

Bridging Gaps and Building Connections: A Protocol for Mapping Mobile Health and Outreach Services in the Greater Hamilton Area

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ABSTRACT

This protocol delineates a comprehensive strategy for mapping mobile health and outreach services in the Greater Hamilton Area, with a particular focus on marginalized and underserved populations. Initiated by the Greater Hamilton Health Network (GHHN) in alignment with the Ontario Health Teams (OHTs) framework, this project aims to enhance integrated, patient-centric care across the healthcare continuum by mapping existing services and identifying synergies and gaps. The steps and methods employed to complete this project are outlined in this protocol. Additionally, the systematic approach used to complete Phase 1 which successfully established a taxonomy that sets a shared understanding and consistent categorization of services for the project are outlined in detail. This foundational work will pave the way for the final phases of the service mapping, gap analysis, and the development of actionable strategies to address identified service gaps, ultimately aiming to foster a more coordinated and accessible healthcare system.

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Introduction

The Greater Hamilton Health Network (GHHN), recognized as one of the first Ontario Health Teams (OHTs) to be endorsed by the Ministry of Health, is at the forefront of transforming healthcare delivery. This transformation is aimed at ensuring seamless, integrated, and patient-oriented care across the entire healthcare spectrum, including acute, primary, home, and community care settings. As an OHT accelerated to maturity, the GHHN, a coalition of over 50 diverse organizations, is dedicated to enhancing patient care experiences through innovative strategies. These strategies encompass early interventions, the adoption of new digital technologies, the expansion of bundled care programs, and improved coordination for patients with complex medical needs.

Rooted in a population health approach, the GHHN prioritizes application of a health equity lens and devising targeted strategies for marginalized and disadvantaged groups. These populations, facing increased health challenges and lower primary care engagement, often rely on mobile health and outreach services for comprehensive care. However, within the GHHN's catchment area, numerous agencies operate independently to provide these services, leading to potential duplications, redundancies, and inefficiencies in the system. From a person-centered perspective, having a multitude of agencies and services could lead to confusion for those receiving care.

To address these challenges and enhance the network's efficacy, the GHHN aims to develop a comprehensive and accountable framework for mobile health and outreach service providers. This initiative involves a detailed analysis of the current state of such services within the GHHN area, identifying existing gaps and areas for improvement. The ultimate goal is to foster a more coordinated,

accessible, and effective healthcare system that caters to the needs of the community's most vulnerable members, ensuring that no one is excluded from receiving high-quality healthcare services.

Project Approach

The project is structured to ensure a systematic approach to mapping mobile and outreach services in the Greater Hamilton area; unfolding in distinct phases, each with dedicated tasks aimed at achieving comprehensive service mapping and analysis (see Tables 1-4).

According to a paper published in *The Joint Commission Journal on Quality and Patient Safety* in 2017, a thorough current state assessment is essential for understanding the complexities and challenges within health service systems. This foundational step ensures that strategic planning is based on accurate, comprehensive data, facilitating targeted interventions and successful outcomes (Golden et al.). This is further supported by earlier research in this area by Silverstro (2005) on applying gap analysis in the health service to inform the service improvement agenda.

Research underscores the importance of engaging stakeholders, particularly frontline healthcare providers, in service delivery to meet real-world needs effectively and increase adoption of service coordination and integration (Agonafer et al., 2021; Boaz et al., 2018). Engaging stakeholders has been shown to enhance trust, foster mutual learning, and increase research adoption, thereby impacting healthcare outcomes positively (Agonafer et al., 2021; Boaz et al., 2018). The development of our protocol, rooted in extensive stakeholder consultation, exemplifies a collaborative approach to healthcare planning that is responsive to the unique challenges and opportunities within the Greater Hamilton Area.

Conceptual Framework

The Integrated Service Delivery (ISD) Framework underpins the overall project, emphasizing service coordination and integration across sectors. It guides the identification of service networks, their collaborations, and coverage, aiding in the planning for service enhancements. This framework supports the creation of a service database that illustrates the service locations, their interconnections and provides optimization opportunities to better meet community needs. Figure 1 outlines a visual representation of the key component of the ISD Framework developed by the project team.

Our project's framework is further supported by the guidelines and strategic priorities outlined by the Ontario Health Teams and the Greater Hamilton Health Network, emphasizing the importance of integrated care systems and community-based health service coordination (OH, 2024; GHHN, 2024).

Phases Completed to Date

To date, Phase 1 of the GHHN project has successfully been completed and has established a solid foundation for the initiative through the development of a standardized taxonomy for service categorization.

Methods

The process began with a rapid review, searching academic databases PubMed, Scopus, and PsycINFO. The review aimed to consolidate existing knowledge on mobile and outreach health services, focusing on those serving marginalized populations, including individuals experiencing homelessness or unstable housing, women and gender-diverse individuals. The selection of literature was guided by specific inclusion

criteria, concentrating on peer-reviewed articles, systematic reviews, and grey literature that shed light on effective strategies and notable barriers within mobile and outreach health services. Table 5 outlines the key search terms used. The rapid review established best practices and challenges in delivering these services, particularly to populations at risk of being underserved by traditional care models.

Simultaneously, an environmental scan was conducted to capture the current landscape of these services within the Hamilton area. This involved collating commentary from different service delivery partner engagement sessions facilitated by the GHHN to gather first-hand insights and data on existing services, ensuring a grounded understanding of the local context.

