Louisville Metro Alternative Responder Model: Evaluation Plan

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This document serves as a supplement to the evaluation plan included in the report "Louisville Metro Alternative Responder Model Research and Planning Final Report" submitted by the Commonwealth Institute of Kentucky at the University of Louisville to the Louisville Metro Government. The supplement elaborates on the DOVE Delegate recommendations for evaluation framework, methods, and measures that will be used to evaluate the implementation and outcomes associated with the alternative responder model. The evaluation plan is dynamic to allow for adjustments to be made to reflect operational changes made during the project and to account for any additional research needs that emerge during the pilot phase.

Overview

The alternative responder model consists of three components starting with a behavioral health hub that provides triage through Metro Safe's Emergency Operations Center, mobile crisis responders, and respite care to individuals in acute crisis stemming from a behavioral health issue. The purpose of the alternative responder model is to rapidly respond, effectively screen, and provide early intervention to help those individuals who are in active state of crisis and ensure their entry into the continuum of care at the appropriate level. This model uses a person-centered approach to defining crisis, by recognizing that callers contact 911 because they need some form of help, even if the reason for the call may not rise to the level of emergency by responders. Behavioral health crises may be related to or associated with homelessness, mental illnesses, substance abuse, aging complications, disputes, or other medical conditions. Behavioral health hub triage counselors and mobile crisis responders will ensure the safety of the person in crises, attempt to de-escalate the situation, conduct level-of-care assessments to determine an individual's needs for services and connect them to appropriate respite. In co-response calls, Louisville Metro Police Department (LMPD) officers will secure the scene and ensure safety and collaborate with mobile crisis responders to deescalate the situation.

The alternative responder model is innovative in its design and focus on adaptions specific to the Louisville community context. A thorough and rigorous evaluation will provide evidence of the program's successes in terms of both implementation and outcomes. As such, we propose both a process and impact evaluation centering on four research questions:

1. To what extent was the alternative responder model implemented as designed, how was it adapted to meet community needs and expectations? (Process)
2. To what extent do individuals in crisis receive needed assistance and what type of assistance is provided? (Process)
3. How does the alternative responder model contribute to community safety? (Impact)
4. What are the economic implications of the deflection efforts? (Impact)

Methods

The evaluation uses a mixed methods approach for studying the alternative responder model pilot initiative, incorporating both qualitative and quantitative data. Each research question has a subset of measures that offer data and evidence about the alternative responder model.

RQ1, RQ2, and RQ4 both rely on secondary data provided by Louisville Metro Government and Seven Counties Services and qualitative data collected prospectively by the evaluation team. All proposed quantitative data analysis will extend the work previously completed and reported (see attached report), including analyses of 911 calls and callers who are deflected into the alternative responder model via the workflow proposed for the pilot. In addition, the evaluation will include empirical assessments of resources used or averted (increases or decreases in time, estimations of cost implications) as a result of

the program. Data necessary for completing these analyses include MetroSafe 911 data and LMPD outcome data (e.g. CIT reports and associated outcomes) to examine the volume of CIT 911 events, the percentage of CIT 911 events responded to by the mobile response team, co-responders, and police, and the time out of service for each CIT event across different response types. Researchers will also extend analysis of call data to other dispatch types for patterns in mobile crisis responder alternative responses, call dispositions, and outcomes related to contacts with the mobile response team, co-responders, and police only response. Finally, mobile response team data/reports to analyze outcomes for the behavioral health triage center, mobile response team reports, and co-response outcomes for disposition of events and connections to other service entities.

While these data and analysis provide critical evidence of the alternative responder model and accountability metrics for Louisville Metro Government, the context surrounding an intervention is an additional factor above and beyond the resources provided specifically for the intervention. As such all three research questions also incorporate primary data collection and qualitative data analyses to document implementation characteristics that may explain variations in implementation and the mechanisms that may promote various outcomes and community perceptions. This surrounding contextual information can inform strategies to strengthen future evolutions of the alternative responder model.

RQ1: To what extent was the alternative responder model implemented as designed, and how was it adapted to meet community needs and expectations? (Process, implementation)
Documenting implementation of the alternative responder model, and the adaptations that will be made, is critical to understanding how the program rolled out and providing evidence of how a program can change over time.

