people in the United States will experience homelessness.²²⁵ Between 2007 and 2016, roughly 7.6 million people nationwide faced

the threat of eviction each year and 3.9 million were actually evicted.²²⁶ These numbers, however, mask the significant over-representation of Black people in eviction rates: relative to their share of the renting population, Black people are about 5.3 times more likely to be threatened with eviction and 3.7 times more likely to be evicted than white renters.²²⁷

Homelessness and housing instability are associated with poor public health and safety.²²⁸ Thus, emergency financial housing assistance to families can advance public safety. One study explored the effects of Chicago’s Homelessness Prevention Call Center (CHPCC), which provided emergency financial assistance to help cover rent, a security deposit, utilities, and other emergency household expenses.²²⁹ The program, which provided up to \$1,500 in one-time payments to assist with housing costs, significantly improved public safety. People who called when funds were available were 0.87 percentage points (fifty-one percent) less likely than similarly situated people who called when funds were not available to be arrested for a violent offense, mostly assault and

battery. Researchers also found a sizeable decline in arrests for offenses associated with homelessness (e.g., trespassing) but an increase in arrests related to property crimes (especially shoplifting) among heads of households. Overall, the Chicago program is cost-effective: considering only the tangible and intangible benefits to crime victims from the prevention of violent crimes, the **benefit-cost ratio of the program is approximately 1.7, meaning the benefits are greater than the costs.** A fuller accounting of the cost savings generated from all other types of criminal offenses would certainly raise this ratio.²³⁰

New research by the Federal Reserve suggests that a Housing First initiative in Los Angeles—which goes beyond emergency housing-related cash assistance and provides long-term, in-kind housing support—is also a cost-beneficial way of improving public safety.²³¹ However, the benefit-cost ratios of such programs can vary widely across different contexts, populations served, and program details.²³²

A person sits in a room in a homeless shelter in Denver, Colorado, on April 9, 2024. Photo by Hyoung Chang/The Denver Post



Summer Youth Employment Programs

Summer youth employment programs may also improve public safety. Almost all summer youth employment programs provide young people with opportunities to work, earn money, and gain experience during the summer, and some go further and pair employment with intensive mentorship or counseling.²³³ New York City’s Summer Youth Employment Program (SYEP), which is open to city residents ages fourteen to twenty-four, enrolls over 100,000 young people across 18,000 work sites in the city. New York City’s SYEP also offers special programs for youth leadership and for young people who had prior contact with the criminal legal system or who are unhoused or in foster care.²³⁴ Other summer youth employment programs, like the One Summer Chicago Plus Program, offer mentorship and cognitive behavioral therapy to youth from historically disadvantaged backgrounds and/or majority-Black communities, as well as those with a higher risk of involvement in the criminal legal system.²³⁵

A large and active body of literature has evaluated the impacts of these programs on youth arrests and incarceration.²³⁶ Twelve empirical studies explored the impact of summer youth employment on academic achievement, college enrollment, contact with the criminal legal system, and mortality.²³⁷ Seven of these studies employed experimental designs that meet the highest standard for uncovering causal effects.²³⁸

Across studies, summer youth employment consistently reduced rates of arrests, convictions, and incarceration. For example, one study found that a summer youth employment program in Philadelphia prevented three arrests and 1.5 incarcerations per 100 youth enrolled in the program, and a program in Chicago prevented 4.6 arrests for drug offenses and 6.4 arrests for other offenses per 100 youth enrolled.²³⁹ Another study

found that, among high-risk youth who had been arrested prior to enrollment, participation in New York City’s SYEP prevented thirty-four arrests per 1,000 youth enrolled.²⁴⁰

Not all studies conducted BCAs of these summer youth employment programs, but those that did suggest considerable cost savings.²⁴¹ Preliminary, informal calculations in one study estimated that New York City’s SYEP, which had approximately 294,100 participants, had costs totaling \$643.5 million. Overall benefits (including reductions in criminal legal costs, lost productivity of people accused of crimes, and both tangible and intangible costs for crime victims, such as the VSL) totaled about \$748 million, thus suggesting that the program at least pays for itself.²⁴² A more formal—though conservative—BCA of a Chicago program that served about 1,600 high-risk young people estimated the total cost of the program to be \$1,600 per participant, with benefits (including reductions in tangible and intangible costs for crime victims, such as the VSL) of \$1,878 per participant.²⁴³ An analysis of a Boston program serving roughly 4,200 youth estimated the administrative program costs to taxpayers at \$600 per participant, with benefits (calculated as in the previous study) of \$1,928 per participant.²⁴⁴ A more recent analysis of New York City’s SYEP estimated that, among high-risk youth, the program saves between \$652 and \$1,250 per participant. This means that New York City’s SYEP recovers between 46.5% and 89.4% of program costs for these participants through savings alone.²⁴⁵

Childhood Education

Robust investments in childhood education can also reduce contact with the criminal legal system, resulting in significant cost savings. The most compelling evidence of the positive effects of early childhood education on criminal legal contact comes from research on Head Start and Smart Start.²⁴⁶ Head Start is a bundled social program



Summer Youth Employment Program participants meet in a museum in New York City.

Photo by Jeffrey Greenberg/Universal Images Group via Getty Images

administered by the U.S. Department of Health and Human Services that provides early childhood education, nutrition services, access to social workers, mental health and dental treatment, immunizations, and health screenings.²⁴⁷ Smart Start is a program administered by North Carolina that helps parents pay for childcare, improves the quality of early childcare and education programs, provides tools so parents can better support their children, and ensures children’s access to preventative health care.²⁴⁸

Both programs are responsible for reducing the conviction rate by approximately twenty percent in high-poverty areas (where poverty is above the median rate).²⁴⁹ The availability of Head Start reduces the likelihood, by 1.3 percentage points (or

by about twenty percent), of a serious conviction by age thirty-five, but only in high-poverty counties.²⁵⁰ Smart Start reduces the likelihood, by 0.6 percentage points, of a serious conviction by age twenty-four.²⁵¹ The reduction is larger (by one percentage point) in high-poverty counties and is also larger for Black people than for white people, potentially due to differing access to high-quality care.²⁵² Because North Carolina implemented Smart Start relatively recently, the researchers were only able to estimate the social benefits of the program for young people up to the age of twenty-four.²⁵³ Nonetheless, the program comes close to covering its costs even when considering only the benefits from improving public safety. Smart Start has a **benefit-cost ratio of 0.79 in all counties and of 0.93 in high-poverty counties.**²⁵⁴ Taking into

account additional benefits would likely make the benefits exceed the costs.

