



Reimagining America's Crisis Response System for Vulnerable Populations:

*Knowledge Gaps and
Areas for Investment*

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To address disparities and to appropriately provide vulnerable populations with the services they need, communities are increasingly seeking to expand and reimagine models of emergency response to individuals experiencing a crisis. However, there is a lack of consolidated information on the various approaches that agencies have implemented across the country. As a result, policymakers have little access to frameworks to use to inform their decision-making. In this white paper, we provide a summary of the types of existing first responder-led, emergency response models and present the evidence that exists for those models. Then we suggest opportunities for future investment to fill the evidence gaps, support jurisdictions in their reform efforts, and ensure that reimagining the emergency response system both contributes to and relies on evidence.

Overview of America's Crisis Response System

Homelessness and untreated behavioral health conditions are at the root of many crisis-related calls for service (i.e., a health or safety emergency caused primarily by a mental health condition, substance use, or lack of housing) (Neusteter et al., 2019; Watson, Compton, & Pope, 2019). For individuals experiencing homelessness, serious mental illness (SMI) or substance use disorder (SUD)¹, a lack of affordable housing and public behavioral healthcare services makes it difficult to access routine, preventative care. This lack of adequate health and housing services puts these individuals at risk of worsening behavioral health conditions, which often result in a call to 911, a visit to the emergency department, or arrest and entry into the justice system (Watson, Compton, & Pope, 2019). This combination of factors has led to the over-representation of vulnerable populations in the justice system and has over-burdened the emergency response system in the United States with situations that would be more appropriately handled by community service and treatment providers.

“Let’s move forward with bold reforms. But let’s study them carefully at the same time, even if we can’t always use the most rigorous designs...we don’t need to choose between evidence and action. We need both.”
(Bloom, 2020).

In the U.S., crisis-related calls for service are typically received by 911 call takers who dispatch first responders (law enforcement, firefighters, and/or emergency medical service technicians (EMS/ EMT)) to respond (Neusteter et al., 2019). As the U.S. emergency response system’s key institutions, law enforcement agencies and fire departments (which often house EMS and EMT units) are in a unique position to intervene with these vulnerable populations before they are arrested or enter the justice system, or unnecessarily use emergency department resources (Neusteter et al., 2019). However, first responders often lack the necessary information, skills, or resources to deescalate crises and help individuals obtain needed services (Rogers et al., 2019).

Community-based programs (such as crisis hotlines, crisis centers, restoration centers) are important resources for first responders to use when responding to a crisis (Abreu et al., 2017) and should be a consideration as state and local jurisdictions explore and consider reforms to reallocate budget spending in their communities. Scholars have argued that investing in an integrated community-based behavioral health system to appropriately serve the needs of individuals with SMI, SUD, and housing instability could yield both “fiscal and humanitarian” benefits (Bonfine, Wilson, & Munetz, 2019).

¹Our use of SMI and SUD includes people who may be presenting symptoms that are common to serious mental health or substance use conditions, but may not have necessarily received an official diagnosis.

Types of First Responder-led Emergency Response Programs

For a recent study, funded by Arnold Ventures (Grant ID: 19-20674), we conducted a systematic scan of the internet to identify programs led by first responders currently or recently (within past 10 years) operating in the U.S. We looked at programs designed to increase the capacity of first responders to identify the signs of SMI, SUD, or homelessness; improve first responders' ability to de-escalate emergency situations; and/or maximize diversion from the criminal justice system to treatment or other community-based services.

We identified three overarching program models: 1) outreach and prevention; 2) intervention at 911 call; and 3) intervention by first responders at the scene of a crisis. Then, within each program model, we identified distinct *program types* that operate slightly differently, albeit with the same approach and intended outcomes.

- (1) In the *outreach and prevention* program model, we identified four distinct types: specialized outreach, paired outreach, team-based outreach, and voluntary walk-in. These types of programs operate at the community level and focus more on training or hiring first responders to focus on crisis prevention rather than response to calls for service.
- (2) In the *intervention at 911 call* program model, we identified three types: specialized dispatch, embedded dispatch, and transfer to crisis center. These types of programs are designed to facilitate appropriate triaging of calls and reduce unnecessary dispatch of first responders.
- (3) In the *intervention by first responder* program model, we identified three types: specialized response, embedded co-response, and mobile/virtual co-response. These program types are focused on diversion of vulnerable populations in crisis away from the justice and emergency systems at the point of first responder contact.

