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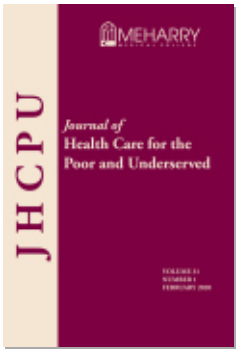

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Prevention Professional for Violence Intervention: A Newly Recognized Health Care Provider for Population Health Programs

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Summary: The National Uniform Claim Committee recognized a new type of health care provider for violence intervention: prevention professional. This creates a pathway for population health interventions to obtain reimbursement through traditional medical financing systems. In addition to violence, prevention professionals may specialize in other conditions of public health importance.

Key words: Population health; health care providers; health policy; violence prevention.

Sustainable funding for population health initiatives is often challenging. Although many interventions improve care quality or reduce long-term expenditures, start-up costs and delayed financial return remain barriers to implementation. Additionally, financial benefit might actually accrue to other health system sectors that did not deliver the service. In the absence of predictable reimbursement, programs often face funding uncertainty. To bridge the gap between existing program funding models and the traditional medical reimbursement system, a new type of health care provider has been developed: prevention professionals. This paper will discuss a brief history of the provider's origin, potential benefits to using prevention professionals, and critical lessons for the advancement of prevention professionals.

Early Experiences Implementing Population Health Interventions among the Violently Injured

The development of the Prevention Professional designation originates in the field of violence prevention, with initial work beginning 25 years ago (Box 1). Research

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Box 1.

TIMELINE OF THE DEVELOPMENT OF THE PREVENTION PROFESSIONAL DESIGNATION

- 1994: First Hospital-based violence intervention program was formed
- 2009: The National Network of Hospital-based Violence Intervention Programs is created with seven founding programs
- Apr 2011: First annual conference of NNHVIP
- Apr 2011: NNHVIP publishes "Violence is Preventable," an HVIP replication guide
- 2014: State of California recognizes Violence Peer Counselor health care provider
- Nov 2014: NNHVIP applies with National Uniform Claim Committee for Violence Prevention Professional recognition
- Sep 2015: NUCC Approves "Prevention Professional" designation
- April 2016: Prevention professional included in the provider taxonomic code
- Apr 2018: First in-person Violence Prevention Professional training and certification session
- Aug 2019: 34 U.S. based HVIPs and 4 international HVIPs

indicates violent injury is commonly a recurrent health issue for an individual, rather than a chance occurrence. In fact, trauma survivors maintain a five-year re-injury rate of up to 44% and mortality of 20%.[1] In response, interventions to reduce the risk of re-injury have been developed. Hospital-based violence intervention programs (HVIP) combine brief in-hospital intervention with outpatient case management, peer mentorship, and targeted services.[2] To date, the National Network of Hospital-based Violence Intervention Programs (NNHVIP) reports 38 members.[3] These programs are located in predominately urban settings throughout the United States, Canada, England, and El Salvador (Figure 1).

Hospital-based violence intervention program evaluations demonstrate effectiveness in reducing rates of participant reinjury. To date, five randomized control trials have been conducted (Table 1).[4–8] The largest of the studies significantly decreased re-injury rates from 20.3% in the control group to 8.1% in the intervention.[5] Using a retrospective design, a San Francisco-based HVIP found at six-year follow-up, 4.5% of program participants were reinjured compared with 16% of historical controls.[9]

Community-based approaches have also proven effective in reducing violent injury. The Cure Violence Model is based on the World Health Organization's epidemic control approach to infectious disease. Its development began in 1995 and drew on public health interventions proven to interrupt transmission of HIV in Uganda[10] and tuberculosis in San Francisco.[11] It addresses violence as a learned, contagious behavior driven by norms.[12] The main program components are: interrupting transmission of violence by detecting and de-escalating disputes, intensive engagement with high-risk participants, and changing norms that accept and encourage violence.

An independent evaluation of the Cure Violence model in New York City found a 50% reduction in homicides and 63% in shootings.[13] Other replication studies of the

Figure 1. U.S. hospital-based violence intervention programs.

Table 1.

REINJURY RATES IN HVIP RANDOMIZED CONTROL TRIALS

	HVIP (n)	Control (n)	Stat. Sig?
Cooper 2006	5% (56)	36% (44)	Yes
Zun 2006	8.1% (96)	20.3% (92)	Yes
Aboutanos 2011	5.6% (39)	6.2% (36)	NS
Cheng 2008	5.7% (56)	7.8% (57)	NS
Cheng 2008	0% (25)	14.3%/8%[a] (25)	NS

Notes:
[a](Parental/Child report)
HVIP = Hospital-based violence intervention program.