Health Care: Affordable Care Act Medicaid Expansion

Health care is integral to overall quality of life and is powerfully related to future involvement in the criminal legal system, but roughly ten percent of Americans in 2020 were uninsured (down from nearly eighteen percent in 2010).²⁵⁵ Providing individuals with access to affordable and quality health care would facilitate treatment for illnesses that might otherwise increase their risk of police surveillance or criminalization. For example, studies show that Medicaid coverage expansion is associated with greater use of treatments to reduce or otherwise manage substance use disorders and mental illnesses.²⁵⁶ Medicaid can also relieve households of health care-related debt and financial distress: eight percent of U.S. adults overall, and thirteen percent of Black adults, have medical debt.²⁵⁷ The expansion of health insurance under the Affordable Care Act (ACA) helped reduce unpaid bills and increase credit scores for people who were previously uninsured.²⁵⁸ Access to health care may also help people address mental health conditions that, if untreated, can affect decision-making and reduce human/social capital and labor market productivity.²⁵⁹

Research makes clear that providing people with access to health care results in cost savings. Most of this research assessed the expansion of Medicaid through the ACA, although other studies examined greater access to health care through referrals or health care workers. Several studies explored the broad effects of Medicaid on public safety and the cost effectiveness of health care provision as a strategy to improve public safety. One study analyzed the effects of Medicaid expansion on public safety in the first few years after the ACA's

passage by comparing reported crime rates in states that expanded coverage with crime rates in states that did not.²⁶⁰ The researchers found a correlation between Medicaid expansion and a reduction in reported offenses across a wide range of categories. Specifically, they found a statistically significant reduction in reported aggravated assaults (by 6.7%) and burglaries (by 4.4%). The researchers estimated that Medicaid expansion saved \$10.6 billion in tangible and intangible costs to crime victims, criminal legal system costs, and the opportunity costs for those arrested.²⁶¹ This stands relative to the total cost of Medicaid expansion of \$28 billion,²⁶² for a **benefit-cost ratio of 0.37**.

Another study—using a broader range of data after changes to the ACA—found a more limited but still significant reduction in crime costs.²⁶³ This study found a correlation between Medicaid expansion under the ACA and a decrease in violent offenses by 5.3%, mostly due to a drop in reported aggravated assaults committed by young people. The findings suggest that Medicaid expansion is associated with twenty-one fewer instances of reported violent crimes per 100,000 people, of which seventeen (per 100,000) are aggravated assaults. The researchers estimated that states with Medicaid expansion averted one assault for every 113 new Medicaid recipients, amounting to an average annual savings of \$122 million in each state that expanded coverage. After multiplying this figure by the number of expansion states in the sample, they estimated annual cost savings of nearly \$4 billion (costs calculated as in the previous study). This offset fourteen percent of the total net costs associated with Medicaid expansion itself, meaning a **benefit-cost ratio of 0.14**. Notably, this benefit-cost ratio of Medicaid expansion is for *crime savings* alone: this finding that Medicaid expansion resulted in saving fourteen percent of the program's costs does not account for other cost benefits of Medicaid expansion. Medicaid expansion may also provide

cost savings or benefits through improvements in mortality,²⁶⁴ health,²⁶⁵ the financial well-being of households,²⁶⁶ the financial health of hospitals,²⁶⁷ and the educational outcomes and career earnings of newly insured people²⁶⁸—on top of the clear moral reasons to expand access to health care. The 0.14 benefit-cost ratio (meaning savings of fourteen percent of program costs, or nearly \$4 billion) from crime savings is an additional and substantial benefit on top of these other, previously identified benefits.

Health Care: Medicaid for Young Men

More focused evidence on the benefits of health care comes from an analysis of the effects of Medicaid disenrollment at the age of nineteen on South Carolina youth.²⁶⁹ This study found that young men who lost access to Medicaid coverage were 0.5 percentage points (fourteen percent) more likely to be incarcerated in the two years following the loss of eligibility.²⁷⁰ This effect was entirely driven by men with mental illnesses: by their twentieth birthday, men with histories of mental illness who lost access

to health services were twenty-two percent more likely to be incarcerated, for both violent and property offenses.²⁷¹

The costs of providing a cohort of low-income young men in South Carolina with Medicaid eligibility for two extra years would amount to roughly \$15 million.²⁷² These costs, however, would be offset by substantial savings: looking only at young men with mental health conditions, the researcher found that the reduction in violent, property, and drug offenses would save \$17 million. These savings are due to reductions in criminal legal system costs, tangible and intangible victim costs, opportunity costs for those arrested, *and* the downstream costs of incarceration, such as unemployment, reliance on public assistance, and post-release contact with the criminal legal system.²⁷³ Overall, the researcher found that **for every dollar invested** in insuring low-income men via Medicaid, society recoups around **\$1.90 in savings** from reduced social and fiscal costs from the criminal legal system alone.

A Black man sits in a medical exam room.
Photo by Getty Images





A public park with a bench and a pond. Photo by Getty Images

Improvements to Physical Infrastructure and Public Spaces

Vacant Lot Greening and Remediation²⁷⁴

The empirical research literature on the effects of vacant lot greening is well established and provides relatively clear and consistent evidence that this intervention can decrease public reliance on police by reducing violent offenses. Although the introduction of green spaces can range from small community gardens to larger, cross-community projects (e.g., Manhattan’s High Line), three types of interventions dominate the empirical research literature. The first is the *mowing* of vacant lots, which includes removing trash and scheduling regular grass mowing. The second is *greening*, which adds to mowing interventions by grading land, planting grass and small trees, and installing perimeter fencing. The third, *planting*, adds more significant landscaping, such as planting flowers, vegetable gardens, and orchards as well as installing murals, sculptures, other community art projects, and benches.²⁷⁵

Although the connection between vacant lot greening and public safety is well established, it is not entirely clear how that connection is made. In a summary of the empirical research on green spaces, researchers identified several ways that the greening of vacant lots may improve public safety, including by facilitating the creation and maintenance of social bonds, providing places for exercise and thereby improving physical and mental health, modulating the climate, and reducing places for the storage or dumping of weapons.²⁷⁶

Researchers recently conducted a review and meta-analysis of ten studies across five cities: Philadelphia, Pennsylvania (five studies); Youngstown, Ohio (two studies); Flint, Michigan (one study); New Orleans, Louisiana (one study); and Milwaukee, Wisconsin (one study).²⁷⁷ Although the empirical literature contains dozens more studies, these ten studies employed experimental or quasi-experimental research designs that may plausibly determine the *causal* effects of these interventions on criminal offenses.²⁷⁸ Unfortunately, these ten studies looked at a range of different

outcomes (such as violent offenses, shootings, gun assaults, robberies with a gun, and felony assaults), complicating comparisons across studies. To maximize comparability, ideally all ten studies would measure the same outcomes, on the same scale, and for the same duration. The authors of the meta-analysis therefore identified the offenses most similar to “firearm violence” in each of the ten studies and determined the estimated effects of greening on this sole outcome.