Please visit our project website at <https://www.abtassociates.com/projects/reimagining-response-to-vulnerable-populations-in-crisis> for more information on our framework.

We also reviewed peer-reviewed articles and other published research on the programs we identified to determine whether there is any empirical evidence supporting each program.

The Evidence for First Responder-led Diversion Programs

Few published evaluations exist of the variety of first responder-led diversionary programs being implemented across the country. The most commonly researched program we identified is the widespread crisis intervention teams (CIT) and crisis intervention training for first responders. CIT has been shown to be associated with a number of positive outcomes, such as reduced arrests, use of force, and use of emergency services. Other programs have shown promise (e.g., Law Enforcement Assisted Diversion (LEAD), Houston's Project ETHAN, Delaware's Hero Hope) but rigorous evaluations of the range of programs we identified remains limited. There has been some research on the role and operation of 911 in crisis response, but much of this research is relatively dated (see Neusteter et al., 2019 for a review of this research) and innovative programs that operate at 911 call centers have yet to be rigorously evaluated.

The bottom line is that there is not nearly enough strong evidence to support the large number of programs being implemented across the country. That's especially problematic in light of the rapidly growing interest among policymakers in such programs. Part of the challenge to conducting research on these programs is that it is difficult (but not impossible) to study prevention, or a "non-event." There are challenges in measuring the size of the population that could be diverted.

And it can be hard to create a comparison group to evaluate a program's effectiveness because it is often unethical to deny access to diversionary programs, particularly when serving underserved and vulnerable populations.

In light of this lack of evidence, our project sought to consolidate available information about crisis response programs. We identified several compendiums of programs with a particular focus area or mode of operation. But we did not identify overarching frameworks to organize programs by type, common elements, and intended outcomes or to provide factors for consideration when implementing programs to guide policymakers in their decision-making. We used the information we found in our study to develop such a decision-making framework and to facilitate future efforts to conduct rigorous implementation and impact monitoring and evaluation.

Recommendations for Future Research and Investment

As communities increasingly expend resources on identifying, scaling, and implementing existing programs or developing new ones, it is essential to evaluate their effectiveness to prevent unintended consequences and ensure appropriate use of limited resources. The lack of research in this area presents an opportunity for investment in research and evaluation through a variety of methodologies and topical areas. We present recommendations for types of evaluations as well as topical areas ripe for consideration and exploration as policymakers reimagine crisis response in their communities.

Recommendation 1: Invest in Implementation Evaluations

The majority of the published literature on first responder-led emergency response programs comprises single program descriptions or compendiums of a particular type of program.

However, very little has been published around what it takes to implement an emergency response program. Rigorous implementation evaluations can generate information to assist with replicability, scaling, and equitable application of programs. Research questions that implementation evaluations can answer include:

- How was a particular program selected for implementation?
- What considerations were made when implementing the program? Who was involved? Who was not involved, but should have been?
- What training is required? Who gets trained and how?
- What barriers were encountered, and how were they overcome?
- What factors facilitated implementation?
- What are the core elements of the program that are required and cannot be modified without compromising the theory behind the program's design? What are the peripheral elements that are not necessarily required and can be adapted, if needed?
- What is the scale of the program? For example, does it cover all or only some calls for service? Does it cover all or only some shifts? Does it serve an entire community or only part of it?
- What are the costs, and who incurs them?
- How is the program perceived by recipients? The community? The staff?
- Are there disparities in how the program is being applied to individuals or communities and in the reception of the program by individuals or communities?
- What factors need to be considered for scaling up the program? For sustaining the program? Who is or should be involved in these conversations?

A variety of theories, frameworks, and models (such as the Consolidated Framework for Implementation Research (CFIR); Damschroder et al., 2009) have been developed through the implementation science field that can assist evaluators in framing their designs to answer these questions.

Recommendation 2: Invest in Outcome Evaluations

Are first responder-led diversion programs achieving their intended goals? Logically, it may seem reasonable to assume that implementing programs designed to improve response to vulnerable populations in crisis would improve outcomes for those individuals.

However, there has been little testing of this logic for these programs to date. Rigorously testing whether a program is achieving its goals is of utmost importance for assessing whether investments are leading to improved outcomes, having no impact, or worse, unintentionally having a negative impact on the population it is trying to serve. Outcome evaluations are necessary for newly developed programs and when adopting existing programs. That's true even if they have been shown to be effective in other locations since the local context may impact program implementation and outcomes differently.