Measures: Tables 1-6 summarize the measures that serve as indicators of implementation, including both descriptive quantitative data (Tables 1, 3, and 6) and qualitative data (Tables, 2, 4, and 5) that show the process of the alternative responder model roll-out. The qualitative aspects of the evaluation are guided by the Consolidated Framework for Implementation Research (CFIR), an evidence-based typology for doing implementation research. Implementation research determines whether program activities have been implemented as intended and how the implementation is perceived by various stakeholders, including those who are served through the program in the community. The CFIR includes five domains including intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and the process of implementation.[1] The CFIR, through detailed qualitative data collection and analysis of each domain, guides understanding of the internal and external factors that contribute to the success of an intervention, as well as any unexpected changes or outcomes. The CFIR informs all four research questions, but certain domains are more specific to certain research questions than others and therefore we emphasize particular CFIR domains in correspondance with relevant research questions.

Table 1: Research Question 1: Quantitative Measures

RQ1: To what extent was the alternative responder model program implemented as designed, how was it adapted to meet community needs and expectations? (Process)

This research question seeks to document the process of program implementation, how funding relates to specified programing and outputs, and how programming evolves.

[1] Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science.* 2009;4(1):50.

Subquestion	Measures
What percent of calls are deflected to the mobile crisis responders?	# calls to BH Hub/ total calls to 911
What are the types of CIT calls deflected to the mobile crisis responders?	# calls dispatched to responders by subtheme type: safety, traffic, self-harm, intoxication, dispute, crisis.
Of the identified calls for deflection, what percentage requires a mobile response? • mobile crisis responders • Police • Co-response	# calls dispatched to responders/ # calls to BH Hub
What percent of CIT calls receive LMPD response? • Emergent/high risk • BH Hub determination • Alternative responder model capacity	# LMPD CIT dispatches/ # CIT calls
What percent of LMPD dispatches could have been diverted? • Call types	# identified calls/ # LMPD dispatches • 10-codes
What percent of mobile crisis responders responses result in subsequent call to emergency responders for additional support? • Police • EMS	# calls for additional responders/ # mobile crisis responder dispatches
What are the trends in calls overall, and those deflected to mobile crisis responders, by time/day/month?	# calls by shift/date/call type
What is the average time per call referred to Behavioral Health Hub?	Minutes on phone from transfer to end/dispatch/transfer
What is the timeframe for a mobile crisis responder response? • Arrival • On scene • Service time	• Minutes from dispatch to arrival • Arrival to clear • Dispatch to clear
What is the number of citations and arrests for CIT dispatches?	# arrests for CIT related events before/after alternative responder model launch # citations for CIT related events before/after alternative responder model launch

Table 2: Research Question 1: Qualitative Measures

RQ1: To what extent was the alternative response model implemented as designed, how was it adapted to meet community needs and expectations? (Process)

This research question seeks to document the process of program implementation, how funding relates to specified programing and outputs, and how programming evolves. The measures below are derived from the five constructs outlined in the CFIR and focus on the domains individuals involved and implementation process.

Construct	Measures

Individuals Involved	Skills and experience (education); knowledge and beliefs about populations in behavioral health crises; strategies for improving access to services
	• How does training evolve for the alternative responder model?
	• How does hiring practices evolve for the alternative responder model?
	  o What are the qualifications of persons hired for each role?
	  o What are the compensation packages for persons hired?
	• What safety concerns exist for responders?

Implementation Process	Feedback to alternative responder model staff on strategy and outcomes; frequency and functionality of staff teams; value of financial resources provided to staff; overall engagement of staff and population served • What community education is provided about the alternative responder model? • What barriers to program implementation are encountered, and how are barriers addressed? • How do implementation strategies adapt based on barriers, lessons learned, and community need? • How do personnel perceive collaborations and how do these perceptions evolve?

In addition to these constructs, the evaluation team will examine fidelity to the proposed alternative responder model, focusing on what was implemented according to plan and what was adapted. These data points will be documented by the evaluation team.

Data collection: The primary data sources for the quantitative data are MetroSafe, LMPD, and Seven Counties Services (SCS). Provision of these data to the evaluation team is essential to successfully completing the evaluation.

The qualitative portions of the evaluation will collect data using focus groups, interviews, field observations, and surveys. The evaluation team will interview representatives with upper level management roles within Louisville Emergency Management Services (MetroSafe), Seven Counties Services (SCS), the alternative responder model, and Louisville Metro Police Department, as well as from front-line workers from the same entities. In addition, focus groups with community members will provide perspectives on community perceptions of the alternative responder model, its implementation, and outcomes. The evaluation team will coordinate efforts with Spalding University to provide community perspectives, without duplicating efforts.

