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User Journey Mapping in Community Health Work: A Case Study From Philly CEAL

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Abstract

Community health workers (CHWs) serve as bridges between clinical care and community-based social support, yet they are often excluded from the design of the health interventions they implement. User Journey Mapping (UJM) is a tool that can enhance health behavior interventions and their implementation. As part of formative planning for the Philadelphia Community Engagement Alliance (Philly CEAL), we employed UJM methods to engage CHWs as co-designers in the implementation of an adapted chronic disease self-management intervention to promote heart health while addressing social needs. We conducted semi-structured interviews ($n = 8$) with seven CHWs and one supervisor from Philadelphia's Office of Community Empowerment and Opportunity. During the interviews, participants co-created visual workflow maps documenting daily tasks, emotional experiences, pain points, and opportunities. Individual maps were synthesized into comprehensive team maps and validated through follow-up sessions with the CHW team. Analysis revealed a four-part CHW process: community-based responsibilities, individual case management, in-office duties, and supervisory functions. Themes were identified related to the specialized skills and strengths associated with the CHW role, systemic challenges related to service workflows, and persistent emotional and psychological role-related stressors. UJM methods used in this formative work generated actionable insights for intervention refinement while positioning CHWs as expert co-designers rather than solely as the implementers of the intervention. The findings underscore the importance of integrating frontline expertise early in intervention planning to ensure programs are operationally efficient, emotionally attuned, and contextually grounded. We propose a set of methodological recommendations for embedding UJM within future public health planning, implementation, and evaluation efforts.

Keywords

User Journey Mapping, community health workers, chronic disease management, participatory design

Introduction

Public health systems are increasingly called upon to address not only clinical outcomes but also the broader social determinants of health that shape community well-being (Alley et al., 2016). In response, public health planning models have evolved to incorporate upstream strategies that emphasize community engagement, cross-sector collaboration, and systems-level change (Mattessich & Rausch, 2014). Yet, translating these conceptually innovative models into practice often proves challenging, especially when it comes to supporting the practitioners responsible for implementation and delivery. Few tools exist to guide participatory engagement with frontline implementers, who are often charged with operationalizing evidence-based practices and programs within complex, under-resourced institutional systems (Villalobos et al., 2023). This gap limits opportunities to enhance the contextual relevance of programs and their ability to address upstream social determinants that drive health outcomes, particularly in community settings where

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standardized approaches may require significant local adaptation to succeed.

The Role of Community Health Workers

Community health workers (CHWs) have emerged as a vital strategy in this effort, bridging clinical care and social support by addressing unmet social needs such as housing insecurity, food access, health literacy, and structural barriers to care (Austin & Qu, 2024; Ferrer et al., 2022). As trusted community members and cultural mediators (i.e., individuals who bridge cultural, linguistic, and institutional gaps between communities and health and social service systems), CHWs are uniquely positioned to advance health equity by delivering services that are contextually relevant and relationship-driven (Rosenthal et al., 2014). Despite their central role, CHWs are often excluded from the design of programs they are tasked with implementing (Coulter et al., 2020). Many public health programs continue to follow top-down models that overlook frontline expertise, resulting in tools and workflows that are misaligned with the realities of community-based work (Oliver et al., 2015; Theobald et al., 2015). This disconnect underscores the need to reconceptualize intervention development by centering community expertise to improve program outcomes.

User Journey Mapping in Research

User Journey Mapping (UJM) is a qualitative design method that documents a user's experience within a system, highlighting goals, actions, emotions, and pain points (Joseph et al., 2020). Its roots can be traced to the fields of user experience and human–computer interaction, where journey maps helped teams visualize not only what users do, but the feelings behind their actions, as well (Kalbach, 2016).

