

Community-Centered Strategies to Reduce Gun Violence: Developing Evidence for Policy and Practice - Original Research

Research By Us, For Us: Violence Prevention Professional Researchers Lead Measure Development for HVIPs

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Abstract

Hospital-based violence intervention programs (HVIPs) address intervention and prevention of community-based interpersonal violence. HVIPs employ Violence Prevention Professionals (VPPs) as first responders to the hospital bedside for patients who present with injuries resulting from community-based interpersonal violence, including firearm injury, stab wounds, and assault. Despite the growing presence of HVIPs in the U.S., the model lacks process and outcome measures to gauge program fidelity and effectiveness. This study utilized a research team of predominantly VPP researchers to conduct key informant interviews with 3 key groups of participants engaged with a regional HVIP, including clients (n=7), VPPs (n=9), and healthcare collaborators (n=8). Analysis of interview data produced 6 overarching themes, including 3 process-based themes: (1) establish the relationship with the hospital site(s) and clients; (2) foundational client engagement; (3) The Work, and 3 outcome-based themes: (1) transition from relationship to partnership; (2) ongoing commitment; (3) The Change that span hospital- to community-based care. Further, the team identified 4 foundational programmatic goals of the HVIP: (1) inspire positive personal change, (2) reduce engagement in violence and other high-risk activity, 3) reduce risk of reinjury and justice system involvement, and (4) reignite young people as beacons of hope. The 6 process-and outcome-related themes and the 4 foundational programmatic goals produced a conceptual framework for the HVIP and a logic model that maps with the conceptual framework. These elements can guide evaluation of HVIP fidelity and effectiveness. Future work can explore the application of these measures at other sites to build the evidence base of the HVIP models in violence intervention and prevention of community-based interpersonal violence, as well as further define the role HVIPs play within the CVI ecosystem.

Keywords

hospital-based violence intervention program (HVIP), community violence intervention (CVI), program effectiveness, qualitative research, community-engaged research, program fidelity, firearm injury, violence, interpersonal violence, community violence

This study was conducted by a research team comprised predominantly of Violence Prevention Professionals (VPPs) and
used qualitative research methodologies to conduct interviews with clients, VPPs, and health care collaborators engaged
with a regional hospital-based violence intervention program in order to determine key process and outcome measures of
the HVIP.

Introduction

Community violence is a leading cause of injury and death in the United States, resulting in nearly 1.5 million emergency department visits annually. Injuries due to violence range in severity and are often underreported. Firearm injury and death is the most severe and potentially lethal form of community violence, affecting young men of color at disproportionately high rates.¹ Hospital-based violence intervention programs (HVIPs) are 1 approach within the community violence intervention (CVI) ecosystem that works to prevent community violence.

HVIPs provide bedside response to patients who present to the hospital with injuries due to community violence, including firearm injuries, stab wounds, and other assaults. A critical element of HVIP services that is consistent across U.S. sites is

the provision of care at the hospital bedside by a Violence Prevention Professional (VPP).³ The VPP is a trained credible messenger, bringing shared membership in the geographic and social communities with the patient and personal or proximal exposure to interpersonal violence. VPPs provide critical support for patients and their families during the hospital stay and after discharge, facilitating access to resources to promote physical, psychological, and social healing post-injury.⁴⁻⁶ Depending upon the structure of the HVIP, whether hospitalbased, hospital-linked, or a hybrid program, HVIPs provide community-based, culturally congruent case management either through continuing to carry clients and families posthospital discharge or through referral to community-based organizations who fulfill this commitment to intervene postviolent injury and to work to prevent future violence. While the number of HVIPs across the country is increasing, with over 80 established and emerging programs through the Health Alliance for Violence Intervention (The HAVI),³ there exists a gap in scientific evidence to support the effectiveness of the HVIP model of care. 4,5,7-9

Traditional outcome measures of HVIP effectiveness include a reduction in reinjury rates and cost savings HVIP programs provide to hospitals and to society. ¹⁰⁻¹⁶ Prevention of reinjury is the most common outcome of interest presented in the literature, but it is challenging to track across hospitals and healthcare systems and is an imperfect proxy for healing, which includes psychosocial healing – a concept not captured fully by measures of physical healing. ¹¹⁻¹⁵ Cost effectiveness is often tied to prevention of reinjury and is another critical yet incomplete element of HVIP program effectiveness. ¹⁰ Neither reinjury nor the measurement of cost savings to the healthcare system provide an adequate measure of effectiveness of HVIPs given their lack of focus on psychosocial healing.

Efforts have been made to determine more comprehensive measures of HVIP effectiveness. Two key efforts include the development of a core set of desired outcomes of an HVIP and the definition of a core set of *Standards and Indicators* to share best practices (*Standards*) and tangible steps (*Indicators*) toward the achievement of stated *Standards* from HVIP models across the country.^{3,17} Further, recent contributions to theories of change in CVI and HVIP models of engagement build upon foundational guidance for beginning and sustaining an HVIP,⁶ address the importance of multidisciplinary partnership,¹⁸ and recognize the centrality of community wisdom to increase relevance and amplify community voice.¹⁹⁻²¹

These elements expand understanding around the complexity of factors that lead to firearm injuries, reinjury, and death, but additional exploration of the factors needed to provide effective intervention and prevention of violent injury through the HVIP model of care is urgently necessary.²²

Qualitative research is uniquely poised to examine the critical process and outcome measures of HVIPs at a depth and nuance that is not available through quantitative measures alone. Further, utilizing participatory research practices, including participation by those closest to the program throughout the entire research study, 16,24-26 increases the likelihood that critical process and outcome measures that can inform evaluation of program fidelity and effectiveness. This qualitative study used a participatory research design (i.e., a VPP-led research team), informed by interviews with HVIP clients, VPPs, and healthcare collaborators (HCCs), to explore and define process and outcome measures of 1 regional hybrid HVIP.