Data analysis: Quantitative data analysis will incorporate descriptive and trend analyses to demonstrate the alternative responder program roll-out. The analyses will examine trends and outcomes beginning June 1, 2019 and continue through 5/31/2022, to understand changes in call volume, response types, practices, and outcomes before and after implementation.

Qualitative data coding will be conducted using qualitative software ATLAS.ti. Initial codes will be based on CFIR, chosen because of its focus on service delivery and recognition of the relevance of context to implementation. Employing template analyses, we will compare interview and other qualitative data to codes based on this framework, as well as compare emergent findings to prior research. Each community will be analyzed separately, then compared to describe differences between settings.

RQ2: To what extent do individuals in crisis receive needed assistance and what type of assistance is provided? (Process)

This evaluation question explores encounters with the alternative responder model – both in frequencies and in context. Table 3 summarizes the metrics that serve as indicators of alternative responder model encounters and interactions.

Table 3: Research Question 2 – Quantitative Measures **RQ2: To what extent do individuals in crisis receive needed assistance and what type of assistance is provided? (Process)** This research question seeks to assess the extent to which alternative responders contribute to the emergency response system and personal safety.	
Subquestion	**Measures**
Of the calls identified for deflection, what percentage receives a mobile response?	# calls dispatched to mobile crisis responders/ # calls to BH Hub
What services does the mobile crisis responders provide?	Example categories of service: • De-escalation • Material goods • Transportation • Suicide intervention • Welfare check • Narcan • Referral • Hospitalization
What percent of individuals who receive a mobile crisis responders onsite services require transportation away from the scene of crisis? • To where?	# rides / # dispatches # hospitalizations / # dispatches
How do individuals utilize the respite community center?	Categories of service: • Respite • Counseling • Referral
To what resources are individuals linked following intervention?	Categories of service: • Respite • Counseling • Referral • Follow-up
How has the frequency of calls from 911 familiar callers changed?	# Incoming calls per familiar caller pre-post intervention, measured monthly # of repeat interactions by volume and type (e.g., multiple arrests, hospitalizations, BHH contacts)

Table 4: Research Question 2: Qualitative Measures **RQ2: To what extent do individuals in crisis receive needed assistance and what type of assistance is provided? (Process, mobile crisis responders Encounters)**

This research question seeks to assess the extent to which alternative responder model contribute to the emergency response system and personal safety. The measures below are derived from the five constructs outlined in the CFIR and represent the primary aspects of CFIR that will address Research 2. A sample of sub-research questions are provided to elucidate the issues studied in each domain.	
Construct	**Measures**
Outer Setting	Availability of mental health treatment facilities locally and by division; other health and human service availability; federal, state, and local resources available to support service delivery; fit between alternative responder's model processes and community values, routines, and incentives; population characteristics • To what resources are individuals linked following alternative responder model? • How does the alternative responder model impact behavioral health resource capacity?
Inner Setting	Alternative responder model staff structure (e.g., size, diversity; resources; time and space for meeting); access to resources; linkage of alternative responders to other activities in Seven Counties Services, MetroSafe, and LMPD interactions; work climate; leadership support within and beyond the alternative responder model. • How do individuals in crisis experience interactions with the alternative responder model? • What role does case management play following a crisis call? • What are individual outcomes for services received?

Data collection: The primary data sources for the quantitative data are MetroSafe, LMPD, and Seven Counties Services (SCS). Provision of these data to the evaluation team is essential to successfully completing the evaluation. Qualitative data will come from interviews, focus groups, field observations, and/or surveys of personnel at MetroSafe, LMPD, and Seven Counties Services (SCS).

Data analysis: Quantitative data analysis will incorporate descriptive and trend analyses to demonstrate the model roll-out. Data collection will start on the project's launch date and continue through 5/31/2022 for the evaluation.

Qualitative data coding will be conducted using qualitative software ATLAS.ti. Initial codes will be based on CFIR, chosen because of its focus on service delivery and recognition of the relevance of context to implementation. Employing template analyses, we will compare interview and other qualitative data to codes based on this framework, as well as compare emergent findings to prior research. Each community will be analyzed separately, then compared to describe differences between settings.

RQ3: How does the alternative responder model contribute to community safety? (Impact)

To measure short term impact, the evaluation team anticipates focusing on community stakeholder perceptions of the alternative responder model, specifically the extent to which it contributes to community safety. Table 5 outlines the questions we seek to answer, and the primary data sources for these measures.