Despite limitations in conducting a comparative analysis of the ten studies, the research findings about the effects of greening on violent offenses were robust. The authors estimated the effects of greening on both reported and unreported firearm violence, using an adjustment commonly made in crime studies.²⁷⁹ Furthermore, the estimates of costs and benefits included all of the tangible costs to taxpayers identified in TMI’s cost analyses in Parts I and II of this Report (e.g., policing infrastructure costs) as well as many of the costs that TMI identified for victims (e.g., pain and suffering, medical costs, work loss costs, etc.).

The results of the analysis show clear evidence that greening vacant lots and planting gardens reduce firearm violence, whereas simply mowing vacant lots does not. Interestingly, the effect of vacant lot greening seems to be larger than the effect of gardening/planting, despite the latter involving more resource-intensive landscaping and amenities. On the other hand, there is significantly more heterogeneity in the effects of greening, meaning that planting produces more consistent effects across cities where it is implemented.

Effect sizes vary by city size and by how many vacant lots are available for remediation. Focusing exclusively on greening, the analysis estimated that small cities (with populations of less than 100,000) can expect to see 2.72 fewer firearm incidents per year, medium-sized cities (with populations between

100,000 and 300,000) can expect to see 7.40 fewer firearm incidents per year, and large cities (with populations of more than 300,000) can expect to see 33.33 fewer firearm incidents per year.²⁸⁰

Although these reductions in violent firearm offenses are notable, the analysis suggests that greening programs *do not pay for themselves*. However, the researchers did not include other benefits—such as improvements to property values and public health—in this analysis. The analysis considered criminal legal system costs, the costs of crimes to the accused (such as wages lost due to incarceration), and tangible and intangible crime victim costs (including the statistical value of human life). Costs vary considerably by the type of program implemented and the characteristics of each city.²⁸¹ Smaller cities, for example, have fewer plots for greening and are less likely to reap the benefits of economies of scale from program implementation.

Focusing again on greening programs, per capita costs are estimated to be \$65 in small cities, \$52 in medium cities, and \$31 in large cities.²⁸² Greening programs have **benefit-cost ratios of 0.08, 0.10, and 0.21** in small, medium, and large cities, respectively. Importantly, benefits generated from reductions in other offense categories were not considered and would likely change these ratios. Additionally, prior research considered only the impacts on crime. If researchers considered additional benefits, such as the improved quality of life for people with more access to green space, the benefit-cost ratios would likely be larger.

The study authors reviewed an array of recommended strategies for cities to reduce costs and increase benefits, such as recruiting community volunteers for greening projects (which could both reduce costs and increase a sense of belonging and community stewardship). The study authors did not explicitly recommend summer youth employment programs, but they may also save costs, increase



Workers remodel a vacant house in Detroit, Michigan. Photo by Jim West/UCG/Universal Images Group via Getty Images

belonging, and reduce violence if utilized for greening projects.

Streetlighting

The research literature on the lighting of public spaces is similarly well established and consistent in its findings that this intervention can significantly improve public safety. However, as with the greening of vacant lots, the mechanisms through which lighting can affect public safety are not well established. Lighting may serve as a deterrent, increase street use and thereby “natural” surveillance, signal heightened social control, improve community confidence, and reduce fear of crime.²⁸³ In the United States, these public lighting interventions almost exclusively involve repairing existing streetlights, installing new streetlights, or increasing the wattage of existing streetlights and other lighting fixtures. Occasionally, interventions involve the installation of smart lights that illuminate when they sense the presence or

movement of people and turn off after a set period of inactivity.

Because empirical research in this area is decades old and sufficiently well established, researchers can conduct quantitative meta-analyses of studies that employ quasi-experimental techniques and can plausibly determine causal effects. A review of seventeen such studies across seventeen cities and three countries demonstrates the effects across a number of contexts, including cities and town centers, parking lots, residential neighborhoods, and commercial areas.²⁸⁴ Overall, the results of this meta-analysis revealed that improving street lighting can reduce daytime and nighttime reported crimes by about eighteen percent. Notably, the majority of the decreased crime resulting from improved lighting was concentrated among property offenses, which declined by twelve percent, not among violent offenses. Further, the reduction was most pronounced in reported vehicle offenses and not burglaries: installing public lighting

resulted in a twenty-two percent reduction in reported vehicle offenses.

Remediation of Abandoned Homes

The remediation of abandoned homes is a lesser-studied intervention that may improve public safety by sending positive signals of community investment, limiting storage places for illegal drugs or weapons, and reducing the number of locations that facilitate the committing of crimes. Remediation programs typically involve the cleaning of a building’s exterior, the cleaning of the property, and the installation of working doors and windows.

Results from the literature are decidedly mixed. Two studies from Philadelphia found that the remediation of abandoned buildings results in significant improvements in public safety and may result in significant public savings.²⁸⁵ One study of publicly financed remediation in Philadelphia reported a large reduction in firearm assaults, resulting in a **benefit-cost ratio of seventy-nine** (where benefits included reductions in criminal legal costs, opportunity costs for people convicted, and both tangible and intangible victim costs).²⁸⁶ Based on this study, **the benefits of this program are dramatically greater than its costs**. Another study found that a Philadelphia program that fined owners of abandoned homes for failing to repair their buildings resulted in significant reductions in reported assaults, gun assaults, and nuisance offenses. However, the estimation of costs and benefits was complicated by the fact that owners bore the costs of remediation.²⁸⁷ In contrast to these Philadelphia-based studies, one study that explored remediation through the Neighborhood Stabilization Program in Cleveland, Chicago, and Denver did not uncover any effects, although that study may have had an insufficient number of cases to determine effects.²⁸⁸

Conclusion and Recommendations

The above programs provide solutions that can profoundly improve communities’ safety, often in a cost-beneficial manner and without the harms and costs of policing discussed in Part I of this Report. To improve safety in communities, residents and officials should support and invest in the following programs:

Community responders to handle calls for service, after a review of calls and discussions with local residents, leaders, and other stakeholders;

Food aid, including to children and formerly incarcerated people;

Cash aid, such as SSI benefits;

Housing assistance, such as emergency financial aid for housing;

Summer youth employment programs;

Childhood education programs, such as Head Start and Smart Start;

Health care access, such as through Medicaid expansion and Medicaid access for young men; and

Programs to improve physical infrastructure and public spaces, including vacant lot greening and remediation, streetlighting, and the remediation of abandoned homes.