Methods

Study Design

The research team conducted semi-structured interviews with 3 distinct participant groups: HVIP clients, VPPs, and HCCs to inform process and outcome measures of an HVIP program serving a large metro-region in the U.S. across 3 hospitals. Interviews were conducted and analyzed in Spring and Summer of 2024. The principal investigator engaged VPPs as core members of the research team throughout the entire research process, including study design, implementation, analysis, and interpretation to recognize the wisdom and experience of VPPs as subject matter experts. Methods utilized in this study were designed for replication on a national level through partner HVIPs within the HAVI. This study followed Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines.²⁷

Study Team

The study team included the principal investigator (PI), 5 hospital-based VPPs, the executive director of the community-based organization (who is a trained VPP), 1 Violence Prevention Specialist (a community/prevention-based VPP), a social worker/program manager for 1 of the hospital sites,

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and the external program evaluator who is also a qualitative researcher. Seven members of the 10-member study team were VPPs who completed training in qualitative research designed by the PI and the external program evaluator.

Study Participants

Participants included HVIP clients (n=7), VPPs (n=9), and HCCs (n=8). Client and HCC participants were recruited through purposive sampling. Inclusion criteria for the study were engagement with the program and, for clients specifically, engagement with the program beyond hospital discharge. Healthcare collaborators who were engaged in daily programmatic operations were excluded. Maximum variation sampling ensured recruitment for a diversity of perspectives and experiences for clients (i.e., age, hospital site, and injury severity), and HCCs (i.e., departmental and role diversity, hospital of employment, and gender). All clients were receiving services through the HVIP, and all but 1 client participant was male, which is representative of the gender distribution of clients served through the HVIP program. Client participants were injured within the previous 12 months with the exception of 1 client. All 3 hospital sites were represented by client and HCC participants. Healthcare collaborators represented a variety of departments including social work, chaplaincy, emergency medicine, and trauma and acute care surgical services (male=3, female=5). All 9 VPPs from the HVIP were interviewed, ranging in VPP experience from 1 to 8 years (male=5, female=4). No prospective participants declined participation in the study, though scheduling with some study participants was not successful.

Interviews

The research team developed 3 semi-structured interview guides, 1 each for clients, VPPs, and HCCs as part of a previous research study conducted by the PI (Appendix 1). While the interview guides had some overlap between groups, the research team intentionally asked participant perspectives of hope experienced through participation in the HVIP. The interview guides were developed by the VPP-led research team. While the guides were not validated or pilot tested, the guides were compared with previously utilized interview guides within the program and modified for VPP-determined cultural alignment, sensitivity, and accessibility based upon the research objectives.

Each client and HCC interview was conducted by 2 interviewers: the PI and another research team member. For HCC interviews, the co-interviewer was either a VPP or the social worker from the research team. All client interviews were conducted by the PI and a VPP researcher, for which some VPPs were also the case manager for the client participant. VPP interviews were conducted by only the PI. This decision for only the PI to interview VPP participants was made by the research team to allow VPP participants to speak as freely as possible, without a colleague or an individual in a supervisory

role present. Five of the 9 VPP participants were members of the research team. The team discussed how and to what extent full team participation in the project might affect responses, especially as half of the VPP participants were also members of the research team. The team decided that it was necessary to interview all VPPs to gain the broadest possible perspective.

A total of 24 semi-structured interviews were conducted, the majority of which (n=22) were conducted in-person. All interview locations were chosen by the participant and included the community-based organization office (n=8), a private space on the hospital campus (n=11), and in a client home (n=3). Two interviews were held via videoconference (HCC). Interviews lasted 45 to 100 minutes and were audio recorded and transcribed verbatim by a third-party transcription company. The PI took unstructured field notes during and following research meetings and following interviews. Field notes informed data analysis and drafting of the manuscript. Informed consent was obtained verbally from all participants by the PI and was documented in a deidentified, password-protected file. All interviews were conducted in English except 1 client interview, which was conducted in Spanish. This interview was conducted by the PI and a VPP member of the research team, both of whom speak fluent Spanish. The interview was translated into English and transcribed for analysis by the research team.

Human Subjects Research

The Institutional Review Board (IRB) provided Institutional Review Board approval (IRB # 24-0604). A Federalwide Assurance was obtained from the Department of Health and Human Services (FWA # 00034316), and an agreement was signed for the IRB to serve as the IRB of this study led through the community-based organization. Clients and VPPs received a \$50 gift card for participation in the study, while HCCs were not compensated.

Data Analysis

A hybrid deductive-inductive approach to analysis was utilized. Codebooks were developed from each of the interview guides, generating a list of *a priori* codes, including a description of the code, guidance for when to use and when not to use each code, and sample excerpts for the application of each code. The study team coded 1 transcript from the client and the HCC participants together to verify and modify the codebooks. Emergent codes were added as needed. All client and HCC transcripts were coded by 2 analysts, at least 1 of whom was a VPP analyst. To protect confidentiality of VPP participants, 2 external analysts were hired to code VPP transcripts. Training was provided on the codebook by the PI who was available for questions during the process and reviewed the analysis.

Based on preference, half of the team coded on paper and the other half coded in Dedoose (Los Angeles, California, Version 9.0).²⁸ Transcripts coded on paper were entered into

Dedoose by the PI. Analysis of interview transcripts was conducted based upon code meaning, or the degree to which codes encapsulated the intended meaning as described by the code description without the need to create additional codes.²⁹ The need for additional codes, or for further nuance to code definitions, was guided by conversation at weekly research meetings and by high levels of code co-occurrence, as identified by Dedoose, which suggested the need to modify code definitions. The research team determined that data saturation was achieved when no additional codes were defined and when the research team agreed that the data collected were appropriate to address the research question thoroughly.²⁹ Sample size was adequate for qualitative research, within and beyond the field of community violence intervention and prevention.^{4,20,23,29-35}

Discrepancies that arose during data analysis were discussed by the research team at weekly meetings until a resolution was reached. Subjectivity and positionality were discussed regularly with regards to analysis and to the overall project. The guideposts for managing researcher subjectivity and positionality were twofold. First, the team discussed that the primary task of analysis was to report the perspective of the participant as accurately as possible. Secondly, the team discussed the extent to which the intersection of information gathered through analysis of participant perspectives and the perspectives of the researcher informed interpretations of the research questions to maintain the highest level of objectivity as possible. These discussions led the team to remind each other of the goal of the research, which was to identify exactly what the participant said without reading further into the statement.