In public health, UJM has been used as a systems diagnostic tool to uncover both behavioral patterns and institutional pain points, particularly in systems where touchpoints are fragmented and delivery pathways are nonlinear (Joseph et al., 2020). Unlike static workflows, UJM can capture the arcs of users' experiences, often revealing context-specific insights that inform iterative design. Within such contexts, journey maps have been shown to reveal contradictions between system architecture and user expectations. For example, UJM has become an increasingly popular method for gaining insight into how patients' access, navigate, and exit health care systems (Davies et al., 2023). This approach has proven valuable across a range of contexts, offering insights that support the redesign and improvement of how health services are delivered.

UJM also holds significant potential for understanding the experiences of health care workers by uncovering, acknowledging, and responding to the complexities of their roles. Participatory research methods, like UJM, are especially useful for identifying barriers to both giving and receiving quality care, and for evaluating the sustainability and comprehensiveness of care across contexts (Göttgens & Oertelt-Prigione, 2021; Lyon et al., 2025).

The Present Study

As part of its formative planning efforts, the Philadelphia Community Engagement Alliance (Philly CEAL) employed UJM methods to position CHWs as co-designers in the integration of DECIDE, an evidence-based problem-solving model for chronic disease self-management (Fitzpatrick et al., 2016; Hill-Briggs et al., 2011). Recognizing the need to simultaneously address unmet social needs and enhance clients' capacity to navigate health barriers, Philly CEAL sought to embed the DECIDE program within the goals and structures of an existing CHW program offered through the City of Philadelphia's Office of Community Empowerment and Opportunity (CEO).

To support intervention refinement and implementation planning that aligned with frontline realities, the Philly CEAL team applied UJM methods to better understand CHWs' day-to-day experiences, emotions, and pain points. In this article, we aim (1) to identify key workflow patterns, pain points, and system barriers that affect CHWs' ability to support chronic disease self-management and address social determinants of health in their communities; and (2) to illustrate how UJM can capture the complex nature of CHW work in underserved communities, including the emotional, procedural, and contextual aspects of their experience. Through this case study, we offer a model for embedding participatory design methods into public health planning and implementation readiness efforts.

Method

Sample

The team conducted semi-structured interviews with CHWs employed by CEO from December 2024 to January 2025. Participants included seven CHWs who were responsible for outreach, enrollment, needs assessments, health coaching, and resource navigation across neighborhoods in Philadelphia, and one CHW supervisor who was responsible for daily team management, event planning, and program implementation. All participants provided informed consent to participate, and the University of Pennsylvania Institutional Review Board (#856216) reviewed and approved all study procedures.

Interview Protocol

Interview guides were designed to elicit detailed insights into participants' daily workflows, decision-making processes, emotional highs and lows, system-level barriers, internal procedures, and sources of satisfaction and frustration in their work (Supplemental File 1). All interviews were conducted in person at the City of Philadelphia's Office of Community Empowerment and Opportunity by a masters-prepared research coordinator with experience in qualitative

interviewing and facilitating program design workshops. Each session lasted between 45 min and 1 hr 15 min. Interviews were recorded, and audio files were transcribed verbatim for analysis. The interviewer took detailed field notes documenting contextual information and elements of the interview not captured by the audio recording (e.g., gestures, tone).

Mapping Procedure

During the interview, the participant and the interviewer co-created a visual map of their unique user journey using sticky notes on a large flat surface. This allowed the pair to document each individual participant's workday from start to finish.

Maps captured specific tasks, emotional experiences, paint points (e.g., friction with colleagues or systemic barriers) and opportunities, such as workarounds or moments of innovation. At the end, the interviewer prompted the participant to confirm the order and details of the workflow and provided opportunity for any modifications. After the field notes were finalized, photographs of the user journey map were taken to preserve details.

Data Analysis

Following established UJM strategies, two research team members (J.V. and S.B.) reviewed field notes, photographs of maps, and interview transcripts to create a digital representation of the user journey discussed in each interview (IDEO.org, n.d.). During this initial digitization phase, both team members documented preliminary observations about barriers, emotional responses, and workflow patterns observed in each CHW's individual map. These individual maps were organized using visual frameworks to illustrate the dynamic interaction between emotional, procedural, and environmental factors.