While this is not an exhaustive list of initiatives that address the root causes of violence or reduce contact with the criminal legal system, this Report demonstrates the costs and benefits of a broad

array of programs that effectively improve safety. Community responders, food and cash aid, housing assistance, summer youth employment programs, childhood education, access to health care, and improvements to physical infrastructure and public spaces have all proven to be effective—and often cost-beneficial—solutions that meet communities’ needs and advance safety.

Importantly, these investments can improve safety without causing the many harms of policing that are often not accounted for in research, as outlined in Part I of this Report—both direct and indirect costs, and tangible and intangible harms to people and communities, some of which are difficult to quantify. As communities continue to grapple with challenges to their safety and search for solutions, community leaders and government officials should consider the true costs and harms of policing. They should also consider the efficacy and benefits of community responder programs and the array of cost-beneficial investments in communities that can improve safety, especially for the long term. Each community is unique and must identify the highest-priority challenges and solutions that are best suited to serve its needs. However, all communities should embrace broader solutions to public safety that respect the dignity and humanity of all people, rather than continuing to rely solely on punitive police activities like stops and arrests.

All communities should embrace broader solutions to public safety that respect the dignity and humanity of all people.

Many of the issues that local governments seek to address with policing today, such as incidents involving people who are experiencing homelessness or behavioral health challenges, are the result of historic and continuing failures to invest in people’s basic needs. Punishing people through policing and incarceration fails to address the root causes of public safety challenges and increases the likelihood that these issues will recur rather than be resolved. Instead, investments in communities have proven to be effective: they improve safety, have benefits that exceed their costs, and avoid the harms of policing detailed in Part I. Community and government leaders should consider both innovative programs and those with well-established evaluations that maximize the benefits of public spending and improve public safety without relying on the police,²⁸⁹ including investments in the social safety net.²⁹⁰

A more effective system of safety that respects all people’s dignity and humanity is possible, and its components have proven to be effective in studies across the country. Local and state governments should further invest in community responders to certain 911 calls as well as programs and services that address underlying problems in a community—all of which can improve public safety with greater benefits and cost savings.

APPENDIX

Part I Data Sources

This section of the Appendix details the sources of data used in TMI’s Monte Carlo simulations, including the approach to cleaning and transforming that data.

Policing Infrastructure Costs

Policing Costs: TMI gathered data on the costs of policing from the 2019 Annual Survey of Local Government Finances (ASLGF), a survey of revenues, expenditures, debts, and assets of local governments in the United States.²⁹¹ TMI’s measure of policing costs includes current operating expenditures, compensation (e.g., salaries, wages, fees, commissions, pensions, and fringe benefits), supplies, materials, and contractual services.²⁹² Current operating expenditures also account for repair and maintenance services for buildings, infrastructure, and equipment, such as cleaning, vehicle repair, and equipment maintenance. Importantly, however, this measure does not include capital outlay expenditures (expenditures for construction, equipment, or the purchase of land or structures) or costs associated with the purchase or installation of equipment that has a life expectancy of more than five years (e.g., patrol vehicles).²⁹³ TMI included costs associated with both sworn and civilian members of law enforcement agencies.²⁹⁴

Police Misconduct Settlements: There is no nationally comprehensive database on money paid by local governments to resolve cases of police misconduct, abuse, or excessive use of force. TMI gathered data on taxpayer costs to settle claims of police misconduct from four different sources, in addition to data collection efforts by an academic: TMI’s

National Police Funding Database, *The Washington Post*, collaborative research conducted by The Marshall Project and FiveThirtyEight.com, and research conducted by Dr. Joanna Schwartz.²⁹⁵ Where estimates from a single city appeared in more than one dataset and were inconsistent with one another, TMI pulled information from whichever database collected data over a longer timeframe. All values were adjusted for inflation (2019 dollars). Where TMI did not have the year of a settlement, TMI randomized the year from within the reported range of the data for that city. When TMI had only totals across a range of years, the simulation randomly drew yearly settlement totals. Where neither was available (such as for St. Paul, Minnesota), TMI assumed that settlements were evenly distributed across the range of years for which TMI had data.

Settlements for police misconduct occur sporadically over time and are exponentially distributed in value, such that a police department may pay very little over a five-year span but may pay millions to settle a particular case in a subsequent year. Given this underlying distribution, TMI did not simply add the total amount paid by the police department in a particular year. Rather, TMI drew from the empirical distribution of settlement frequencies and values to simulate the expected cost to a police department of settlement values. Specifically, TMI simulated the number of misconduct settlements the city entered by first drawing from the empirical distribution characterizing the number of settlements a city entered across the span of years for which TMI had data. TMI then assigned each of these settlements a value from the empirical distribution of settlement values for that city. Put simply, for settlement values,

TMI violated the hierarchy rule and simulated possible settlement values, rather than simply pulling yearly settlement values. This approach had the important advantage of characterizing the considerable variation and uncertainty that settlement values add to TMI's estimates of the costs of policing.

Tangible, Direct Costs

Value of Time: This Report's analysis of the costs of policing accounts for the tangible, direct costs borne by community members who interact with police. First, TMI accounted for the opportunity costs of time, or the value of the time of people who are involuntarily stopped by the police. To do so, TMI first estimated the amount of time community members spend in officer-initiated interactions from police calls for service and computer-aided dispatch (CAD) records.²⁹⁶ Specifically, TMI calculated the amount of time persons spent in these interactions as the time between when police officers arrived to the scene and when they departed.²⁹⁷

TMI assigned a monetary value to the total amount of time spent in these interactions, using estimates generated from transportation research. Specifically, TMI utilized estimates from a study conducted by Goldszmidt and colleagues, who leveraged data from a national experiment to generate value of time estimates.²⁹⁸ Following their recommendation, TMI used data from the Current Population Survey and calculated seventy-five percent of the mean after-tax wage rate in the metropolitan area where the police department is located.²⁹⁹

Use of Force Frequency: In addition to having their time wasted, persons who encounter the police—especially people of color—may experience physical harm in the form of force. TMI considered all forms and instances of force documented by police departments—including those deemed justified—as

exerting a cost on the individuals who experienced them. TMI's estimates of police use of force came directly from police departments to which TMI issued Freedom of Information Act requests and from publicly maintained databases, particularly the data collected by the Mapping Police Violence project.³⁰⁰ Data frequently, but not always, included both lethal and non-lethal use of force (e.g., pepper spray, canine, impact weapons, etc.). Mapping Police Violence measures the total shooting incidents reported by each police department. TMI estimated police department-specific nonfatal shooting rates, and thereby the total number of persons with nonfatal shooting injuries, from a dataset made available by *Vice News*.³⁰¹

Note that TMI's utilization of the Police Scorecard dataset adjusted for police settlements where victims of force may have been compensated for injuries, medical costs, quality-of-life costs, and other costs of police use of force. That is, TMI adjusted city-level counts of force incidents downward by the number of settlements for force in TMI's misconduct dataset. This was to prevent double-counting medical, quality-of-life, or other costs that may have already been accounted for in a settlement.