Upon completion of coding, the research team reviewed frequency of code use and code co-occurrence pertaining to the identification of process and outcome measures and overarching themes within the data across the 3 groups of participants. Next, the themes were mapped visually and compared with 2 related theories of change, ^{19,36} a standardized list of outcomes of HVIP programs, ¹⁷ and the HAVI list of *Standards and Indicators*. ³

Results

Six major themes were identified in this study, 3 of which were process-based and 3 were outcome-based. The themes were further organized into a conceptual framework for the program (Figure 1), which includes the process- and outcome-based themes that range from hospital to community-based care, and 4 foundational programmatic goals also defined through this study. The conceptual framework was built from a logic model (Figure 2), which connects each process-related theme with an outcome-related theme. The logic model also included phases of action and activities as process measures and short- and long-term change within outcome measures. The 3 process-based themes are: (1) establish the relationship with the hospital site(s) and clients; (2) foundational client engagement; (3) The Work of basic case management. The 3 outcome-based themes are: (1) transition from relationship to partnership; (2)

ongoing commitment; (3) The Change achieved through complex case management. The team also identified 4 foundational programmatic goals that both define and result from the work of the HVIP. These goals are: (1) inspire positive personal change, (2) reduce engagement in violence and other high-risk activity, (3), and reduce risk of reinjury and justice system involvement (4) reignite young people as beacons of hope.

Theme I (Process-Based): Establish the Relationship(s) with Hospital Site(s) and Clients

Awareness of the presence and purpose of the HVIP team, by both the hospital site and clients, was identified as a critical first step to establishing relationships. One healthcare collaborator shared how they tried to promote awareness of the HVIP to their coworkers:

How do more people not know about this program? This is incredible. And then once I got into this role, I reached out to try and set up talks to have the [HVIP] crew of everyone come in and provide exposure and education, (HCC 6).

The desire to raise awareness and promote the program developed a relationship between this hospital-based provider and the HVIP team. These relationships, however, were described as taking time to build, and challenging, due to the nontraditional role that VPPs play in the hospital.

Sometimes it's draining because you have to explain to people who may not have seen you in the role yet, why you're there. Because in this space you don't look like the helper. So sometimes it's draining because you show up, you get profiled by nurses, and yet the thing is I have probably have more access to the information than you do, (VPP 4).

Over time, the role of VPPs in the hospital setting has become more apparent to the HCCs and therefore more integrated and valued.

We had a new - I think it was a gunshot [wound]—come in. . . We [didn't] know who their family [was]. We [didn't] know who would be safe to visit if we [had] all these people coming in. And the [VPP] knew everything. Like they knew everything about this person. They knew their name, what part of town they lived in, the people's family and friends, (HCC 3).

VPPs introduced a level of information to patient care that was otherwise unavailable to the medical team and that could be critical to the immediate and long-term provision of care. This level of engagement of the VPP with the hospital team led to increased awareness and utilization of VPPs in patient care.

Theme 2 (Outcome-Based): Transition from Relationship to Partnership

This theme included short-term and long-term outcome measures of establishing a relationship between key hospital

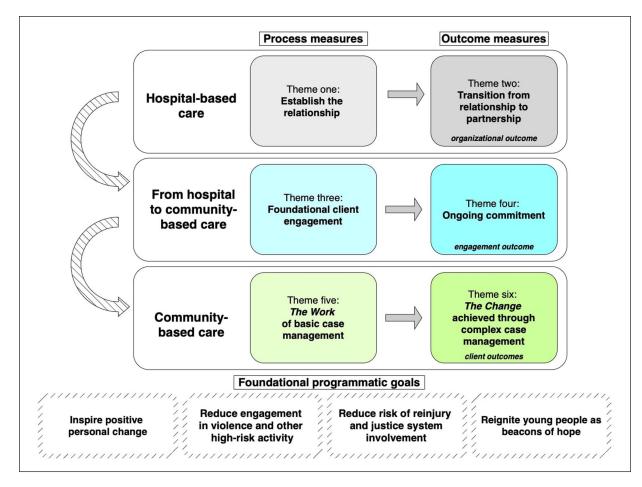


Figure 1. Conceptual Framework of HVIP Process and Outcome Measures, Foundational Programmatic Goals. This conceptual framework includes 3 process-based outcomes and 3 outcome-based measures of a hospital-based violence intervention program (HVIP). The process and outcome measures are paired, I process measure with I outcome measure, and grouped by setting, spanning the transition from hospital- to community-based care. The 3 outcomes can be categorized as organizational, engagement, and client-based outcomes, sequentially. The ideal progression is that each outcome measure strengthens the following process measure, indicated by the arrows on the lefthand side of the diagram. The 4 foundational programmatic goals were defined through this study as the guiding elements for program implementation and to inform outcomes at each level of care.

departments and the VPP team (Theme 1). Efforts made to build relationships in the hospital setting laid the foundation for transition from relationship to partnership, with the goal of full integration of the HVIP team into the healthcare team and establishing strong client engagement early in the patient's hospital experience, which was conceptualized as an organizational outcome. One HCC requested, "I would like [VPPs] to be present at the time of arrival of every patient who is injured by violence," (HCC 7). The desire of HCCs to have VPPs present during patient care was evidence of the evolution from relationship to partnership of the HVIP team with healthcare providers. VPPs also appreciated the shift to partnership:

There's just a lot of people in very high positions of power who don't like to hear the concerns or the voice of people who are supposed to be silent. And so that was a little frustrating. But I'm

finding it now, you know, the more that we are more physically present and showing up and part of committees that I feel empowered. I feel empowered, (VPP 1).