After creating individual CHW user journey maps, four members of the research team (J.V., S.B., Gr.T., and Gl.T.) synthesized insights across all participants through collaborative thematic analysis. The digitized maps served as prestructured data, with content already organized by workflow phase (e.g., client intake, needs assessment, referral coordination) and insight type (tasks, emotions, pain points, opportunities). Each of the four team members independently reviewed all digitized maps to identify recurring patterns and preliminary themes. The team then convened for collaborative synthesis sessions where individually identified themes were presented, discussed, and refined. Through consensus-building discussion, the team consolidated overlapping themes and agreed upon the key overarching themes that represented the most salient and shared experiences across CHWs. This collaborative mapping process, informed by service design methodologies (Howard, 2014), resulted in the creation of a comprehensive map that synthesized the key processes that defined the team's workflow, as well as a detailed document outlining the major themes that emerged across the interviews.

The final stage involved refining materials through two validation sessions. The first took place in March 2025 as an in-person session attended by all CHWs, their supervisors, and additional project team members. A follow-up session was held virtually with the CHW team manager, focusing specifically on refining the management-related sections of the journey maps.

These validation sessions were designed in alignment with participatory research principles, emphasizing iteration and consistent stakeholder engagement. Participants in both sessions reviewed the synthesized journey maps, provided corrections, added missing context, and suggested refinements. These discussions not only ensured accuracy of the maps but also laid a foundation for the collaborative implementation of the DECIDE intervention.

Results

Our analysis resulted in a synthesized team workflow map (Figure 1) and a summary of key themes related to operational barriers, emotional landscape, and CHW skills and strengths.

Team Workflow

The synthesized team workflow illustrates how CHW activities are structured across three primary organizational levels: onsite community-based organization (CBO) operations, individual case management, and in-office responsibilities, with supervisor oversight coordinating across all levels.

Onsite CBO operations included the foundational community engagement activities that initiate CHW–client relationships. This phase includes three sequential components: (a) preparation and community engagement, where CHWs review caseloads, prepare materials, and engage informally with community members; (b) intake and assessment, involving systematic client needs assessment through personal networks and digital platforms; and (c) resource coordination and distribution, where CHWs deliver direct services and connect clients with appropriate resources.

Individual case management represents the core service delivery workflow, progressing through resource coordination, follow-up and case management, and case closure and reflection. This level captures the longitudinal relationship between CHWs and individual clients, including ongoing needs assessment, service linkage, progress monitoring, and case resolution.

In-office responsibilities reflect the behind-the-scenes coordination and documentation that CHWs engaged in as part of their work, as well as additional responsibilities they had related to partnered projects across their department in the city. This includes partner support through phone banking, resource coordination and kit assembly, and event planning for community health activities. Supervisors provide oversight and coordination across all operational levels through

