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INJURY PREVENTION (T RAYBOULD, SECTION EDITOR)

Bridging the Gap: Hospital Community-Based Youth Violence Prevention Program—Pitfalls and Lessons Learned

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Abstract
Purpose of Review This review focuses on pitfalls and lessons learned during the development, implementation, and sustainability of hospital community-based youth violence prevention program.
Recent Findings In the USA, homicide is the third leading cause of death among youth aged 10–24. The re-injury rate seen at Virginia Commonwealth University Trauma center (VCU-TR) is comparable to the nationally observed rate of 10 to 50%. VCU-TR, along with several other Trauma Centers, has taken an active role in the development of hospital community-based youth violence prevention programs. The efforts have been effective in reducing recidivism and the risks of violence. Significant pitfalls can be avoided in the development and sustainability of an evidence-based, collaborative, hospital community-based youth violence prevention programs.
Summary This review highlights the effectiveness of hospital community-based violence prevention programs in reducing the risks of re-injury. There are significant pitfalls to avoid both internal within the institution as well as external with the community partners.

This article is part of the Topical Collection on *Injury Prevention*

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Introduction

In the USA, homicide is the third leading cause of death among youth 10–24 years of age accounting for 4300 deaths with 3703 (86%) male and 597 (14%) female [1]. In Richmond Virginia, however, this problem is more pronounced, where homicide is the leading cause of death among youth [2]. Between 2009 and 2013, the homicide rate among 10 to 24 years old was slightly more than four times higher than the state rate and five times higher than the national rate as noted in Table 1 [3–6]. During this four-year period, there were 113 injury related deaths of Richmond City youth under 25, with close to 70% of these injury deaths due to intentional injury; 87% of the intentional injury decedents were African American and 91% of the intentional injury decedents were males [3].

The Virginia Commonwealth University Level 1 Trauma center (VCUTC) receives 85% of all intentionally injured patients in the Richmond area. The highest rate of intentional injury visits to VCU ED was among 10–24 years old accounting for 95% (446) of assault-related injury visits. The total number of admissions secondary to assault, stab, gunshot wound (GSW), averages 500 per year with 40% in the 10–24-year-old category. The re-injury rate seen at VCU is up to 15% comparable to the nationally observed rate among other trauma centers which range from 10 to 50% with an additional estimated 20% death as a result of re-injury [7–15].

In response, VCUTC, along with several other Trauma Centers noted in Table 2, has taken an active role in the development of hospital community-based youth violence prevention and intervention programs [7, 14, 16, 17•, 18–25]. At VCUTC,

Table 1 Homicide firearm deaths and rates 2013, 0–24 years old

Location	Deaths	Population	Crude rate per 100,000
Richmond City [4]	14	70,476	19.86
Commonwealth of Virginia (minus Richmond City) [4]	66	2693,742 [5]	2.45
United States of America [6]	3897	105,043,525	3.71

an evidence-based, multidisciplinary collaborative hospital communit-based youth violence intervention program, Bridging the Gap (BTG), started in 2007 as a prospective randomized control trial, comparing in-hospital brief violence intervention (BVI) alone vs. BVI plus community case management for all youth aged 10–24 admitted to the trauma center [14]. Initial outcome analysis in 2010, shown in Table 3, noted improved hospital and community resource utilization and improved reduction in violence risk factors such as alcohol and drug use in the group where case management was combined with BVI [14]. Since November 2008, 139 people have enrolled in the program with noted five re-injuries and two mortalities for an overall recidivism and mortality rate of 3.6% (5/139) and 1.4% (2/139), respectively.

After the initial Pilot study, BTG moved from an evidence-based program to a standard of care program at VCUTC. During the past 10-year period, VCUTC was able to sustain the program with appropriate staffing, adequate funding, and the development of two additional programs, one involving intimate partner violence, and one involving a prevention program for non-admitted at risk youth identified in the ED and Clinics [26]. The following is an analysis of the pitfalls and lessons learned during the development, implementation, and sustainability of the program. It is the hope of the authors to offer the 10-year experience of a sustainable youth violence prevention and intervention program from one level 1 trauma center, as a useful model for other hospitals to emulate and learn from.