The feeling of empowerment contributed to further clarification of the role of the VPP on the healthcare team and greater confidence that the services provided by the VPP were critical to holistic patient outcomes. With VPPs as team members, the HCC reported the ability of VPPs to ease mistrust patients may have toward healthcare providers:

He was able to vouch for me and say, hey, social work is here to help you. She's not trying to get into your business or anything. Like, we're really here to support you and make sure that you're safe and that your family is safe when you leave the hospital. I feel like after he had that conversation with them, a lot of the family members were more open to speaking with me or if I had

Themes: process	Process measures			Outcome measures	
measures	Phases of action	Activities	Themes: outcome measures	Short-term change	Long-term change
Theme 1: Establish the relationship	Establish relationships with hospitals	Information sharing with key departments -departments presentations -distribution of filess/materials Collaboration with key departments -participate in departments frounds	>Theme 2: transition from relationship to partnership Organizational outcome	Increased awareness of the HVIP program in the hospital hospital lines of the HVIP program in the hospital	Strong relationship with the hospitals Integration into healthcare team and hospital system
	Immediate response - establish relationship with patients	Alert to patient arrival respond to trauma pages renza ko poarts eller via emalitext		Physical presence at the hospital bedside within I h	Response to all patients who have experience injuries due to violence
		Conduct informational check-ins		Create open lines of communication -serve as a lisison and advocate for care -assess safey risks, including potential retaliation	Established role of VPP and the HVIP program in situations of immediate response
		Meet the patient		Ongoing assessment of changes in patient need support/care	Ability to address patient needs comprehensively and collaboratively
Theme 3: Foundational dient engagement	Introduction of self and program, role and resources (in-hospital)	Introduce self and the program to the patient and family -VPP as distinct from medical team and from police -bugin to build relationship with the patient -assessment of family/level resources	>Theme 4: Ongoing commitment Engagement outcome	Build trust with the patient and family credible messenger shared life experiences	Established trust with patiend client and family
		Facilitate connection with pertinent resources as necessary victims of crime assistance -temporary Medicaid, if needed visits from other departments (social work, mental health providers, chaplans, etc.)		Serve as a liaison for care and resources during the hospital stay	Established role of VPP and HVIP program as a liaison for care between patient and healthcare team
		VPP knows their role and is prepared to work with the patient adequate duration of time and level of engagement -trauma/healing-informed approach		VPP commits to working with patient to support as needed and appropriate modeling the establishment of trauna/healing-informed practices to support self-care	VPP works with patient/client through evolution of current and future needs for resources to facilitate healing models gelcare recogniting influence of self-care on client accompaniment
	Discharge	Establish a care plan for discharge from the hospital (including wound care and education, medication, follow up appointments, mental health care)		Increased access to resources to meet immediate needs (i.e., safety plan, access follow-up appointments, identify any needs or gaps in access)	Established access to resources for the duration of need
		Create a plan for follow-up with additional resources after leaving the hospital (safery, job, school, church, family, friends, housing, food, participation in prosocial programing, transportation, recreation center, mentor, insurance)		Increased access to resources -meet origoing, basic needs to fulfill short- and long-term goals -faciliate access to these resources	Establish ongoing access to needed resources promote positive, safe community connections reduce ergagement in high-risk activities reduce likelihood for retilutor reduce likelihood of retaliation prevent further involvement with the Justice system
Theme 5: The work of basic case management	Ongoing case management	Individualized goal setting to promote healing include continued connection with VPP epigeach healing e-physical healing e-enrocional/psychological healing and mental healing acotal healing.	>Theme 6: THE CHANGE achieved through ongoing case management Client outcomes	Continued progress toward goals to promote healing congoing engagement with VPP successive measures of progress successful ravigation of serbacks	Individual goal achievement -modification of goals based upon progress -organing engagement with VPP -successive massures of progress -successive massures of progress
		Address root beliefs that influence behavior (dentify pathways of influence and assess potential for change)		Continued conversation regarding the relationship between root beliefs and behaviors	Alignment of beliefs and behaviors -increased agency and empowerment -establish and maintain sale community connections to support positive, prosocial engagement
		Addressing client-identified needs for behavior change (perspectives, activities, focus on [positive] future, job, education, positive social connection, healing)		Increased access to resources needed to facilitate sustained positive change (education, employment, housing, positive social engagement, mental health care)	Ongoing, regular access to resources needed for sustained positive change (education, employment, housing, positive social engagement, mental health care)
		Assist with navigation of the legal system, if needed Assess immediate risk and protective factors that led to the injury at a personal and systems level		Maintain good standing w legal system (including court) Use aggregate level data to inform upstream preventive factors	Sustained good standing with the legal system-including accessfully based court case, if applicable Leverage the intersection of lived experience, of VPPs and Clients, to advocate for policy change to address factors that perpetuate cycles of violence

Figure 2. Logic Model of HVIP Process and Outcome Measures by Theme.
The logic model connects each process-related theme with an outcome-related theme. The logic model also includes phases of action and activities as process measures and short- and long-term change within outcome measures. The process and outcome measures explored in depth through this logic model map to the conceptual framework by theme and color.

questions for them. They were a lot more receptive versus when I first introduced myself and my role, they were more standoffish, which happens with not only gang-involved families but just a lot of families, (HCC 2).

In turn, increased trust of the healthcare team by patients and family members enhanced patient care. The ultimate goal of this partnership would be for all healthcare providers, while discussing patient care, to say, "wait, I noticed [the HVIP] wasn't in this conversation, where are they?" (HCC 8). This outcome is a programmatic outcome and pertains to integration into the hospital and healthcare team.