Cure Violence model worldwide show consistent reductions in shootings, largely due to the work of the frontline violence interrupters and outreach workers (Table 2).[14–17]

While differences exist between the HVIP and Cure Violence models, there are similarities at the level of direct service delivery. Although program management may be driven by a health system leader such as a health commissioner or physician in conjunction with other clinical and social service providers, culturally competent frontline workers provide the bulk of patient-level interventions. These frontline workers, whose primary task is to address upstream injury risk factors, remain the prototype for what would eventually evolve into the prevention professional designation.

Situated within population health programs, these frontline staff perform a vari-

Table 2.

REDUCTIONS IN SHOOTINGS IN CURE VIOLENCE EVALUATION STUDIES

	City	% Reduction in Shootings	Stat. Sig?
Maguire 2018	Port of Spain (Trinidad)	45% (violent crime)	Yes
Delgado 2017	New York City	63%	Yes
Henry 2013	Chicago	19%	Yes
Webster 2012	Baltimore	44%	Yes
Skogan 2009	Chicago	41% – 73%	Yes

Box 2.

POTENTIALLY REIMBURSABLE SERVICES

- Crisis intervention
- Patient education
- Peer support services
- Patient and family support services
- Targeted case management
- Care coordination and health promotion
- Transitional care
- Mental health screening
- Mental health self-management education & training
- Alcohol and substance misuse screening

ety of tasks commonly performed in the traditional medical service reimbursement model, especially in services qualifying as case management or counseling (Box 2). San Francisco General Hospital's HVIP, the Wraparound Project, reviewed patient needs and expectations workers must be equipped address.[18] Mental health services were a priority for over half of program participants. Additionally, a significant percentage needed assistance with victims of crime compensation reimbursement, employment, housing and education. Over one-tenth (10.6%) of clients required items for personal documentation, such as driver's licenses. Services unique to violence prevention included gang intervention and tattoo removal.

During the early development of a frontline violence prevention role, the possibility of reimbursement for these services was simply not possible given that nearly 75% of gunshot wound victims were uninsured.[19] However, the ACA changed this. Medicaid Expansion now covers a larger proportion of hospital and emergency department charges for violent injuries. In the first year of implementation, Medicaid increased its share as the primary payer for gunshot injuries by 9.7%.[20] This amounts to approximately $397 million spent annually on violence-related injuries in the Medicaid Expansion

population alone.[21] As these patients gain insurance, the frontline workers who execute longitudinal care plans to prevent reinjury became logical recipients of reimbursement.

Lack of Violence Prevention Service Reimbursement Leads to New Provider Code

Despite delivery of services to a newly insured population, initial efforts to receive reimbursement proved difficult due to the health provider classification of the workers. Although several designations appeared relevant to the work performed, such as community health workers, health educators, and case managers, none of the existing designations provided an acceptable fit. For example, although the providers performed targeted case management services, their skill set encompassed unique activities distinct from those of case managers such as conflict mediation or safety planning. Furthermore, the case manager designation typically requires a higher level of educational attainment and certification than many prevention professionals.

The NNHVIP initially considered classification under the community health worker (CHW) designation, but a review of current and anticipated regulatory status indicated that this classification may be constraining for violence prevention. At present, there is substantial variability among states regarding overall recognition, training, certification requirements, and reimbursement for CHWs.[22] Given the reliance on Medicaid for violently injured patients, this specific payer was particularly important for the field. Unfortunately, many states do not reimburse CHWs through Medicaid. Others do, but only for defined conditions. (Home-based asthma care is one example.)

Although the NNHVIP could have utilized CHWs and advocated for reimbursement similar to that paid for home-based asthma therapy, this was deemed impractical. Because CHWs encompass a broad field of health care workers across the country, each state represented a different Venn diagram of financing, education, and certification, creating incentives for workers in violence prevention to match pre-specified state requirements, rather than those specific to the services delivered.

Alternatively, several benefits existed in the possibility of a new provider designation. First, it would allow the creation of more focused, uniform training and certification process. Second, with established program models, disease-specific service and patient outcomes data existed. Finally, the narrow focus allows for relatively granular cost-effectiveness data for specific payers. Overall, since research demonstrated violence prevention programs decreased patient emergency department use and hospitalizations, this created a logical argument for reimbursement.

Considering these factors, the NNHVIP proposed a new health care provider taxonomic code for those working in violence prevention. To do so, the group applied through the National Uniform Claim Committee, which elected to accept the application for a new provider code, but with a broadened scope of practice to include other population health-oriented providers. The new code is now operational under the following definition:

> "Prevention Professionals work in programs aimed to address specific patient needs, such as suicide prevention, violence prevention, alcohol avoidance, drug avoidance,

> and tobacco prevention. The goal of the program is to reduce the risk of relapse, injury, or re-injury of the patient. Prevention Professionals work in a variety of settings and provide appropriate case management, mediation, referral, and mentorship services. Individuals complete prevention professionals training for the population of patients with whom they work."[23[P.123]]

Population Health Funding Challenges are Not Unique to Violence Prevention

Funding for violence prevention programs is emblematic of challenges seen in other patient populations suitable for intervention. As is common for many population health programs, the HVIP and Cure Violence models are both funded by a combination of funds from local city and county budgets, research grants, hospital in-kind contributions, and charitable foundations.[24] On average, the annual cost of operating a hospital-based program is $350,000 to care for 90 patients,[25] while community-based approaches are approximately $400,000 for a high-risk neighborhood.[26] Notably, only a minority of programs receive reimbursement for the services delivered, creating a significant barrier to developing new programs or expanding successful ones.