The available data did not allow TMI to identify which cases in the Police Scorecard database resulted in a misconduct settlement. Further, the available misconduct settlement data did not consistently identify if the settlement was associated with police use of force or some other cause, such as false imprisonment or false arrest. Accordingly, TMI adopted two approaches to adjusting both fatal and nonfatal force counts downward from the Police Scorecard data. TMI first identified cities where the settlement data indicated whether the settlement was associated with force (either fatal or nonfatal). For these cities, TMI adjusted annual Police Scorecard fatal and nonfatal use of force counts downward by the number of such settlement cases

in TMI's data. For those cities where the settlement data did not clearly identify cases associated with force, TMI imputed the share of settlement cases associated with police use of force by using data from those cities where TMI could directly calculate the number of misconduct settlements associated with force and the following covariates: police funding per capita, annual misconduct spending per capita, officers per capita, police shootings per 100,000 arrests, less-than-lethal force per 10,000 arrests, and deadly force per 10,000 arrests.

Rates of Injury: Police departments inconsistently report the rates and the seriousness of injuries from use of force events. Drawing on statewide datasets on police use of force and suspect injury from California, New York, and New Jersey, TMI estimated rates of serious and non-serious (“moderate”) injury by level of force.³⁰² In these data and by statute, serious injury is typically defined as “serious bodily injury.” TMI treated these “severe injuries” as analogous to the serious injuries defined by CDC WISQARS as injuries that resulted in hospitalization. TMI treated non-serious injuries (“moderate injury”) as injuries that resulted in treatment in the emergency department but no hospitalization.

When determining the cost of injury, TMI recoded non-lethal use of force estimates into seven categories of injuries received following interactions with law enforcement, using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision.³⁰³

A binomial distribution takes two parameters: an intensity rate and the number of successes. For each run of the simulation, the number of seriously and moderately injured people was drawn from binomial distribution, where the total number of nonfatal injuries was the success and injury rates (serious and mild) reported in the literature were the intensity rates.

Medical Costs: TMI pulled estimates of the medical costs of police force from WISQARS and from research conducted by Zonfrillo and colleagues.³⁰⁴ These data identify the medical costs associated with fatal, serious, and moderate injuries caused by legal interventions by mechanism (e.g., injuries from firearms, injuries from being struck, etc.) and by year.³⁰⁵ Legal intervention-specific injury data, however, were occasionally suppressed or otherwise unreported in these data. In instances where TMI could not ascertain the medical costs specific to legal interventions, TMI pulled data on larger, aggregated categories. For example, TMI's estimates of the medical costs of moderate canine bites were drawn from data on bites caused by assaults and legal interventions, and TMI's estimates of the medical costs of severe choking cases came from the data on all violence-related incidents. Year-specific data were not always available. In these instances, TMI used the weighted average generated from years where data were available.

TMI simulated a distribution of costs, assuming that these costs follow a log-normal distribution.³⁰⁶ Since standard deviation values are not reported in the WISQARS data, TMI approximated them based on extant research. TMI assumed that the standard deviation of medical costs—on the normal scale—is ten percent the value of the mean, and TMI used these values to draw a log-normal distribution for medical costs.³⁰⁷

Costs of Loss of Future Work: A subset of use of force cases will result in injuries that affect a person's ability to earn income in the future. TMI pulled estimates of the costs of loss of future work from moderate injuries from WISQARS and from Zonfrillo and colleagues.³⁰⁸ As above, TMI assumed that these costs are log-normally distributed with standard deviations set to ten percent of the value of the mean.

Present Value of Lifetime Earnings: Fatal injury results in the loss of lifetime earnings. TMI estimated the present value of lifetime earnings of individuals who were fatally injured, following Max and colleagues.³⁰⁹

Intangible, Direct Costs

Quality of Life Loss: Injuries sustained in police interactions may erode the quality of life of people subject to them. TMI estimated the costs of the loss of quality of life from police interactions using data from WISQARS.³¹⁰

Value of Statistical Life: TMI pulled estimates of the statistical value of human life from WISQARS.

Tangible, Indirect Costs

TMI’s estimates of the tangible, indirect costs of policing focus on the vicarious effects of lethal police use of force on the families, friends, and communities who have lost a loved one. To estimate this cost, TMI first estimated the size of the social network of the person killed by the police or the number of people left bereaved. TMI then drew estimates from the extant literature on the economic costs of bereavement from violent crime.

Number of Persons Bereaved: The number of persons bereaved following a violent killing is not well known, and the research literature relies largely on a single study from 1989.³¹¹ Subsequent studies and reports suggest that the number of bereaved persons is: seven to ten relatives, plus friends, neighbors, and coworkers;³¹² between 1.5 and 2.5 people;³¹³ or between three and ten people.³¹⁴ To simulate the number of persons bereaved by a police killing, TMI drew from a truncated normal distribution with a lower bound set to zero, a mean value set to eight (rounding down the average of seven and ten), and a large standard deviation of six, to account for the evidence of proximal effects of fatal police killings on broader communities.³¹⁵

Costs of Bereavement: No study analyzes the costs of fatal police violence to the bereaved, and TMI did not identify any study estimating the costs of any violent homicide on the bereaved. There are, however, broad-scale physical and mental consequences of bereavement, including increased mortality risk.³¹⁶ Fox and colleagues note several different costs stemming from the bereavement of a child’s death: bereaved individuals may bear direct costs associated with the physical and mental health consequences of bereavement; they may seek professional medical help to deal with their grief; they may take time away from work (*absenteeism*); and they may be less productive at their places of work once they return (*presenteeism*).³¹⁷

TMI estimated the costs associated with absenteeism, presenteeism, and mental health care. Based on a review of bereavement leave policies in the United States, TMI drew an asymmetric triangle distribution, with the minimum set to zero, mode set to three, and maximum set to twenty-one days of bereavement leave.³¹⁸ TMI drew estimates of the effect of presenteeism—a labor productivity penalty estimated as a fraction of a person’s daily wage—for the first thirty days and six months based on values estimated by Fox and colleagues.³¹⁹ For the number of persons estimated to be bereaved, TMI pulled simulated wage data from the Current Population Survey, allowing bereaved persons to be unemployed, outside of the labor force, retired, etc. TMI assumed no presenteeism after the first six months of bereavement.