Pitfalls in Injury and Violence Prevention Program

During the 10-year period of BTG, significant pitfalls where encountered as noted in Table 4. The Merriam-Webster definition of pitfall is a hidden or not easily recognized danger or difficulty [27]. The following list and review highlights the most impactful difficulties encountered in the development, implementation, and sustainability of an evidence-based, collaborative, multidisciplinary, hospital community-based youth violence intervention program at VCUTC.

Pitfall #1: Self Identity—the Failure to Recognize the Comprehensive Role of the Trauma Center

Walt Kelly's phrase "we met the enemy and he is us" applies distinctly to the development and sustainability for hospital-based violence prevention programs (HBVPP) [28]. An inherent internal pitfall is the self-image of the Trauma center. When it comes to the care of the injured, the hospital or trauma center is seen as the last stop, in the post injury phase. The clinical care of, not the prevention of, injuries is regarded as the main function of the trauma center. The American College of Surgeons, Committee on Trauma Verification Review Committee – 2006 Optimal Resource Guide stressed the requirement for alcohol screening and the presence of prevention activities focused on priorities based on local data [29]. However, it did not clearly delineate the type of prevention activities needed, especially for an urban Trauma center, where youth violence is a public health crisis.

What was critically needed was a paradigm shift in the role of the trauma center in the community. This became a large challenge for VCUTC's Injury and Violence Prevention Programs (IVPP) to educate and inform the Department of Surgery, The Trauma Center Administration, the Hospital Administration and Boards of Directors, as well as the associated School of Medicine, of the role the Trauma Center can and must play in the community. As noted by Dr. Schwab and colleagues from the University of Pennsylvania, Trauma Centers must take an active leading role in injury and violence prevention activities, inform and collaborate with their communities, and monitor the effect of prevention and intervention programs [30]. The resources offered by the trauma center in terms of leadership, provider-patient relationships, windows of opportunity for intervention when patients can be reached at a susceptible (vulnerable) moment while in the hospital, data registry and management, research and expertise in epidemiology, demographics, and public health among others, can be a significant help to community leaders with their own resources in terms of law enforcement, government agencies, youth services, local businesses, and funding agencies.

Prior to engaging in any community outreach, it was important to be aware that the hospital itself is a community in need of awareness, role definition, and identity, where education and training should be first initiated. The solution at VCUTC was the transformation to an "Injury Responsive Hospital" with a comprehensive approach centering on education and training at all levels in the health system including leadership, administration, staff, and faculty. Additionally, a formal violence consultation process was initiated for any admitted patient involved in an intentional injury, akin to any disease presentation in need of a dedicated specialty consult. In this case, dedicated culturally diverse violence prevention coordinators from the IVPP team served as the consultants.