Theme 3 (Process-Based): Foundational Client Engagement

A solid relationship between the healthcare team, VPPs, and patients facilitated early and effective client engagement. One HCC underscored the unique role VPPs play in the hospital experience of violently injured patients:

I think a huge piece of it is just them coming into a patient room and being a member of the community. They come as a trusted person already. They walk into the room and have an ability to connect. All of the [VPPs] are so skilled at building relationships and creating a safe space that is culturally sensitive and respectful of the patient as an individual. (HCC 1).

VPP strategy to engage patients demonstrated concern, relatability, and continuity of support, adding a layer of patient care through understanding patient context that was otherwise unavailable within the healthcare team. This level of connection created the space for meaningful engagement between patients and VPPs:

[I] try to see their experience, where they're at, what happened, if they want to talk about what happened. I don't want to press them about what happened because my experience is that if you get shot, you really don't want to tell nobody who shot you. . .If they want to talk about it, I ask them about it. I let them give out whatever information they want to give. . .I make sure that they have my contact information, I get their contact information, and I provide them with any available resources I may have. Later, if they stay in the hospital, I'll come back and I'll engage more and try to get them to open up more. And if I follow them out to the community, I try to see where they're at. Like, why are you violently injured? Does it have to do with just your living environment, or does it have to do with the choices you're making? (VPP 5).

HCCs appreciated and saw the need for VPPs to serve as a bridge to ongoing support as patients were discharged from the hospital and return to the community. VPPs were viewed as a critical connection to needed resources post-hospital discharge to support the client and increase case management services provided to the client to reduce potential reinjury due to violence.

Theme 4 (Outcome Measure 2): Ongoing Commitment

After discharge from the hospital, VPPs continued to facilitate access to needed resources for clients, build trust with clients and families, and work to minimize risk of future engagement with high-risk activities. This outcome was considered to be an engagement outcome. HCCs recognized that "the ability of [VPPs] to do the community outreach component that we are really limited in being able to do has been the most beneficial," (HCC 5). Clients appreciated the support and lived experience of VPPs that they witnessed through ongoing engagement with their VPP and the organization: "Everybody is there for a reason. . .they know how to deal with kids like you because they've been kids like you," (C4). With VPP support, clients were better able to adhere to their plan for healing and shared about the critical role that VPPs played in encouraging them to continue to pursue the goals they had set for themselves for healing and found a level of accountability through those relationships that encouraged positive growth for the client and reducing exposure to high-risk activities and situations.

Theme 5 (Process Measure 3): The Work of Basic Case Management

Clients described their experiences of working with their VPP in case management as encompassing a variety of components, including transportation to medical appointments, assistance with paperwork, legal assistance and advocacy, connection to mental health resources, utilizing their VPP as a confidant, a resource for seeking financial assistance, developing and enacting safety plans, support in pursuing educational goals, securing housing, engaging in steady employment, and facilitating connections with additional needed resources. Case management also often took the form of social and emotional support, including the role that shared trauma plays in the client-VPP relationship:

It might sound strange, but I think it's the trauma we've all endured. Personally, I think it's the hard moments, because in these spaces we're normally dealing with people who are dealing with hard moments. And normally people dealing with hard moments want to hear about hard stuff. It's backwards. . . it's about the fact that I'm seeing you in a vulnerable position and I'm gonna show up and I'm gonna give you a piece of my own vulnerability. (VPP 4).

The ability of the VPP to enter into the story of the client through shared trauma created the space for clients to share as much or as little with their VPP about their situation as they liked. The trust created through VPP willingness to engage in shared vulnerability served as healing for both the VPP and the client. Further, discussing shared trauma introduced the power to interrupt the cycle of violence:

I have to make our clients realize that even though you're the victim, you're also victimizing. And I have to show them that how their trauma affects everybody else. . .In validating that their trauma exists, I also have to show them that they are traumatizing other people (VPP 5).

The understanding of trauma as a cyclical and exacerbating reality presented clients with the choice to stop the cycle of trauma. VPPs played a critical role in supporting clients along their healing journey through shared identities and similar struggles to process trauma. While VPPs did not serve in a clinical therapeutic role, they played an important role in connecting clients to needed services and relationships, accompanying clients through their experiences of accessing these resources. Connection to VPPs for basic case management laid the foundation for ongoing connection to VPPs for sustained case management to support change over time.

Theme 6 (Outcome Measure 3): The Change Achieved Through Complex Case Management

This theme addressed hope for lasting change due to ongoing engagement with the HVIP through increased complexity and duration of case management. Client perspectives changed due to program participation, "Man, I was in dark places. They brought me out of dark places. Now I look like that sign right there, shining and glowing in different colors instead of all black," (C2). VPPs supported the achievement of client goals, encouraging, "changes of behavior, changes of perspective and mindset, making them get comfortable being uncomfortable, because the change that comes with that discomfort," (VPP 3). VPPs shared personal experiences of making the change themselves with clients:

We're not connecting through credentials. We're connecting through lived life experiences, shared life experiences. And so we are genuine in the way that we show up because we understand the pain and the frustration and the confusion of some of our young people. But we've made it out on the other end, and so we come with a different level of, or a different layer of experience, with wisdom (VPP 6).

The VPP model of accompaniment allowed VPPs not only to support clients in their own healing journey but to also encourage clients to continue their healing journey through joining the team and continuing to provide these needed supports to others who have experienced similar situations.

Foundational Programmatic Goals

In the course of building the 6 major themes, 4 foundational programmatic goals were also identified inductively through analysis of the interview data. The 4 foundational programmatic goals were conceptualized as existing beyond the immediate set of outcome measures, serving

instead as the vision statement, or the raison d'être of the HVIP and included: (1) inspire positive personal change, (2) reduce engagement in violence and other high-risk activity, (3) reduce risk of reinjury and justice system involvement, and (4) reignite young people as beacons of hope and are included in the conceptual framework. These goals were defined as the anticipated impact of the HVIP both at individual and at programmatic levels, while also informing all work of the HVIP.