Finally, TMI drew estimates of the mental health care costs of bereavement due to fatal police use of force by using a study that estimated the mental health care costs of the death of a friend or a family member from murder.³²⁰ TMI drew costs from a truncated normal distribution, with a minimum value set to zero and a mean value set to \$4,373.57. TMI set the standard deviation to three times the value originally reported in the study (\$891.61)

to account for what are likely significant changes or variation in the standard of care for bereaved

persons in the nearly thirty years since the study’s publication.

Part II Data Sources

TABLE 14 Data Sources

Data Type	Source(s)	Uncertainty
Calls available for dispatch ¹	1. Annual police reports 2. Raw CAD/CFS data 3. Imputation	3. Calls available for dispatch imputed values based on population size, violent crime rates, and property crime rates using multiple imputation ¹
Calls that CRTs can respond to		
Calls for service		
Arrest and citation rate by call type	Lum et al. (2022)	Weighted truncated normal distribution
False positive rate by call type	Lum et al. (2022)	Weighted truncated normal distribution
Count of calls for police response	Simulated	Binomial distribution
Count of calls for CRT response	Simulated	Binomial distribution
Count of false positive calls requiring police backup to CRT response	Simulated	Binomial distribution
Police response times	Lum et al. (2022)	Log-normal distribution ²
CRT response time relative to police	Simulated	Uniform distribution ³
Additional police/civilian time spent on false positive calls	Lum et al. (2022)	Log-normal distribution, modified by factor drawn from normal distribution ⁴
Effect of CRTs on disorder arrests	Dee and Pyne (2022)	Normal distribution ⁵
Time spent on arrests	Simulated	Triangle distribution ⁶
Responder compensation	Bureau of Labor Statistics	Truncated normal distribution
Gross pay rate	Municipal data ⁷	Triangle distribution
Effect of CRTs on lethal and non-lethal force incidents	NA	Uniform distribution ⁸
Effect of CRTs on police misconduct settlement frequency	NA	Uniform distribution ⁸
Effect of CRTs on police misconduct settlement amounts	NA	Uniform distribution ⁹
Lethal use of force incidents	Police Scorecard	None
Costs of lethal use of force	See Part I of this Report	See Part I of this Report

Data Type	Source(s)	Uncertainty
Non-lethal use of force incidents	Police Scorecard	Non-shootings: None Shootings: See Part I of this Report
Costs of non-lethal use of force	See Part I of this Report	See Part I of this Report
Police misconduct settlements	1. TMI’s National Police Funding Database 2. The Marshall Project 3. <i>The New York Times</i>	Each simulation randomly draws: 1. The number of misconduct cases; and 2. Settlement values from the empirical distribution

Notes

1. When pulling data from police reports, TMI used data on the calls for service to which police officers responded and excluded officer-initiated contacts. When pulling data from computer-aided dispatch, TMI similarly filtered out officer-initiated contacts, business checks, personal relief, hot-spot checks, court attendance, and other such calls. Where TMI was unable to access data on 911 calls, TMI used multiple imputation based on the total population, violent crime rates, and property crime rates.

2. TMI estimated the weighted mean and standard deviation from data reported by Lum and colleagues and used those values to estimate a log-normal distribution of police response times.

3. There is uncertainty concerning the amount of time it might take community responders to respond to calls to which they are dispatched. Research from Durham’s HEART program suggests that community responders in this program (who respond to trespassing, mental health issues, welfare checks, and some nuisance calls) resolve calls in about forty-three minutes. This compares to (call-weighted) average police response times of fifty-nine minutes for mental health calls, twenty-eight
- minutes for disorder calls, and twenty-six minutes for suspicious person calls, as reported by Lum and colleagues. TMI modeled the time it takes for CRTs to respond to calls for service relative to police from a uniform distribution, such that relative response times ranged from half of police response times to double police response times.

4. False positive calls to which CRTs are initially deployed and then require police backup take additional time for both sets of responders. TMI pulled the additional time it takes from calling for backup to resolution from Lum and colleagues. However, TMI assumed that police resolution of these calls does not on average take a “normal” amount of time since CRTs have presumably given their time on the scene and worked in some ways toward resolving the call. TMI therefore modified the amount of time police and CRTs spend on the call by a constant drawn from a uniform distribution, with the minimum value set to 0.50 and the maximum value set to 1.25. Note that this approach departs considerably from the approach adopted by Midgette and colleagues.

5. Following Midgette, TMI incorporated the effect that civilian responders may have on crime, specifically drawing from Dee and Pyne’s study that found a 33.6% reduction in disorder arrests, and inflated the reported standard error

- by a factor of three to capture uncertainty in the application of those findings to other U.S. cities.

6. TMI estimated the time it takes to process an arrest, pulled from Midgette and colleagues, and modeled following a triangular distribution with a minimum set to 0.5 hours, a maximum set to 4.0 hours, and a mode set to 1.5 hours.

7. TMI estimated the gross pay rates of police officers and CRTs using data from a sample of cities that make their employee compensation data publicly available. The triangle distribution from which TMI pulled has gross pay rates for police officers with a minimum value of 1.0, a maximum value of 1.43, and a modal value of 1.27. The distribution for CRTs (status quo) has
- a minimum value of 1.0, a maximum value of 1.31, and a modal value of 1.06. The distribution for CRTs (enhanced) has a minimum value of 1.0, a maximum value of 1.22, and a modal value of 1.14.

8. TMI simulated a potential reduction in force incidents and misconduct settlements by drawing from a uniform distribution with a minimum value set to 0.7 and a maximum value set to 1.0.

9. TMI compressed the exponential function by applying a factor drawn from a uniform distribution with a minimum value of 0.95 and a maximum value of 1.0.

TABLE 15 Relative Pay Rates of Police and Community Responders (Select Cities)

Police Department	Responder	Regular Wage	Gross Wage
Atlanta*#	CRT (Status Quo)	\$46,365	\$49,147
	CRT (Enhanced Wage)	\$60,758	\$68,961
	Police	\$52,315	\$66,440
Baltimore	CRT (Status Quo)	\$44,744	\$47,428
	CRT (Enhanced Wage)	\$73,599	\$83,535
	Police	\$76,689	\$97,395
Baton Rouge*#	CRT (Status Quo)	\$44,951	\$47,648
	CRT (Enhanced Wage)	\$52,726	\$59,844
	Police	\$46,076	\$58,516
Berkeley	CRT (Status Quo)	\$60,181	\$63,792
	CRT (Enhanced Wage)	\$93,469	\$106,088
	Police	\$120,147	\$152,586
Burlington*#	CRT (Status Quo)	\$42,673	\$45,233
	CRT (Enhanced Wage)	\$70,354	\$79,852
	Police	\$60,700	\$77,089
Charleston*#	CRT (Status Quo)	\$37,032	\$39,254
	CRT (Enhanced Wage)	\$56,618	\$64,262
	Police	\$49,665	\$63,074