Table 2 Hospital community-based violence prevention and intervention programs

Project	Citation	Characteristics:
Bridging the Gap (BTG) (Richmond, Virginia)	Aboutanos et al. (2011) [14]	Description**:** in-hospital brief violence intervention (BVI) with community case management and wraparound services with referrals for employment, vocational training, mental health, substance abuse, and housing. Target: youth age 10–24 hospitalized with violent injuries. Design: prospective randomized clinical trial. Outcome: improve hospital and community service utilization, reduction in risk factors (alcohol and substance use), and injury recidivism.
Caught in the Crossfire (Oakland, California)	Becker et al. (2004) [16] Shibru et al. (2007) [7] Chong et al. (2015) [17•]	Description**:** hospital-based peer intervention program with engagement of community resources, home visits, and housing. Target: youth age 12–20 hospitalized with violent injuries. Design: retrospective case–control study (2004) followed by a retrospective cohort study (2007). Outcome: reduce at-risk youth involvement in the criminal justice system; noted cost effectiveness and decreasing recidivism from 4 to 2.5%.
Youth Violence Prevention program (Baltimore, Maryland)	Cheng et al. (2008) [23]	Description: community mentor-implemented, violence prevention intervention with 6-session skill building, 3 home visits with a health educator, and facilitated service use and parental mentoring. Target: youth age 10–15 who presented to ED with peer assault injuries. Design: randomized clinical trial. Outcome: reduced misdemeanor activity and youth-reported aggression and increased youth self-efficacy.
Violence Intervention Program (VIP) (Baltimore, Maryland)	Cooper et al. (2006) [18]	Description: in patient case management with intensive psychosocial follow-up services, family or group therapy, and assistance with substance abuse treatment. Target: repeat victims of violence on parole/probation. Design: prospective randomized control clinical trial. Outcome: reduction in quantity and severity of criminal activity.
Prescription for Hope (Indianapolis, Indiana)	Gomez (2012) [19]	Description: in patient case management with individualized tailored plan and links to community social services with reduction in recidivism. Target: patient admitted with a violent injuries to a level 1 trauma center. Design: prospective observational study. Outcome: reduction in violent injury recidivism rate from 8.7 to 2.9%.
Project UJIMA (Milwaukee Wisconsin)	Marcelle (2001) [25]	Description: based on a community-based home visitation model offering12 months of case management services for patient and family with links to community social services. Target: patients aged 10–18, presenting at an urban pediatric Emergency Department as a result of interpersonal violent injury. Design: retrospective observational study. Outcome: increase community referrals for victims of violence.
Wrap Around Project (San Francisco, California)	Smith et al. (2013) [21] Juillard (2015) [20]	Description: in-hospital screening and enrollment of high-risk violent patients with linkage to case management services and wrap around community resources. Target: admitted patient age 10–30 at high risk or re-injury. Design: retrospective observational study. Outcome: reduction in violent re-injury and noted cost effectiveness.
SafERteens (Flint, Michigan)	Waltons et al. (2010) [24]	Description: ED brief intervention (motivational interviewing with skills training) addressing violence and alcohol use. Target: ED patient aged 14–18 with reported Hx of aggression and alcohol use in the past year.

Table 2 (continued)

Project	Citation	Characteristics:
		Design: randomized clinical trial Outcome: Decrease in the prevalence of self-reported aggression and alcohol consequences.
Within our Reach program (Chicago, IL)	Zun et al. (2006) [22]	Description: assessment and 6-month case management with referrals to social and community services. Target: ED patients aged 10 to 24 years who were victims of interpersonal violence. Design: randomized clinical trial. Outcome: reduction in self-reported re-injury rates.

Pitfall #2: Lack of Education and Understanding of Internal Constituents and Processes

In the initial development of VCUTC injury and violence prevention programs (IVPP), there were significant challenges to engage the hospital staff and faculty in injury prevention efforts. Most providers operated in a strict clinical mode with a "treat and street attitude" and were not cognizant of the 15 to 20% re-injury rate for our patients. Our providers lacked basic knowledge regarding injury and violence prevention and the type of hospital or community resources available. The few, who were working on prevention initiatives, were isolated in their own departments, operated in silos, with minimal interdisciplinary work, and no evaluation process. Therefore, there was no evidence of efficacy and impact. Perhaps, the most damaging pitfall was the general perception among administrators and clinicians alike that injury prevention efforts require a huge time investment which no one can afford. In an internal QI survey among 70 trauma care providers, more than 80% saw their role to extend beyond compassionate care and be involved in injury prevention. However, less than 30% actually participated in any type of injury prevention efforts. Most of our nurses wanted to be involved but few had the awareness, the knowledge base, or resources to get involved. This was not unique to VCUTC. A study was carried out in Ontario Canada by Wildings et al. to determine current injury prevention practices of registered nurses working in an emergency department in a level 1 trauma center and to identify perceived obstacles for incorporating IP education into clinical practice. Wildings et al. showed that the majority of nurses do not have the resources for injury prevention or the knowledge to refer to other resources in the community. Time, education, and resources were recognized obstacles to implementation of injury prevention efforts in the ED [31] similarly, in a large national survey of 268 trauma centers, lack of time (68%), dedicated funding (68%), and an injury prevention specialist (45%) were the most frequently cited barriers to conducting injury prevention activities [32].