Discussion

This study utilized a research team comprised of a majority of VPP researchers with lived experience to engage in qualitative inquiry including interviews with clients, VPPs, and healthcare collaborators. The 6 themes and 4 foundational programmatic goals identified through this study inform and expand the conceptualization of process and outcome measures of the HVIP model of violence intervention and prevention in 3 critical areas: (1) the integral role of VPPs in research and on the healthcare team for patients injured through interpersonal violence; (2) the comprehensive inclusion of community voice through multilevel interviews to inform the development of a logic model and conceptual framework for the HVIP; and (3) the development of a replicable model for VPP-led research in qualitative inquiry across HVIP sites nationally to contribute to the evidence base for the HVIP model of care.

This study highlights the integral role that VPPs play in the healthcare setting for patients presenting with injuries resulting from interpersonal violence. Clients and healthcare collaborators, alike, attested to the important role fulfilled by VPPs that other members of the healthcare team could not achieve due to time constraints, perceived scope of clinical practice, cultural incongruence, or patient apprehension of providers, among other factors. This study confirmed the importance of several HAVI-defined Standards and *Indicators*, particularly the practice areas of Service Delivery, Participant Engagement, and Hospital Systems Transformation. These areas were highlighted across participant groups as critically important to the work of the HVIP. The study team translated the more granular elements within these practice areas to develop the logic model and conceptual framework produced to convey study findings.

Most of the extant literature on HVIPs has been conducted by academic researchers, and, while community voice is represented, research designed to integrate and prioritize individuals with lived experiences into research teams remains limited. Consistent with the development of theories of change in the field, this study drew upon the wisdom of communities most affected by the problem and approached solutions through a participatory and multidisciplinary lens. ^{21,25,26,36} The community-engaged approach utilized by Schleimer et al to work with leaders of CVI programs generated a similar emphasis on activities that considered the whole person in context,

providing a comprehensive list of services provided in the realm of CVI that overlaps significantly with services represented in the logic model and conceptual framework generated through this study.¹⁹ Further, the community-researcher partnership model advanced the co-development of knowledge in the CVI space that is critical to prioritizing community voice in the measurement of change over time.¹⁹ In a similar fashion, Voith et al utilized grounded theory to incorporate community voice and develop a theory of change for 1 newly-established HVIP, extending healing measures beyond physical healing to incorporate psychological and social components, as well as systems- and community-level engagement that progressed through chronological steps to support distinct needs for healing over time.³⁷ Building upon the community-based knowledge generated by Voith et al, and leveraging both participatory and qualitative research methodologies, 16,24-26 this study advanced theory and practice to move beyond shared voice and shared leadership with community to strengthen the capacity for community-led research efforts. This study addressed this methodological and experiential gap by incorporating community voice comprehensively through the training of VPP researchers in qualitative research and through the inclusion of interviews with clients, VPPs, and healthcare collaborators in 1 study. Interviews with those most closely engaged with the HVIP informed the development of the logic model and conceptual framework of HVIP process and outcome measures. Further, through daily engagement with the work of violence intervention and prevention, VPP researchers synthesized results in ways that were both informed by their current work and beneficial to their future work and to the field.

This study confirmed and expanded upon activities critical to the HVIP models developed by Schleimer et al and Voith et al. ^{19,36} One significant difference introduced by this study was the research team connected themes about activities (process-based themes) to short-term and long-term outcomes, to give maximal application of the results. These process measures, which align with core HVIP programs, may explain a possible pathway for arriving at the intended outcomes identified through this study.¹⁷ Further, the conceptual model developed through this study adds a chronological progression that demonstrates the ways in which achievement of or progress toward short- and long-term change can add depth to subsequent process measures undertaken through the program. The measures defined through this study can now be compared with current implementation and evaluation practices, locally and in the field, to determine the most adequate evaluation metrics for HVIP programs. Robust evaluation will measure program fidelity and program effectiveness at both client and programmatic levels.

It is the hope of the study team that the methods utilized be replicated by other HVIPs throughout the HAVI network across the country. Replication of this study would achieve 3 goals: (1) participating programs would benefit from defining or refining process and outcome measures at their individual site, (2) a growing body of measures would be developed by participating HVIPs, allowing for cross-site comparison, and (3) cross-site comparison of process and outcome measures would enhance measurement of program fidelity and build the evidence base for HVIP model effectiveness through robust and rigorous methodologies. Further, replication of this study would build capacity of VPPs in research and practice, prioritizing community-led research in the CVI ecosystem. Beyond replication of this study, future research can also explore 2 additional themes that arose during this study, including the role of VPP self-care and growth and the prioritization of the interruption of cycles of trauma in HVIP delivery and effectiveness.

Limitations

The study site for this project was a hybrid HVIP model, meaning that the HVIP provides hospital-based services as contractors, but the HVIP has robust operational and programmatic supports both within each hospital site and on the community-based side, as the same community-based organization runs the HVIP and the post-discharge communitybased services. This hybrid HVIP structure is relatively unique in the HAVI and may limit the ability to translate findings into hospital-based or hospital-linked HVIP models, due to potential variations in the scope and reach of programing.³⁷ VPP presence in the interviews, while an asset in many ways, may have reduced the likelihood of participants sharing constructive or negative feedback freely. Similarly, participation bias likely influenced this study, as the perspectives of clients who did not choose to enroll in the HVIP or of HCCs who are skeptical of or who have had negative experiences with the HVIP were not included, potentially skewing the results to the positive. Participation bias may have influenced this study further through the inclusion of all VPPs as participants in the study, given that 5 VPP participants were also members of the research team. The team chose to interview all VPPs due to small sample size and the desire to gain as much insight as possible into the work determined the comprehensive approach to interviewing that was utilized in this project. Another limitation was that interview guides were not formally validated nor pilot tested. However, given the participatory research design, VPP researchers led the development of these guides, ensuring cultural alignment and relevance of research questions. Finally, 6 of the 7 client participants were male. While this proportion is representative of a majoritymale population injured through community-based interpersonal violence, greater female representation would have benefited this study and will be included in future research.