Police Department	Responder	Regular Wage	Gross Wage
Chicago	CRT (Status Quo)	\$45,905	\$48,659
	CRT (Enhanced Wage)	\$80,751	\$91,653
	Police	\$82,869	\$105,243
Dallas	CRT (Status Quo)	\$46,163	\$48,933
	CRT (Enhanced Wage)	\$58,900	\$66,852
	Police	\$72,020	\$91,465
Denver	CRT (Status Quo)	\$49,024	\$51,966
	CRT (Enhanced Wage)	\$60,885	\$69,105
	Police	\$83,846	\$106,484
Detroit*	CRT (Status Quo)	\$46,016	\$48,777
	CRT (Enhanced Wage)	\$67,309	\$76,396
	Police	\$62,964	\$79,964
Fort Worth	CRT (Status Quo)	\$46,111	\$48,878
	CRT (Enhanced Wage)	\$58,888	\$66,838
	Police	\$71,973	\$91,406
Houston	CRT (Status Quo)	\$47,203	\$50,035
	CRT (Enhanced Wage)	\$61,716	\$70,048
	Police	\$65,601	\$83,313
Long Beach	CRT (Status Quo)	\$50,896	\$53,950
	CRT (Enhanced Wage)	\$83,625	\$94,914
	Police	\$107,392	\$136,388
Los Angeles	CRT (Status Quo)	\$50,988	\$54,047
	CRT (Enhanced Wage)	\$83,555	\$94,835
	Police	\$107,318	\$136,294
Minneapolis	CRT (Status Quo)	\$48,819	\$51,749
	CRT (Enhanced Wage)	\$67,884	\$77,048
	Police	\$79,159	\$100,532
New Orleans*	CRT (Status Quo)	\$43,008	\$45,589
	CRT (Enhanced Wage)	\$52,250	\$59,304
	Police	\$50,516	\$64,155
New York City*	CRT (Status Quo)	\$54,379	\$57,642
	CRT (Enhanced Wage)	\$90,822	\$103,083
	Police	\$89,214	\$113,302

Police Department	Responder	Regular Wage	Gross Wage
North Charleston*#	CRT (Status Quo)	\$35,663	\$37,803
	CRT (Enhanced Wage)	\$57,210	\$64,933
	Police	\$49,553	\$62,932
Oakland	CRT (Status Quo)	\$60,546	\$64,179
	CRT (Enhanced Wage)	\$93,644	\$106,286
	Police	\$120,006	\$152,407
Phoenix	CRT (Status Quo)	\$40,958	\$43,416
	CRT (Enhanced Wage)	\$53,584	\$60,818
	Police	\$74,967	\$95,208
Pittsburgh*	CRT (Status Quo)	\$40,629	\$43,066
	CRT (Enhanced Wage)	\$71,931	\$81,642
	Police	\$67,617	\$85,874
Portland	CRT (Status Quo)	\$57,904	\$61,378
	CRT (Enhanced Wage)	\$79,433	\$90,156
	Police	\$83,817	\$106,447
San Diego	CRT (Status Quo)	\$47,016	\$49,837
	CRT (Enhanced Wage)	\$83,864	\$95,185
	Police	\$88,439	\$112,317
San Francisco	CRT (Status Quo)	\$60,225	\$63,839
	CRT (Enhanced Wage)	\$93,572	\$106,204
	Police	\$120,358	\$152,855
Seattle	CRT (Status Quo)	\$47,919	\$50,794
	CRT (Enhanced Wage)	\$74,029	\$84,023
	Police	\$88,957	\$112,976
Tulsa	CRT (Status Quo)	\$37,167	\$39,397
	CRT (Enhanced Wage)	\$54,405	\$61,750
	Police	\$55,408	\$70,368
Washington, D.C.*	CRT (Status Quo)	\$52,922	\$56,097
	CRT (Enhanced Wage)	\$82,148	\$93,238
	Police	\$79,027	\$100,364

*Note: * denotes a city where the CRT enhanced regular wage exceeds the police regular wage. # denotes a city where the CRT enhanced gross wage exceeds the police gross wage. Not all cities in TMI’s dataset are presented in this table.*

Endnotes

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157 Gabriela Solis Torres et al., *Insights from the Field: How Jurisdictions are Approaching Alternative Emergency Response Implementation*, Harv. Kennedy Sch. Gov’t Performance Lab (Oct. 9, 2024), <https://govlab.hks.harvard.edu/insight/how-jurisdictions-are-approaching-alternative-emergency-response-implementation/> (“‘The training these responders receive is very different from the usual training provided to traditional emergency responders,’ said Solis Torres, noting that training often includes topics like trauma-informed care and service referrals. This intensive training is crucial to ensuring responders are prepared to quickly assess emergency situations for safety, de-escalate the crisis at hand, and successfully connect people to needed services, such as shelter.”).

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278 In the ideal experimental scenario, researchers would randomly assign some vacant lots to receive greening (treatment condition) and other vacant lots to receive treatment as is (control condition) and would then compare the average change in levels of crime between these two groups before and after greening was applied to the treatment condition. This randomized design is not always possible, so researchers may occasionally employ other, quasi-experimental designs to try to estimate the causal effect of an intervention. In many cases, this takes the form of a “difference-in-difference” approach with “propensity score” matching. In short, this approach involves some vacant lots being targeted for greening (typically by municipal or community leaders), rather than being randomly assigned to greening. A control group is then constructed using propensity score matching, which tries to identify vacant lots that appear to be as similar as possible to vacant lots in the treatment group based on characteristics researchers can measure (e.g., levels of crime prior to the intervention, size, racial composition of the surrounding neighborhood, etc.). This approach is considered much stronger than that of studies that simply measure changes over time in lots that receive greening without a comparable control group, but weaker than experiments where assignment to treatment or control conditions is fully randomized. *See* Elizabeth A. Stuart et al., *Using propensity scores in difference-in-differences models to estimate the effects of a policy change*, 14 Health Servs. & Outcomes Rsch. Methodology 166–82 (2014), <https://pmc.ncbi.nlm.nih.gov/articles/PMC4267761/>.

279 Michael Planty et al., *Special Report: Firearm Violence, 1993-2011*, U.S. Dep’t of Just., Bureau of Just. Stat. (May 2013), <https://bjs.ojp.gov/content/pub/pdf/fv9311.pdf>.