Table 3 Summary of initial analysis of Bridging the Gap (BTG) 2007–2010 [14]

Characteristics	Number (%)
Total patients	75
Male	70 (93%)
Black	65 (87%)
Age (ave)	19.5
Penetrating	74 (99%)
- GSW	64 (85%)
Injury-related clinic visit follow-up (baseline 75)[a]	69 (92%)
Appropriate ED visits/patient rate (baseline 0.3)[a]	0.7
Community services utilization rate (baseline 0.43)[a]	2.69
Re-injury	5.9%
Mortality	0%

[a] Baseline is based on EMR data for same period for non BTG patients involved in violent injuries

What IVPP noted was its need to develop plans to educate internal constituents in order to find ways to address traditional research, academic, or health system policies. Examples include dealing with IRB requirements for projects that are not research focused, but require IRB approval or addressing HIPPA issues such as accessing patient information for tracking purposes when the patient is no longer being followed by the clinical team. Processes of identification and engagement of participants were another basic but none the less challenging processes when it came to (a) initial encounter of the participant with the health system, (b) the method of screening (who and how), (c) the initiation of the violence consult by the rotating surgical house staff on the trauma service, (d) the development of automated flagging of at-risk patients in the EMR system to eliminate variability in patient identification and selection, (e) the development of a violence consult as integral part of trauma care at VCU Level 1 trauma center, (f) the logistics of the initial approach to the patient, (g) the recognition of the susceptible (vulnerable) moment for patient engagement, (h) the development of trust between the patient and IVPP team, (i) the administration of BTG's six step brief violence intervention (BVI), and finally, (j) the development of a follow-up plan upon discharge [14, 33].

Table 4 Pitfalls in injury and violence prevention program

Pitfall #1	Self identity—the failure to recognize the comprehensive role of the Trauma Center
Pitfall #2	Lack of education and understanding of internal constituents and processes
Pitfall #3	Working with the wrong team
Pitfall #4	Conflicting agendas
Pitfall #5	Community mistrust/ethical standards
Pitfall #6	Funding challenges
Pitfall #7	The wrong partners/lack of champion
Pitfall #8	Rigidity vs. flexibility and relevance
Pitfall #9	Standard of care vs. evidence based
Pitfall #10	Data silo vs. data sharing

The successful implementation of such processes is not possible for any violence coordinator or project evaluator not familiar with the health system in general and with trauma care in particular. Inversely, the administration of the BVI or intakes for social determinants of violence and its risk factors are not facile for the average provider engaged in clinical management of the patient. The development of a well delineated process with clear role definition and integration was needed for successful implementation of BTG.

Pitfall #3: Working with the Wrong Team

Given that the majority of youth involved in violence either as victims or perpetrators in Richmond were young black males, there was an initial bias as to what constitutes an effective program coordinator and team members with whom our target patients will identify. For IVPP, an initial determination to hire a culturally diverse team was essential, as noted by multiple studies [21, 34, 35]. However, in the initial development stage of BTG, a culturally competent team, rather than a culturally diverse team, proved more effective and successful in participant recruitment and retention. Significant valuable time was lost at the beginning of the program, in working with coordinators who either had cultural competency but lacked the appropriate social management skills, or vice versa. The recruitment of a coordinator with enhanced sensitivity and capacity to treat other cultures, and the ability to develop empathy and trust with the participants, was the turning point for our program. As the program grew, with successful implementation and well delineated and existing processes, cultural and gender diversity and representation in the team itself became essential and was the next stage in the ability for BTG to reach all of its diverse participants [14, 34].

Another important pitfall in team composition that is unique to the hospital setting is the use of a dedicated IVPP staff vs. a shared hospital staff such as a nurse, a nurse practitioner, or a unit social worker. Starting with a shared model, IVPP was hindered by inadvertent or unexpected competing needs between the clinical hospital needs such as staff shortage and the programmatic administrative and operational needs of IVPP. Additionally, a shared model led to significant constraints on time and availability of the IVPP staff, which was at the mercy of a clinical supervisor, whose vision, agenda, responsibilities and reporting structures were not always aligned with IVPP. During the initial development of IVPP at VCU Trauma center, a shared staff model was a necessary constraint. As more funding was secured, a gradual migration toward a dedicated staffing proved to be the turning point for the growth and sustainability of BTG and other IVPP programs.