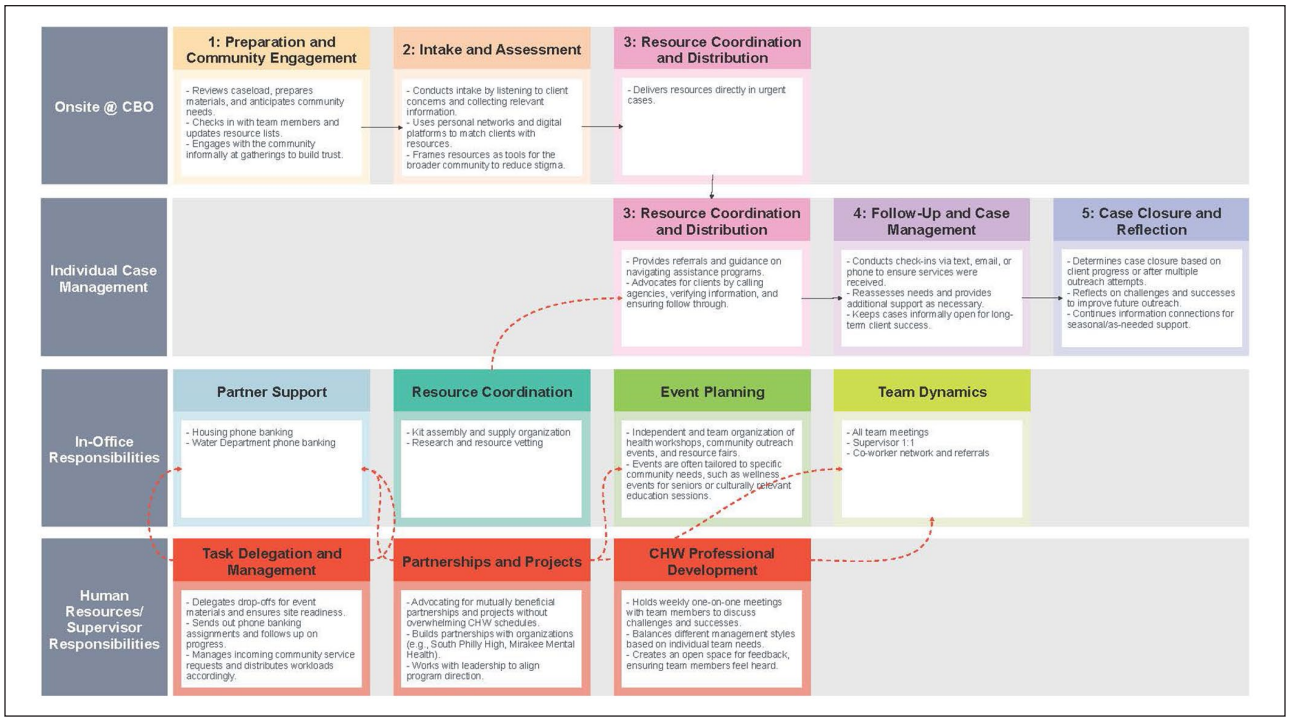


Figure 1. Synthesized map depicting community health worker workflow at the Office of Community Empowerment and Opportunity, City of Philadelphia.

task delegation and management, partnerships and projects development, and CHW professional development activities.

Resource Navigation Challenges

Individual insights consistently illuminated friction points within CHWs' daily workflows, many of which seemed or reportedly resulted in inefficiencies. These operational barriers, while often individually navigable, collectively contributed to workload fatigue, procedural confusion, and gaps in service delivery.

A central challenge identified across CHWs was the limited capacity of programs and resources as a constraint on their work. Strict eligibility criteria, long wait times, or other rigid protocols restricted CHWs' ability to tailor services to the realities of their clients' lives. In addition, lack of funding for community programs was seen as a systemic issue requiring advocacy to increase funding for these essential services. One CHW highlighted how resource limitations required constant adaptation, saying '[There is a] lack of resources, lack of funding to really give people some things. You've really got to do your homework and be creative' (CHW 5).

Insights also uncovered frustrations with the fragmented nature of many service referral pathways. This frustration was compounded by a lack of reliable, up-to-date information on available client resources. CHWs are responsible for facilitating connections to social services, health care providers, housing support programs, and more. Despite this being a core support service offered by CHWs, they frequently encountered outdated or inaccurate resource directories. One CHW shared a particularly challenging experience:

> . . . recently, people in one of the other teams came to me and asked me if I knew of any places that would deliver food, like in emergency . . . So I looked at [our social service directory]. There was none. And so, I asked one of my teammates and they referred me to somebody. When I called them, they no longer did that. (CHW 2)

This experience illustrates a common need for what participants described as a shared directory of vetted resources that all CHWs could access and contribute to. Such a system would ensure that resource information remains current and accurate.