280 Estimates are over a thirty-year period, the typical life cycle of urban greening projects. *See* Geneviève Martineau et al., *Final Report: Life Cycle Assessment of the Environmental Impacts Resulting from the Implementation of Urban Heat Island Mitigation Measures*, CIRAIG (Feb. 2011), https://www.inspq.qc.ca/sites/default/files/publications/1532_lifecycleassessenviroimpactsresultimplemurbanheatislandmitigmeasur.pdf; Sergiy M. Smetana et al., *Sustainable plants in urban parks: A life cycle analysis of traditional and alternative lawns in Georgia, USA*, 122 Landscape & Urb. Plan. 140–51 (2014), <https://doi.org/10.1016/j.landurbplan.2013.11.011>; Sadatsafavi et al., *supra* note 275.

281 Costs for greening projects are determined by the number of vacant lots in a city, the share of lots that are blighted, the number that can be remediated or greened, the average size of such lots, clean-up costs, and program maintenance costs.

282 Sadatsafavi et al., *supra* note 275.

283 Brandon C. Welsh et al., *The impact and policy relevance of street lighting for crime prevention: A systematic review based on a half-century of evaluation research*, 21 Criminology & Pub. Pol’y 739–65 (2022), <https://onlinelibrary.wiley.com/doi/10.1111/1745-9133.12585>.

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286 Branas et al., *supra* note 285.

287 Kondo et al., *supra* note 285.

288 Jonathan Spader et al., *Fewer Vacants, Fewer Crimes? Impacts of Neighborhood Revitalization Policies on Crime* (Wash.: Fed. Rsrv. Bd. Sys., Fin. & Econ. Discussion Ser. 2015-088, 2015), <https://www.federalreserve.gov/econresdata/feds/2015/files/2015088pap.pdf>.

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290 Nathaniel Hendren et al., *A Unified Welfare Analysis of Government Policies*, 135 Q. J. Econ. 1209–1318 (2020), <https://academic.oup.com/qje/article/135/3/1209/5781614>.

291 U.S. Census Bureau, *Government Finance and Employment Classification Manual* (Oct. 2006), https://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf. TMI utilized the ASLGF rather than the more common Justice Expenditure and Employment Extracts Series because of the need to collect standardized data on municipal—rather than state—police expenditures. Specifically, TMI utilized the 2019 State and Local Finance Public Use Files. Note that the unit of analysis is the government and not the specific police department.

292 *Id.* at 5-96.

293 *Id.* at 5–97.

294 The ASLGF defines law enforcement personnel as: “general police, sheriff, state police, and other governmental departments that preserve law and order, protect persons and property from illegal acts, and work to prevent, control, investigate, and reduce crime.” Nonsworn members of law enforcement include administration staff such as human resources, finance, internal investigations, forensics lab, and other administrative and support personnel. This definition excludes individuals not regularly engaged in law enforcement activities such as bailiffs and officers employed in jails that hold people beyond arraignment. TMI’s analysis only considered costs associated with municipal policing and did not consider sheriff departments, who may be responsible for both law enforcement and administering local jails. U.S. Census Bureau, *Annual State and Local Government Finances*, 5–58 (2018), <https://www.census.gov/data/datasets/2018/econ/local/public-use-datasets.html>.

295 These data have significant limitations. The authors of the dataset report that the data that they have compiled constitute a “best guess” and note tremendous variation in the manner in which cities collect, sort, and categorize legal settlements (The Marshall Project 2021). In response to their Freedom of Information Act requests, for example, some cities and departments may have reported just the amount paid to plaintiffs, while other cities may have reported settlement values as well as the costs of legal fees and representation. Again, the authors of the dataset report that the data collection practices of responding police departments and cities are “shoddy, confusing, or incomplete” and that tremendous local variation makes it “nearly impossible” to meaningfully compare values across cities or within the same city over time. TMI notes a particular limitation of the data: the cost of legal representation for cities in use of force cases can be considerable, and their exclusion from these datasets may lead to a significant underestimation of the costs of police force. Joanna C. Schwartz, *How Governments Pay: Lawsuits, Budgets, and Police Reform*, 63 UCLA L. Rev. 1144 (2016), <https://www.uclalawreview.org/wp-content/uploads/2019/09/Schwartz-63-5.pdf>; Amelia Thomson-DeVaux et al., *Police Misconduct Costs Cities Millions Every Year. But That’s Where The Accountability Ends.*, The Marshall Project (Feb. 22, 2021, 6:00 AM), <https://www.themarshallproject.org/2021/02/22/police-misconduct-costs-cities-millions-every-year-but-that-s-where-the-accountability-ends> (last visited Mar. 6, 2026); Alexander et al., *supra* note 61; NAACP Legal Def. Fund, T. Marshall Inst., National Police Funding Database: *Settlements*, <https://policefundingdatabase.org>, <https://policefundingdatabase.org/explore-the-database/settlements/> (last visited Mar. 6, 2026).

296 The Police-Public Contact Survey (PPCS) also asks respondents about the average amount of time spent in a police interaction. Estimates generated from the PPCS, however, may suffer from significant selection and recall bias. Estimates of time spent in police interactions in the PPCS are binned (e.g., between five and ten minutes) and are therefore less precise than those generated from administrative data.

297 In one city where the time officers departed was unmeasured, TMI estimated the amount of time in the interaction as the difference between the time when the officers arrived on scene and when they reported back in service.

298 Ariel Goldszmidt et al., *The Value of Time in the United States: Estimates from Nationwide Natural Field Experiments*, (Becker Friedman Inst., Working Paper No. 2020-179, 2020), https://bfi.uchicago.edu/wp-content/uploads/2020/12/BFI_WP_2020179.pdf.

299 Sarah Flood et al., *IPUMS CPS: Version 11.0 [dataset]*, IPUMS (2023), <https://doi.org/10.18128/DO30.V11.0>.

300 Police Scorecard, <https://policescorecard.org> (last visited Mar. 6, 2026).

301 Vice, *Shot by cops and forgotten [dataset]*, <https://github.com/vicenews/shot-by-cops/> (last visited Mar. 6, 2026) (data and code supporting investigations into police shootings in the fifty largest U.S. local police departments from 2010 to 2016).

302 NYCLU, *UOF Incidents 2000–2020* (Aug. 10, 2023), https://www.nyclu.org/uploads/2023/07/2023-08-10_nysp_use-of-force_database.xlsx; Open Just., Data Portal: *Use of Force Incident Reporting* (2024), <https://openjustice.doj.ca.gov/data>; ProPublica & N.J. Advance Media, *Police Use of Force Reports (New Jersey)*, <https://www.propublica.org/datastore/dataset/police-use-of-force-new-jersey> (last visited Mar. 6, 2026). Ted R. Miller and colleagues discuss other potential sources of data on rates of injury, but they are not used in this analysis. Ted R. Miller et al., *Perils of police action: a cautionary tale from US data sets*, 23 Inj. Prevention 27–32 (2017), <https://injuryprevention.bmj.com/content/23/1/27.long>.

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