Another pitfall to avoid in team selection depends on the stage of development of the program. In its initial phase, BTG was a research study comparing one simple in-hospital intervention (BVI) with a more comprehensive intervention with case management and community follow-up. The study meant that a dedicated coordinator needed to limit its services and engagement with a participant based on which intervention the participant has blindly chosen. This proved quite difficult for social workers especially if a participant with high risk factors for recidivism chose BVI only without case management and community wraparound services. The inability to follow patients and offer needed case management can have its own moral distress and ethical dilemmas for the team members. This became significantly easier when the IRB study phase terminated and the program moved to a standard of care phase to all participants. A team member with good intention, who is not in agreement with the research aspects and requirements of a study, will have a challenging time operationalizing the program. This pitfall can be sometimes averted with a transparent and a careful selection process during the initial job interviews. Otherwise, for BTG, regular debriefing became essential for the various coordinators when dealing with such complex and important issues.

Pitfall #4: Conflicting Agendas

It is important to understand the agendas of the various project partners and collaborators. It is to be expected that initially many partners have a different agenda in their approach to youth violence. These agendas become apparent when dealing

with data sharing, outcome recognition, ownership, and most importantly funding. Our experiences relate to competing agendas within our own institution as well as interactions with government agencies (state and local), political parties, criminal justice system, and law enforcement.

Interactions with politicians (elected officials and those running for office) can be a particularly important pitfall for youth violence prevention. Alignment with one particular party or elected official, especially during an election campaign effort, will put into question the purpose of the program, and threatens its sustainability and source of funding, especially if that official's term ends or the opponent wins the election. For BTG, this was highly tempting, when one political official, offered significant funds to sustain the program, in return for media endorsement, alignment with the political campaign message, and the use of the youth violence agenda in a partisan way. A significant pitfall was also avoided, when the program, which is part of a health system structure, chose not to align itself with a political view or stance, inconsistent with the University or hospital standards. This would have qualified as program suicide.

Partnerships with the Criminal Justice System and Law Enforcement are essential for all violence prevention programs. However, the most important aspect of all hospital community-based programs is the relationship of the health system with the participant as a patient, the development of a trust relationship, and the ability of the team members to identify risk factors that can be mitigated to prevent recidivism and promote positive youth development. This significantly rests on the ability of the program staff and faculty to obtain valuable information from the participants at susceptible moments in their life, while injured and receiving care in the hospital. This information can have a different value and importance to law enforcement or the criminal justice system that are operating on a different agenda than the health system. Without a common agenda or platform, that is transparent to all partners involved and especially to the participants, a risk of violating that trust relationship between the health system and the participant/patient can be significant if not detrimental. This usually leads to the inability to share data, compete jointly for large funding, and most importantly impact the community positively, which is the ultimate objectives of all the various stakeholders [36••].

Pitfall #5: Community Mistrust/Ethical Standards

A community-based initiative proved to be an initial significant challenge to IVPP especially with the introduction of research and the need to have an evidence-based violence prevention project. The decision to go with a prospective randomized case–control study posed even a greater challenge. It became apparent early on that to achieve any success, it was critical to identify partners that help address trust issues within the communities we aimed to serve. There is often an ethical conflict in communities that have participated in programs and research studies, but received little, if any, long-term benefit [37]. This was not different in Richmond City communities, especially in the EAST end of Richmond where the majority of the patients admitted with intentional violence lived. The only way moving forward was to identify partners that can overcome mistrust of the health system or university. Without a sustained outreach with community partners to ensure that relationships are established and maintained, community mistrust could not be overcome. This was an important pitfall and challenge that we learned to navigate.