There is a range of outcomes that may be realized through implementation of a particular first responder-led diversion program (see Exhibit 1).

Exhibit 1: Outcomes by Program Model

PROGRAM MODEL	OUTCOMES
Outreach and Prevention	<ul style="list-style-type: none"> • Reduced number of arrests • Reduced number of emergency department intakes • Increased connection to treatment • Increased connection to services for unmet needs correlated with justice-involvement (e.g., shelter, food) • Improved responder awareness of SMI/SUD issues and services • Improved client experience/relations
Intervention at 911 Call	<ul style="list-style-type: none"> • Reduced number of arrests • Reduced number of emergency department intakes • Improved dispatcher awareness of SMI/SUD issues and services • Increased connection to treatment/services • Reduced repeated crisis-related calls for service
Intervention by First Responder	<ul style="list-style-type: none"> • Reduced number of arrests • Reduced number of emergency department intakes • Increased connection to treatment • Improved responder awareness of SMI/SUD issues and services • Reduced use of force • Improved client experience/relations • Reduced use of first responder time and resources

Determining which outcomes to measure will be related to the outcomes the activities of each program type are designed to produce.

Randomized controlled trials (RCTs) are the gold standard design for outcome evaluations. However, given the ethical constraints mentioned previously, it is not always feasible or ethical to conduct RCTs, particularly when programs are serving vulnerable or underserved populations. A variety of rigorous non-experimental designs exist for such circumstances; the most rigorous design possible for a particular program and context should be employed. In addition, outcome evaluations should be paired with corresponding process evaluations to contextualize the results of the outcome evaluation and understand why a program is working or not.

A theory of change is a description of how and why a set of activities are expected to lead to outcomes. Logic modeling is a standard evaluation tool used to articulate a theory of change by documenting the factors that influence program selection and start-up (the inputs), what actually occurs as part of the program (the activities), what the program produces (the outputs), what happens as a result of what the program produces (the outcomes), and the goals that the outcomes aim to achieve (the impact) (Rossi, Lipsey, and Henry, 2018). Elsewhere, we have published sample logic models for the different types of emergency response programs to assist researchers and evaluators in framing their evaluations (see Appendix C in the guidebook posted on our project website).

Recommendation 3: Prioritize Rapid Cycle Evaluations

Communities are facing increasing pressure to reimagine the role of first responders in engaging with vulnerable populations in crisis, but they have limited evidence to inform their decision-making. We encourage prioritization of rapid cycle evaluations (RCE) and rapid dissemination of findings about the

conditions under which programming was effective, as well as lessons learned for implementation.

RCE uses short-term outcomes as early indicators of potential long-term impact and offers learning at early stages of project implementation. By incorporating techniques used in PDSA cycles (Plan, Do, Study, Act), RCE produces quick results and provides actionable evidence to optimize program design and implementation. This approach facilitates the push to reform while generating the evidence, testing for impact and unintended consequences, and adjusting as needed to mitigate problems.

Recommendation 4: Support Investigations of Under-researched Areas for Reimagining Crisis Response

In addition to generating a broader and more rigorous evidence base for existing crisis response models, we recommend supporting investigations of new or under-researched areas for reimagining crisis response. Topics for investigation could include reimagining entry into the emergency response system, the focus on vulnerable populations, and the role of first responders in conducting outreach and engaging with the community. Within each area, we recommend attention to and assessments of disparities (racial, geographical, socioeconomic, and otherwise) in both the application and impact of programming.

Reimagining Entry into the Emergency Response System

In the United States, crisis-related calls for service are typically received by 911 call takers, who dispatch first responders (law enforcement, firefighters, and/or EMS or EMT) to respond. A comprehensive review of 911 services provides baseline knowledge of how 911 operates and important areas of research that need to be expanded upon and updated (Neusteter et al., 2019).

Where are 911 geographic hot spots? Are there disparities in who calls 911 at the individual or community level? What are the drivers of those disparities? How are dispatch decisions made? What determines who gets dispatched? What training do dispatchers receive? What is the variation in response time and what causes that variation? What is the optimal level of coordination in terms of who can respond to calls and sharing of data? What data are publicly available to researchers to study 911?