Conclusion

This research study was conducted by a team composed predominantly of VPPs trained as qualitative researchers who gathered the perspectives of 3 key groups of HVIP collaborators to inform process and outcome measures for a regional HVIP, as well as a logic model and a conceptual framework. This project underscores the key role that HVIPs can play in

connecting those injured through community-based violence to needed resources for holistic healing, namely case management, and the role that case management can play within the CVI ecosystem to intervene immediately post-injury and prevent future violence for affected individuals and their social networks. Further, due to their proximity to violence and healing, HVIPs are well-poised to inform upstream measures to serve as a community-level mechanism of preventing future violence. Future research can utilize the logic model and conceptual framework developed through this study to explore and compare appropriate process and outcome measures at other HVIPs to expand the evidence base for the HVIP model of care.

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ORCID iDs

Ethical Considerations

This study received ethical approval from the Colorado Multiple Institution Review Board (protocol number 24-0604) on April 5, 2024.

Consent to Participate

Informed consent was obtained verbally from each participant by the PI and documented in a secure, password-protected file, per IRB protocol.

Author contributions

- Conceptualization: Virginia McCarthy, Johnnie Williams, Virginia Visconti, Ashley Brooks-Russell, Erin Wright-Kelly, Quintin WO Myers, Shamya Wright, Erin Hart-Rodriguez, Alma Mireles-Monsivais, Felipe Perez, Erica Green, Rian McNeal, and Eddie Gonzales participated in the development of the research questions and study design.
- Methodology: Virginia McCarthy, Virginia Visconti, Johnnie Williams, and Quintin WO Myers designed the qualitative methods that were utilized in the study. Virginia McCarthy, Virginia Visconti, Johnnie Williams, Quintin WO Myers, Erin Hart-Rodriguez, Alma Mireles-Monsivais, Felipe Perez, Erica Green, Rian McNeal, and Eddie Gonzales collaborated on the development of the interview guide and data collection procedures.
- Participant Recruitment: Virginia McCarthy, Johnnie Williams, Erin Hart-Rodriguez, Alma Mireles-Monsivais, Felipe Perez, Erica Green, and Rian McNeal performed recruitment of study participants.

 Investigation: Virginia McCarthy, Erica Green, Erin Hart-Rodriguez, Shamya Wright, Felipe Perez, Eddie Gonzales, and Rian McNeal participated in participant interviews.

- Data Curation: Virginia McCarthy managed and organized the qualitative data, ensuring data security and confidentiality.
- Formal Analysis: Virginia McCarthy, Johnnie Williams, Quintin WO Myers, Erin Hart-Rodriguez, Alma Mireles-Monsivais, Felipe Perez, Erica Green, Rian McNeal, and Eddie Gonzales developed and refined the codebook, coded the data, and participated in thematic analysis. Monika Williams and S Kathleen Foley developed and refined the codebook, coded the data, and participated in thematic analysis for the VPP interviews.
- Writing: Virginia McCarthy wrote the first draft of the manuscript. Johnnie Williams, Virginia Visconti, Ashley Brooks-Russell, Erin Wright-Kelly, Quintin WO Myers, Shamya Wright, Erin Hart-Rodriguez, Alma Mireles-Monsivais, Felipe Perez, Erica Green, Rian McNeal, Eddie Gonzales, Benjamin Li, Catherine Velopulos, Marian E Betz, Monika Williams, and S Kathleen Foley reviewed and revised multiple drafts of the manuscript for methodological, conceptual, and intellectual accuracy and content.
- Supervision: Virginia McCarthy, Virginia Visconti, Johnnie Williams, Quintin WO Myers, and Ashley Brooks-Russell provided oversight of the study process and supported the research team.
- Project Administration: Virginia McCarthy, Quintin WO Myers, and Johnnie Williams managed project timelines and IRB compliance.

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Data Availability Statement

De-identified data may be available upon reasonable request.

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Appendix I

Multi-Level Semi-Structured Interview Guides

Protocol #: 24-0604

Project Title: Qualitative Research to Inform Violence Prevention: Engagement of Violence Prevention Professionals to ensure relevance of research framing and findings and build the evidence base of hospital-based violence intervention programs

Version Number: 1 Version Date: 03/27/2024

Semi-Structured Interview Guide for Client Interviews

Introduction/permission (consent)

Mindful of trauma

Grounding exercise to begin, closing moment

Therapists of Color Collaborative on call, refer after to US

TOCC

Follow up with them individually within 2 to 3 days, let them know that we will do that

- 1. Who are you?
 - a. Who do you represent?
 - b. Where do you come from?
 - i. Neighborhood
 - ii. Community
- 2. How were you introduced to AIM? (consider hospital bedside AND community referrals AND family)
 - a. Tell me a little bit about how you first encountered the AIM program
 - b. our outreach team
 - c. your outreach worker
 - d. *AIM is. . ..
- 3. If you think back to the moment when you first met an AIM outreach worker