Moreover, the concern over hospital community engagement and relations placed additional constraints on IVPP and significantly altered the research design of BTG. A true case–control study was not approved by our IRB, without offering the control group an intervention as well. This was based on the premise of equity and ethical practice and the image of the hospital in the community. In this case, BTG became an evidence-based project with a study design comparing an in-hospital brief violence intervention (BVI) alone to a combination of an in-hospital BVI with community wraparound case management interventions. There was no group without an intervention, and therefore, no opportunity for a case–control study. The recidivism rate was therefore inferred through historical comparison using the Trauma registry at VCUTC. This pitfall was not anticipated since there is no ample evidence to show that brief violence interventions are clearly better than nothing. In retrospect, a better informed IRB would have agreed with the original design of the study. This would have resulted in stronger impact and more meaningful outcomes.

Pitfall #6: Funding Challenges

Funding challenges are an expected pitfall and differ depending on the source of funding. For BTG, initial solicitation of funds from the health system was instrumental prior to solicitation of funds from outside community agencies. The fact that the VCU health system funded ½ FTE to initiate BTG in 2007, without any proof of return on investment, was highly regarded by local foundations, who were impressed by a demonstrable health system's investment in a hospital community-based project. This in fact helped secure two significant grants in youth violence and helped move the project forward.

Another important pitfall is to avoid competition with local partners. This occurs when the project moves away from its identity as a hospital–community based project and acts solely as a community project. With BTG, we became quickly aware of many other youth violence prevention and intervention initiatives in the community. Most were not evidence-based and lacked a demonstrable rigorous evaluation process. However, the majority was deeply entrenched in community

affairs and social infrastructure. It was important therefore to bring all the resources and benefits of a hospital/university based project to the table in a collaborative process and thus be seen as a valuable partner and an asset, in lieu of being seen as another competitor [30].

It is important to gain an understanding of the funders' perspective to ensure programs are designed and implemented in a way that provides the information and outcomes they are seeking. This is important both for the philanthropic community who may be interested in information such as the impact on the community served, as well as the hospitals/health systems who provide financial support and are interested in the impact on the organization and a justification of the "return on investment."

The lack of engagement with internal partners (hospital and university) as well as community partners along with a lack of knowledge of the role and efforts of the trauma center in the community, beyond its clinical mission, is another major pitfall with significant financial impact. For example, in 2005, The Centers for Disease Control and Prevention (CDC) established and funded ten National Academic Centers of Excellence (ACE) on Youth Violence Prevention, to serve as national models for the prevention of youth violence. The purpose of the Centers is to help communities prevent youth interpersonal violence. VCU's Clark-Hill Institute for Positive Youth Development was one of the centers. However, it had no connection or awareness of the Trauma center's IVPP program [2, 3, 38]. Similarly, in 2003, The U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention (OJJDP) implemented a 5-year gang reduction initiative (GRIP) in four cities: Los Angeles, Milwaukee, North Miami Beach, and Richmond Virginia [39]. OJJDP provided each site with $2.5 million. In Richmond, 50 community programs where invited to participate. The Trauma center was not invited. Clearly, in both of these opportunities, we were failing to be seen as a vital part of the community in the injury prevention effort! Something had to change. Only after, IVPP changed the paradigm or the role of the center in prevention efforts, did IVPP become an integral collaborator and recipient of funding in the GRIP mission, and a partner and collaborator with the Clark-Hill institute [2, 3, 38, 39].