The synthesis of information from the rapid review and the environmental scan identified effective strategies and prevalent barriers in service delivery, forming an evidence base for the development of the taxonomy for mapping mobile and outreach health services in the GHHN catchment area. This taxonomy was designed to ensure a consistent and coherent approach to categorizing and mapping services, with consideration of the unique aspects of mobile and outreach services, thereby facilitating a more structured and efficient analysis of the service landscape. It will foster a unified understanding among stakeholders about the nature of mobile and outreach programs and services, crucial for maintaining consistency in service identification and categorization throughout the project's lifecycle. Additionally, by creating a roadmap to categorizing new and evolving services, the taxonomy will allow

the map to adapt and remain relevant as a "living document," thereby supporting its long-term utility in guiding service delivery and strategic planning. This adaptability will be essential for the project to continue providing value in the face of changing service landscapes and community needs.

Next Steps

The remaining phases of the project will be implemented in Spring 2024 beginning with validation of services in the context of the taxonomy by the service providers.

Conclusion

The successful completion of Phase 1 of the GHHN project marks a significant milestone in the endeavor to map mobile health and outreach services in the Hamilton area. By establishing a standardized taxonomy, the project has laid a solid foundation for the systematic mapping and analysis of services, addressing the need for a coordinated approach to healthcare delivery for marginalized and disadvantaged groups in the GHHN catchment area. As we move forward, the phases of data collection and validation, service map development, gap analysis, and knowledge transfer will build upon this groundwork, guided by the Integrated Service Delivery Framework to enhance service coordination and integration. The GHHN project stands as a testament to the power of collaborative, evidence-based planning in transforming healthcare service delivery, with the ultimate goal of ensuring equitable access to care for all community members.

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Author Contributions

Author A was the primary writer of the submission and lead for the project described in the protocol, Authors B and C drafted the Introduction section and assisted with planning the project described in the protocol, Author D reviewed and refined the submission and contributed to writing the Phases Completed to Date section. All authors reviewed and approved the submission.

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Table 1: Project Plan Phase 1 (Planning and Preparation)

Stage	Activities
Stage 1: Project Initiation and Information Gathering	<ul style="list-style-type: none"> • Review of existing and foundational resources. • Develop a detailed project plan. Identify potential risks and mitigation strategies.
Stage 2: Scope and Taxonomy Definition	<ul style="list-style-type: none"> • Develop a standardized taxonomy for organizing outreach service information. <ul style="list-style-type: none"> ◦ Conduct a rapid review of literature on best practices in mobile and outreach health services, focusing on underserved populations. ◦ Perform an environmental scan of current services in Hamilton, Haldimand, and Niagara Northwest using service delivery partner meetings and inclusion/exclusion criteria established through collaboration. ◦ Develop a standardized taxonomy for service categorization, informed by evidence and stakeholder discussions, to organize the service mapping exercise. • Review and finalize the taxonomy for service categorization.

Table 2: Project Plan Phase 2 (Data Collection and Validation)

Stage	Activities
Stage 1: Data Collection	<ul style="list-style-type: none"> • Develop a data collection strategy, including engagement with relevant organizations and agencies. • Review previous program and service mapping content and update using local resource guides and snowball methods as needed. • Gather additional outreach service data using standardized forms and guidelines. • Ensure data quality and completeness through iterative review processes.
Stage 2: Stakeholder Validation	<ul style="list-style-type: none"> • Share the collected data with stakeholders for validation and revisions. Include guidance around the inclusion and exclusion criteria. • Incorporate stakeholder feedback to ensure accurate representation of services

Table 3: Project Plan Phase 3 (Service Mapping and Gap Analysis)

Stage	Activities
Stage 1: Service Map Creation	<ul style="list-style-type: none">• Develop a service map from validated data, incorporating stakeholder feedback for accuracy.• Refine the service map, focusing on design and function to a variety of stakeholder audiences.
Stage 2: Gap Analysis	<ul style="list-style-type: none">• Conduct a comprehensive analysis to identify gaps and overlaps in services.

Table 4: Project Plan Phase 4 (Reporting and Knowledge Transfer)

Stage	Activities
Stage 1: Recommendations and Final Reporting	<ul style="list-style-type: none">• Finalize high-level recommendations for addressing gaps and overlaps in services.• Create a comprehensive report summarizing the project, including the service map and recommendations.
Stage 2: Knowledge Transfer and Dissemination	<ul style="list-style-type: none">• Develop knowledge transfer materials to aid in the dissemination of project insights and outcomes.• Organize a presentation or meeting to share project findings and recommendations with GHHN stakeholders and service providers.• Ensure that all project documentation is properly archived and accessible for future reference.

Table 5: Search Strategy

Databases Searched	Academic databases PubMed, Scopus, and PsycINFO were utilized for a comprehensive search.
Keywords	A combination of keywords was used, including "mobile health services," "outreach health services," "underserved populations," "healthcare accessibility," "integrated care models," and "culturally competent care."
Inclusion Criteria	Peer-reviewed articles, systematic reviews, and grey literature focusing on effective strategies and barriers in mobile and outreach health services. Special attention was given to literature highlighting the needs of homeless, under-housed, and women and gender-diverse individuals.
Exclusion Criteria	Studies that did not directly address mobile or outreach health services, or those not focusing on the target populations, were excluded.

Figure 1: Integrated Service Delivery (ISD) Framework Developed for the Project