If this misalignment between historical funding schemes for population health programs and typical medical care can be reconciled, then health departments, community-based organizations, hospitals, clinics, and health providers have wide-ranging opportunities to benefit health. In 2010 alone, the Centers for Disease Control and Prevention estimates over one billion outpatient visits occurred in clinics.[27] Although the primary purpose of most encounters might be for acute illness or disease management, each offers an opportunity to address social determinants of health and other upstream factors.

The Patient Protection and Affordable Care Act (ACA) and Medicare Access and CHIP Reauthorization Act enacted a variety of policies to encourage value-based care over quantity of care.[28] Importantly, these changes still rely predominately on a backbone of fee-for-service payments, a structure that inherently incentivizes treatment of disease rather than disease eradication or prevention. However, other regulations stemming from the ACA authorized states the option to reimburse non-physician providers to deliver preventive services.[29]

The combination of an evolving health care financing system in tandem with the reimbursement capabilities of non-physician providers creates an opportunity for the new "Prevention Professional" health care provider to bridge the divide between funding traditional health care and population health programs. Although originally conceived for the field of violence prevention, this provider can benefit other patient populations as well.

Next Steps and Lessons Learned

The recognition of prevention professionals is an important, but preliminary step in reimbursement for population health programs that engage in disease prevention. Notably, it is expected that individuals complete "training for the populations of patients

Box 3.

VIOLENCE PREVENTION PROFESSIONAL CORE COMPETENCIES

- Trauma-Informed Care and Trauma-Informed Practices Part 1: Understanding Trauma
- Trauma-Informed Care and Trauma-Informed Practices Part 2: Trauma-Informed Care Basics
- HIPAA & Confidentiality
- Record-keeping, documentation, and maintaining files
- Awareness and Screening for various other types of violence (domestic violence, abuse, sexual exploitation)
- Effective Management of Vicarious Trauma and Secondary Traumatic Stress
- Hospital bedside visit procedures and Professional boundaries
- De-escalation & Retaliation prevention
- Crisis Intervention and Conflict Mediation
- Personal Safety on Home and Community Visits
- Case Management and Advocacy
- Victim of Crime Compensation
- Gang and Group Violence Awareness
- Violence as a health issue & the model of hospital-based violence intervention

with whom they work."[23[P.123]] The NNHVIP, Cure Violence, and other national providers of public health approaches to violence prevention have traditionally trained new workers using best practices, on the job training, technical assistance for new programs as well as requiring all new programs to have an established "mentor."[30]

After recognition of the prevention professional designation, the NNHVIP formalized its training and certification process to include in person training and established core competencies (Box 3). This structure allows the organization to act as the certifying body for prevention professionals in the field of violence. Those working in suicide, alcohol, tobacco, or drug prevention programs interested in pursuing reimbursement under the prevention professional designation would be wise to establish an independent certification program as well. Early meetings with policymakers and regulators suggest that a successful, operational certification program is a rate-limiting step. Policymakers have consistently expressed that this component is a necessity to demonstrate quality of service providers. In its absence, policymakers fear that low-quality providers could enter the field, resulting in wasted spending for unclear patient benefit.

In addition to certification, other subspecialties contemplating the prevention professional designation should prepare robust data on program effectiveness. These data tend to be well-received when published, peer-reviewed local data are presented and backed by replication studies. Beyond health outcomes, cost-effectiveness data are essential. These data are more powerful when tailored specifically to the payer of interest. An example is evident in studies of cost-effectiveness for the Medicaid program rather than a combination of multiple payers or sectors of government.

Lastly, just as the development of the "Prevention Professional" designation was a result of lessons learned from other specialties, the promotion of the specialty should also learn from concurrent reimbursement efforts. One specific example is California's decision to reimburse non-physicians as part of its Diabetes Prevention Program.[31] Enacted through legislation in 2017, this program will undoubtedly provide tangible lessons for population health programs seeking funding through Medicaid reimbursement.

The prevention professional designation is a promising development in the advancement of population health programs into the American health system. However, a significant amount of effort remains to prove the value of this work and translate recognition into reimbursement. The NNHVIP and Cure Violence are in the midst of this process for violence prevention and have much remaining work moving forward. Those engaged in prevention of suicide, alcohol, tobacco, and substance misuse would be wise to examine the potential benefits that the prevention professional designation may bring to their fields.

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Note: Since acceptance of this manuscript, the National Network of Hospital-based Violence Intervention Programs has been re-named the Health Alliance for Violence Intervention.

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