Emotional Landscape

Our analysis revealed emotional dynamics that shape the everyday experiences of CHWs. One of the most salient emotional themes was moral distress. CHWs described how their strong commitment to clients often clashed with the limitations of the systems they worked within (e.g., referring to outside agencies with shifting eligibility criteria and availability). When clients were denied services at outside organizations due to narrow eligibility criteria, long waitlists, or lack of coordination among providers, CHWs were left feeling helpless, frustrated, and emotionally burdened. They

often knew what was needed—housing, mental health care, food access—but lacked the tools or authority to bridge those gaps. One CHW explained,

> Sometimes when I'm in a better place mentally, it's easier to separate. But if I'm already feeling bad, it gets a lot harder . . . I realized I can only offer services that exist—and not enough services exist. Not the right ones. (CHW 4)

Compounding this was the risk of burnout, driven by chronic exposure to crisis situations and administrative demands. Many CHWs juggled complex caseloads involving clients in acute distress while also managing documentation requirements, tight deadlines, events, and performance expectations.

The journey maps also surfaced meaningful instances of emotional fulfillment, resilience, and pride. CHWs spoke with pride about the deep relationships they have built with clients, their ability to advocate for resources, and the small but powerful wins—such as a client successfully attending a medical appointment on their own or expressing gratitude for being treated with dignity. These moments offered renewal and motivation, helping CHWs reconnect with their sense of purpose even amid challenging circumstances.

Skills and Strengths

Another prominent theme that emerged was the depth and nuance of the skills and strengths CHWs bring to their roles. Consistent with the core roles and skills identified by the National Council on CHW Core Consensus Standards (Rosenthal et al., 2014), CHWs demonstrated capabilities around relationship building, responsiveness to diverse client needs, and the ability to navigate clients through complex clinical and other services settings. These strengths were often exercised in tandem with emotional labor, community knowledge, and systems-level problem-solving.

One of the clearest expressions of these strengths was in how CHWs approach client engagement. Across interviews, CHWs consistently emphasized the importance of one-on-one interpersonal connection and trust building as foundational to their work. Rather than relying solely on transactional or checklist-driven interactions, CHWs intentionally built relationships with clients over time—drawing on shared lived experiences, cultural understanding, and empathy to foster rapport. One CHW described how they build trust through humility and shared experience—standing in line with clients not only to better understand their situation, but also to show solidarity:

> I said, 'Well, you know what? I'm going to stand in line. I want to see how it is to get these resources'. I came in, I'm in the same line as them . . . I said 'Yeah, I need food too. Food is going up'. And I was like, 'I'm going to go last so you guys can go ahead of me' . . . Then I'm hearing them say, 'I wish they had more noodles . . . more canned goods'. Okay, so now I can go in and tell the people at the pantry, 'This is what they need . . . what will be more beneficial to them and their family'. (CHW 3)

Through this relational strategy, the CHW built rapport while also gathering actionable insights to advocate for system-level changes that directly benefited the community. It reflects the layered, often invisible skill set CHWs employ daily: blending interpersonal care with structural advocacy in ways that formal systems rarely achieve.

Importantly, trust was not treated as a passive outcome, but as an active component of care delivery. CHWs described using small moments—like remembering a client's story or taking time to listen deeply—to signal respect and care. This approach often extended well beyond clinical or programmatic goals, as CHWs routinely supported clients navigating housing instability, food insecurity, and family stressors.