Table 5: Research Question 3: Qualitative Measures
RQ3: How does the alternative responder model contribute to community safety? (Process)

This research question seeks to evaluate the extent to which an alternative responder model meets community expectations and how programmatic operations adapt based on community need. This research question seeks to document the perceptions of community stakeholders of the alternative responder model. Community stakeholders include community members who have and have not interacted with the model and emergency responders. The measures below are derived from the five constructs outlined in CFIR. The emphasis on *perceptions* requires that all five constructs are examined in this research question. A sample of sub-research questions are noted to elucidate the topics examined for each construct.

Construct	**Measures**
Outer Setting	Availability of mental health treatment facilities locally and by division; other health and human service availability; federal, state, and local resources available to support service delivery; fit between alternative responder model processes and community values, routines, and incentives. • What do community members who have not used the service know about the alternative responder response? • What are the community's perceptions of the program?
Intervention Characteristics	Role clarity; training and technical assistance; facilitating/constraining administrative systems; capacity for data and information sharing • What expectations do members of the community have of the alternative responder team? • How has use of community services changed following the implementation of the alternative responder model?
Inner Setting	Linkage of alternative responders to other activities in Seven Counties Services, MetroSafe, and LMPD interactions; work climate; leadership support within and beyond the alternative responder model. • How does the behavioral health hub team impact the 911 Call Center? • What safety concerns exist for community members regarding the mobile crisis responder's response protocol? ○ How are they addressed? • What is LMPD's assessment of the mobile crisis responders during co-response? • How are LMPD and mobile responders interacting during co-responses? • How have Louisville Fire and EMS experienced interactions with mobile crisis responders?
Individuals Involved	Skills and experience (education); knowledge and beliefs about populations in behavioral health crises; strategies for improving access to services • How do Louisville Fire, EMS, and LMPD perceive the effectiveness of the alternative responder's model?
Implementation Process	Feedback to alternative responder model staff on strategy and outcomes; frequency and functionality of staff teams; value of financial resources provided to staff; overall engagement of staff and population served • How do Louisville Fire, EMS, and LMPD perceive the effectiveness of the alternative responder model? • How does the behavioral health hub impact the 911 Call Center?

Data collection: The primary data sources for RQ3 will come from focus groups, interviews, field observations, and/or surveys for community members and agencies involved in the model including personnel from SCS, MetroSafe, and LMPD. the qualitative data are MetroSafe, LMPD, and Seven Counties Services (SCS). Provision of these data to the evaluation team is essential to successfully completing the evaluation.

Data analysis: Qualitative data coding will be conducted using qualitative software ATLAS.ti. Initial codes will be based on CFIR, chosen because of its focus on service delivery and recognition of the relevance of context to implementation. Employing template analyses, we will compare interview and other qualitative data to codes based on this framework, as well as compare emergent findings to prior research. Each community will be analyzed separately, then compared to describe differences between settings.

RQ4: What are the economic implications of the deflection efforts? (Impact)
Under this research question, the evaluation team will extend economic evaluations that began during the planning phase. The underlying goal is the weigh the costs of deflection with the potential benefits of the program, and to characterize those in the context of resource expenditures elsewhere. (e.g. LMPD).

Table 6: Research Question 4: Quantitative Measures

RQ4: What are the economic implications of the deflection efforts? (Impact)

This research question seeks to understand costs of the program, compared with potential benefits/outcomes.

Construct	Measures

How do the costs of deflection off-set those of typical protocols?	• Cost of deflection
	  • Cost of police response
	  • Cost of mobile response
	  • Cost of co-response
	• Cost of deflection
	  • Hospitalization
	  • Jail diversion

Data Collection and Analysis: We will rely on data reported and analyzed under RQs 1-3 to construct a cost effectiveness model to compare costs of the alternative responder model with those anticipated without the model.

Deliverables

The evaluation team will provide a final evaluation report. The final report will provide a comprehensive evaluation of the implementation and outcomes associatedwith the pilot program and will cover data through 5/08/2022. The evaluation team will also work with Emergency Management Services and Louisville Metro Council to provide periodic updates prior to the final report.

Timeline

June 6, 2022 Final Evaluation Report

1. Will include complete implementation and outcome evaluation for pilot activities completed by 5/08/2022.
2. Will include final proposal for next phases in the alternative responder model.