In addition to further investing in research on the existing system for crisis response, we recommend exploring alternatives to 911. *What innovations exist for entry points to specialized response systems, such as community crisis lines? What efforts are needed to facilitate uptake and appropriate use of alternative entry points?*

Reimagining the Focus on Vulnerable Populations

Our study focused on alternative responses to crisis-related calls for service among individuals experiencing symptoms related to SMI, SUD, and homelessness. However, we know that programs exist to provide alternative responses to law enforcement encounters with other vulnerable populations, such as veterans and sex workers (NIC, 2019; IACP, 2018). *How do these programs operate, and what is their impact? How do they compare with or contrast to the programs our study focused on? What factors do they contrast on and why?* Studying the range of programs that currently exist to improve emergency response to vulnerable populations will enable refinement and expansion of the decision-making and evaluation frameworks we have developed in our study.

In addition to evaluating existing programs that target particular populations, fully reimagining the focus on vulnerable populations requires the recognition that, more often than not, these issues co-occur and intersect with additional circumstances and identities that place individuals at an elevated risk of experiencing a behavioral health crisis. More research is needed to understand and effectively address the myriad issues

facing individuals in crisis who are encountered by first responders. Individuals who come into contact with emergency response systems, particularly those who are experiencing a mental health, substance use, or housing crisis, are often faced with additional vulnerabilities, such as histories of domestic violence, trauma, justice-involvement, unemployment, poverty, racial/ethnic minority status, veteran status, food insecurity, and chronic and infectious disease. Given the overlaps of these vulnerabilities, it is reasonable to consider that responding to and addressing a symptom presented during a crisis may not in fact resolve the underlying issue(s). Conversely, problems may be presented that result in an encounter with first responders that do not necessarily reflect a symptom recognized as a behavioral health crisis, but are in fact masking underlying vulnerabilities that would be better addressed in non-emergency response systems.

As a result, crisis response systems must expect to encounter complex needs, traumas, and perceptions of and actual oppression and historical discrimination by the justice and health care systems—and respond to these issues. *Questions to explore include: How can crisis response programs ensure sensitivity to the complexities of vulnerability and inequity? What mechanisms can be put in place to recognize the ways power, oppression, trauma, and other social determinants of health contribute to individual- and community-level crises and mitigate the impact of those factors during and after crises? What is needed to ensure that individuals and communities receive equitable and fair access to services they need before and after crises?*

Reimagining Connections Between First Responders and the Community

We identified several programs that reimagine the role of law enforcement in the community by focusing on outreach to communities with high levels of homelessness and to individuals known to have a history of crisis-related calls for service.

In some of these programs, first responders are specially trained to identify individuals' needs (such as medical or behavioral health treatment, food or transportation services, state ID services) and provide those individuals with referrals or direct transportation to services to fill those needs. In other programs, first responders conduct outreach on multi-disciplinary teams or with a partner who is a behavioral health clinician or social worker. One of the aims of several of these programs is to improve the relationship between first responders, specifically law enforcement, and the community. There are a number of unanswered questions about these programs:

- What innovative approaches are jurisdictions implementing and why? What is the impact? How do the communities these approaches serve perceive them?
- What population(s) is best served by these programs? Frequent or all users of emergency response and other social systems? Individuals with SMI, SUD, or co-occurring disorders? Individuals who are homeless? Other vulnerable or underserved populations?
- What combination of factors and activities is most impactful? What is the impact and community response when sworn officers are involved versus officers who are not sworn? When they carry firearms or other weaponry? When they are identified or in plainclothes? When they are paired with one other person (a clinician) or are part of larger team? When they come from the same community or are of the same race, ethnicity, gender, etc., as the individuals they serve?
- What is the process for and impact of coordination among different stakeholders, especially in the context of frequent users of multiple systems?
- What does it look like and what are the outcomes when behavioral health clinicians or mobile crisis teams replace first responders in response to crisis-related calls for service?

Finally, we recommend providing opportunities to think creatively and expand the field beyond program-level evaluation to community-level evaluation. How have states (e.g., Maryland), regions (e.g., Cape Fear, NC), or counties (e.g., Bexar County, TX) accomplished broader efforts to reimagine crisis response for vulnerable populations in their communities, and what has their impact been? Chapter 5 of our guidebook (published on our project website) provides a snapshot of these broader efforts and provides factors that need to be considered prior to embarking on such efforts.

Reimagining America's emergency response system will take time, thoughtful investment, partnerships, and creativity to ensure a robust, coordinated, equitable, and evidence-driven system of services as well as communication efforts to ensure that communities are aware of the options available to them when crises occur.

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