CHWs also viewed social connection as a health intervention in its own right. They sought out ways to connect clients to broader support systems, including community resources, peer groups, and social services. In some cases, CHWs even utilized personal resources to better support clients' needs:

> . . . first all we had was papers . . . sadly, it took a year for [these resources] to come . . . we were literally doing stuff out of pocket because it was like, 'There's no way I'm sitting here . . .' I remember [someone] needed plastic for their windows. And I'm like, 'You got extra plastic?' [my coworker was] like, 'Oh, I got some. I live down the street from her. I'll just drop it off'. She dropped off plastic. I dropped off blankets to someone. Someone needed toys. I'm like, 'I have a niece who have old toys. Let's give them away, whatever'. (CHW 3)

Discussion

Through this case study, we highlight the value of integrating participatory research methodologies, especially UJM, into the early stages of public health intervention research and development. By applying these methods during the planning phase of this project, we are able to use the insights generated to refine and tailor elements of the intervention and its implementation to better align with the context and priorities of the CHWs delivering this program to clients. This approach aligns with a growing recognition that implementation efforts in health care should incorporate co-creation with end-users and build on human-centered design frameworks (Bird et al., 2021; Holeman & Kane, 2019). Human-centered design is an iterative design process that prioritizes the needs, perspectives, and experiences of stakeholders (Kim et al., 2017). This approach shares strong philosophical and practical alignment with community-based participatory research (CBPR), which also emphasizes co-learning, mutual respect, and the redistribution of power within research processes (Israel et al., 1998). While CBPR emerged within public health and social sciences, and human-centered design from design and product development, both share a commitment to grounding inquiry in community expertise and valuing lived experiences as evidence (Minkler & Wallerstein, 2011).

Through UJM, we uncovered key challenges that might otherwise have gone unnoticed or unaddressed, as well as strengths and skills that the CHWs identified as tools for

Table 1. User Journey Mapping Key Findings and Corresponding Adaptations to the DECIDE + Program.

Finding/barrier identified	Adaptation to DECIDE + program	Goal of adaptation
Fragmented referral pathways, outdated and inaccurate resource directories	Co-creation of a Social Needs Resource Directory with the Community Advisory Coalition (CAC). An asset mapping process was initiated with the CAC to identify, verify, and compile a tailored directory of Philadelphia-area resources aligned with the social needs most commonly encountered by CHWs.	Provide CHWs with accurate, up-to-date referral resources to reduce friction in connecting clients to services.
Administrative burden and documentation/ coordination demands contributing to burnout	A revised enrollment protocol eliminated an intermediate Penn outreach step, authorizing CHWs to send baseline survey links directly to participants after eligibility confirmation and moving documentation upstream to reduce redundant handoffs.	Reduce administrative burden on CHWs by simplifying the enrollment workflow, minimizing duplicative steps, and integrating study tasks more naturally into existing CHW responsibilities.
CHW role overload (caseload management, social service navigation, documentation, and community outreach)	A dedicated team of Community Ambassadors is being hired to focus specifically on outreach and linkage of new clients, freeing CHWs to concentrate on caseload management and DECIDE integration.	Protect CHW capacity by separating outreach responsibilities from ongoing case management, while sustaining and expanding recruitment reach.
Structural barriers limiting clients' ability to access and engage with services.	DECIDE sessions were adapted to a hybrid format (with some virtual, some in-person sessions).	Reduce participation barriers related to transportation and scheduling, and honor CHWs' commitment to meeting clients where they are by offering flexible, accessible modalities for intervention delivery.

navigating the challenges that they face in their role. User journey maps of CHWs' daily routines surfaced critical points of tension, including limited community resources and fragmented referral pathways that undermined their ability to address unmet social needs. The journey maps also highlighted the emotional component of this work, emphasizing the emotional labor embedded in CHW roles. CHWs described feeling helpless, frustrated, and emotionally burdened working at the intersection of systemic failure and human need. This finding aligns with emerging evidence of widespread psychological distress among public health workers more broadly, with a recent meta-analysis documenting 39% burnout prevalence globally (Nagarajan et al., 2024). Moral distress, burnout risk, and emotional exhaustion shaped how CHWs approached their work, how they related to clients, and how long they imagined themselves staying in the role. At the same time, moments of emotional fulfillment served as critical sources of emotional renewal.