- a. Tell me about when you first met your outreach worker?
- b. What made you say yes to working with your outreach worker?
 - i. Continue talking with your outreach worker?
- c. Did you have any reservations or hesitations about saying yes to talking with your outreach worker?
- d. How did it feel to have your outreach worker introduce themself to you
 - i. To know that you had access to that support without requesting it or knowing it was available to you?
 - ii. While you were in the hospital, how often were you in communication with your outreach worker?
 - iii. Tell me about your interactions with your outreach worker
 - 1. What did you talk about with your outreach worker
 - 2. Were there specific resources you needed at that time?
 - 3. Were there resources that your outreach worker offered to you?
- 4. Was working with your outreach worker beneficial to you?
 - a. If yes, how?
 - b. If no, why not/what would have made the relationship more beneficial?
- 5. What was the transition like going from working with your outreach worker in the hospital to continuing to work with your outreach worker in the community?
 - a. What was your hospital discharge plan?
 - b. How did your outreach worker help you navigate that plan?
 - c. Have your needs changed since you first left the hospital?
 - d. Did/does your outreach worker visit you in your home?
 - e. Did/does your outreach worker also work with your family?
 - i. Say more about this?
- 6. What made you want to continue to work with your outreach worker once you left the hospital?
- 7. In what ways have you remained involved with AIM since you have been back in the community?
 - a. What other programs have your participated in/ have you been referred to?
 - b. What have you learned through these programs?
 - i. GRASP

- ii. MOC
- iii. Mentoring
- c. What have you learned from your case manager/ outreach worker?
- d. Have you been referred to other resources outside of AIM/GRASP
 - i. Which services?
 - ii. Are you still involved with those resources?
- 8. What other community programs have you participated in?
- How has working with your outreach worker been different from other programs you have worked with?
 - a. Do you feel that your outreach worker met you at your level?
 - b. Could you relate to your outreach worker?
 - i. If so, how so?
 - ii. If no, why not?
- 10. How motivated were you to change when you met your outreach worker?
 - a. Has your motivation changed (better/worse) since you first met your outreach worker?
 - b. What let to that change?
- 11. Has your engagement with AIM/GRASP changed how safe you feel in the community? How? Say more?
- 12. Do you feel differently about your community after working with your outreach worker?
 - a. If yes, how? Say more about how you feel about your community.
 - b. If no, say more about how you feel about your community?
- 13. What was most helpful about the AIM program?
- 14. Is there anything you would change about the program?
- 15. If you told someone else about the program, what would you tell them?

Protocol #: 24-0604

Project Title: Qualitative Research to Inform Violence Prevention: Engagement of Violence Prevention Professionals to ensure relevance of research framing and findings and build the evidence base of hospital-based violence intervention programs

Version Number: 1 Version Date: 03/27/2024

Semi-Structured Interview Guide: Outreach Workers/Violence Prevention Professionals

1) Can you tell me a little bit about your yourself? Your background? When did you first get involved and how long you have been an outreach worker for the AIM program?

- 2) What does a typical day look like for you at the hospital versus the community? Can you explain your process and functions of your day-to-day job? What are your goals and objectives as an outreach worker? Is there a consent and intake process?
- 3) What kinds of services and interventions do you provide to youth in the hospital and community? Do you have inclusion or exclusion criteria for your program? How many youth served etc.?
- 4) Is there an average length of time for youth to stay in the program? Are there any barriers to getting youth engaged in the program?
- 5) What have you found most successful with the AIM program? How would you define success in the work you do?
- 6) What are the most outstanding stories or moments that have made you proud?
- 7) What activities or interventions matter the most to vou?
- 8) Any challenges or barriers with the program and reaching certain outcomes for a client? What kind of trainings have you done as an outreach worker? What approaches/strategies or interventions do you use to alleviate those barriers or engage someone?
- 9) What do you see as major risk factors leading to trauma recidivism/reinjury? How do you collect data on patient progress/goals and track a client's history of recidivism or incarceration?
- 10) What changes to you hope to see in someone in the program? Do you find the AIM program to be cost effective?
- 11) What components of the program would want to improve or change? Are there any gaps in services?
- 12) What specific components or resources do you think make a HVIP programs effective or successful?
- 13) Any recommendations you would make to other new and emerging HVIPs?
- 14) Overall, have you been satisfied with your involvement in the program?

Closing Statement

This concludes our interview today. Is there anything more you would like to add? The evaluation team will be analyzing and coding the information that you provided for this interview and will be developing a draft final report for everyone to review.

Protocol #: 24-0604

Project Title: Qualitative Research to Inform Violence Prevention: Engagement of Violence Prevention Professionals to ensure relevance of research framing and findings and build the evidence base of hospital-based violence intervention programs

Version Number: 1 Version Date: 03/27/2024

Semi-Structured Interview Guide for Healthcare/ Hospital Collaborators

- 1. Can you tell me what you know about the AIM program?
- 2. How did you first hear about the AIM program?
- 3. What has your interaction been with the AIM team?
- 4. How do you support the AIM program?
- 5. How is the AIM program helpful to patients?
- 6. How is the AIM program helpful to your work?
- 7. Describe the role that the AIM team does and should play in the care team.
- 8. What resources would you provide to a traumatically injured patient that your job prevents you from providing?
- 9. Can you share a memorable encounter that you have had with the AIM team and/or an AIM client?
- 10. Have you participated in any of the following groups/ presentations provided by the AIM team? If yes, which? If NO, share about these as upcoming opportunities
 - a. Trauma-informed care trainings
 - b. Gangs 101
 - c. Healing circles
 - d. Groups we hold
 - i. Trauma
 - ii. Thursday night group
 - iii. GRASP Enterprises Academy
 - iv. Women's group

- v. Men's group
- vi. Joven Noble
- vii. Cara y Corazon
- viii. Girasol
- ix. Monthly sweat lodge
- x. WRAP program
- 11. Are you aware of the patient's rights policy and how do you advocate for it?
- 12. How do you feel the relationship and interactions are currently between the police and patients/family members of patients in the emergency department?
- 13. How can the AIM team better support you when you are working with violently injured patients?
- 14. If you have referred patients to the AIM team, can you please speak to the process?
 - a. Ease of referral
 - b. Availability of accurate contact information
 - c. Timeliness of response of the AIM team
- 15. Who needs to know about the AIM program that currently does not know about it?
 - a. How can we extend our reach to additional partners and collaborators in the hospital?
 - b. What are the barriers to reaching more patients who are in need of AIM services?
 - c. What are the barriers to engaging additional hospital staff in AIM work?