Drawing on the insights shared by CHWs through this UJM process, the team continues to develop and refine tools and protocols that are not only operationally efficient, but also emotionally attuned and contextually grounded in the work of the CHWs (Table 1). To address CHWs' frustration with fragmented and outdated referral resources, the team initiated a collaborative asset mapping process with our Community Advisory Coalition to co-create a verified, tailored directory of Philadelphia-area social needs resources. However, we note that maintaining such a directory presents ongoing challenges, as changes in funding, staffing, and eligibility criteria means that resources can become outdated quickly, and sustaining an accurate directory will require deliberate and ongoing investment. To reduce administrative burden, we streamlined the study enrollment protocol by eliminating a redundant coordination step and authorizing CHWs to manage baseline survey distribution directly. Recognizing that role overload (i.e., the diverse roles a CHW plays including caseload management, social service navigation, documentation, and now DECIDE facilitation) posed a sustainability risk, the team at CEO are hiring several new Community Ambassadors to handle outreach and new client linkage, enabling CHWs to focus on their core relational and clinical work. Finally, to reduce participation barriers for clients, DECIDE sessions were adapted to a hybrid format combining in-person and virtual delivery. Each of these adaptations will be tested and refined in collaboration with CHWs, preserving the iterative, feedback-driven ethos of participatory research methods. This ongoing process will ensure that intervention components and implementation processes are continuously aligned with the evolving needs of CHWs and the communities they serve.

Recommendations for Research and Practice

To meaningfully advance health equity and address entrenched disparities, researchers must continually engage in a reflexive practice to question *how* interventions are designed and *who* is engaged in that process. We encourage the application

of UJM as a participatory method for improving both intervention planning and implementation readiness. UJM offers a structured way to engage those most proximate to implementation as co-designers rather than informants, as they are essential to understanding the dynamic, nonlinear, and emotionally complex nature of community health work. In doing so, it provides a critical bridge between intervention design and operational reality.

Public health researchers must also prioritize implementation strategies that account for context from the outset as a program development principle. Akin to other participatory methods used in CBPR, UJM helps to center interventions in community members' lived experiences, to anticipate friction points, and to build tools that reflect the contours of real-world practice (Israel et al., 1998). Moreover, this participatory method offers a way to assess and build implementation readiness beyond administrative or technical metrics. It can help intervention teams to understand whether an intervention is emotionally, relationally, and structurally compatible with its delivery. In doing so, readiness is positioned not simply as a checklist of logistics, but as a reflection of alignment, trust, and collective capacity.

Limitations

Several limitations should be considered when interpreting the findings from this case study. First, interviews captured experiences at a single point in time, potentially missing seasonal variations or evolving challenges as the program matures. In addition, these findings reflect pre-implementation experiences with the DECIDE intervention; post-implementation dynamics may reveal different challenges or strengths as CHWs integrate the program into their existing workflows. Second, while the co-creation process was intentionally participatory, it still relied on researcher-led facilitation and interpretation, which may have shaped how experiences were documented and synthesized. Finally, visual mapping methods may privilege procedural and sequential elements over others, such as relational or systemic dimensions of CHW work. Despite these limitations, the insights generated through this process have proven valuable for intervention refinement and offer a replicable model for incorporating frontline expertise into public health intervention design. Future research should continue to explore how design methods can support early-stage intervention planning, particularly in equity-focused initiatives.

Conclusion

Although the findings here are drawn from a small, context-specific sample, they underscore the broader potential of integrating participatory methods into public health. As such systems continue to grapple with how to center equity, participation, and contextual fit in their work, approaches like UJM offer concrete, adaptable pathways. They make it possible to foreground lived experience, reconfigure power dynamics, and produce interventions that are not only technically effective but also socially and emotionally resonant. By embedding these methods earlier in the research and implementation life cycle, we may be better positioned to design programs that are not only scalable, but also sustainable, relationally grounded, and just.

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Supplemental Material

Supplemental material for this article is available online.

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