Pitfall #7: the Wrong Partners/Lack of Champion

One major pitfall is the lack of institutional support. One can have a false assumption that most individuals in the hospital or administration are up to date on youth violence prevalence and impact on the health system and the community and thus share the passion and the vision for the development of a hospital community-based violence prevention program. It is another pitfall to presume that one is alone in informing, the Chair of the Department of Surgery, the CEO of the Health System, or any other decision maker in administration that this issue should be on the priority list for the department and the health system. It is important to do significant homework within the institution and to identify the right hospital/health system partners to get buy-in and support in order to be successful. This includes identifying champions who will promote the merits of the program to their colleagues and organizational leadership, presenting to internal groups who can support the program's mission once they have an understanding of the impact on their departments or clinical units and patients they serve and presenting to the leadership (board, administrators, etc.) who has an interest in the impact on the community the institution serves. For BTG, when first initiated, it took collaborative efforts of the Departments of Surgery, Psychology, and Pediatric Emergency Department to prompt the CEO of the Hospital to approve a ½ FTE position for IVPP to develop and implement BTG. The next challenge was sustainability, and the need to have a champion in a leadership and decision-making position to ensure the sustainability of the program. Unlike clinical outcomes, public health outcomes and evaluation, including behavioral studies, require time. The lack of initial results within the first year of BTG was initially regarded as a failure of the program and required significant administrative push from the Chair of the Trauma Center to sustain the position for another year. Since then, with persistent internal partnership development, better data evaluation, the role of IVPP is recognized in the Trauma center and has now grown significantly in the institution to the point that the CEO of the Health system, personally donates to the program, and has assigned significant infrastructure to ensure program growth and sustainability.

Pitfall #8: Rigidity vs. Flexibility and Relevance

One significant pitfall is the lack of flexibility to respond to the needs of the institution. Consistent with the message of securing institutional support, it is vital to reciprocate the support to the institution as the needs arise. This can only occur through the creation of a flexible program that can be adaptable and relevant as needed. For IVPP, the main focus was on the development of BTG for youth violence intervention and prevention. However, when the need for the hospital and the entire Health System and University to respond to the ongoing crisis of intimate partner violence became apparent, IVPP needed to expand quickly and grow its portfolio to include intimate partner violence prevention. Similarly, when the Health System community engagement efforts focused on the prevention aspects of youth violence, IVPP also expanded to include a prevention arm to the BTG program focusing on patients at risk of violence with screening and referrals. This in fact kept the program relevant with the mission of the institution and the social climate changes in the community. Therefore, a hospital-based violence prevention program needs to remain relevant and flexible to support the needs of

the population served by the sponsoring institution (in our case—the health system).

Another significant pitfall is the lack of flexibility to the needs of the community partners involved. Expecting and adapting to change in community partners is essential. It is important to remain vital and relevant to the changing missions of some of the community partners which can occur based on change in leadership or financial status. Only by developing an open ongoing relationship with the community partners can one anticipate and thus mitigate the ongoing changes that each institution undergoes and be supportive in the process.

Pitfall #9: Standard of Care vs. Evidence Based

The development of a program without a sound evaluation and ability to study its outcomes is a major pitfall. As mentioned in the discussion on pitfall number 7, the lack of initial results within the first year of BTG, nearly resulted in the termination of our program. Sustainability therefore depended on the ability to deliver the desired outcome in a consistent manner to the supporters and funders of the program and to essentially compete for their interest and support with solid data.

With the shrinking ability of academic centers and hospitals to meet the bottom line, the willingness of the hospitals to support a non-externally funded program, or to match external funding, is now very limited. It is important to ensure that the prevention programs are indeed evidence based with the evidence clearly showing the positive impact on the patients, but also on hospital resources utilization. For BTG, we purposely studied and showed an increase in post discharge clinic visitation from 76 to 92%, while showing decreases in inappropriate emergency room visit from 83 to 48% for the high risk patients [14]. Inappropriate ED visits included non-urgent medical cases, medication refills, routine wound checks, drug-seeking behaviors, social issues, and suture removals.

Another potential pitfall is to push early to make the program a standard of care in the hospital. From our experience, this should be the 5- or 10-year plan. Standard of care may be important especially if it is coupled with a sustainability plan and hospital support. However, it may limit significantly the ability to study the program adequately and show its effect. For BTG, the program started as a pilot study in 2007, with a prospective randomized study, and gradually moved to become an evidence-based program before becoming the standard of care in 2014 for the injured patients admitted to VCU trauma center. This allowed us to compare the outcomes of BTG participants with the other patients who were not enrolled in BTG and simply received basic social services as part of the hospital admission and discharge, which was the standard of care. So our recommendation: Do not be in a hurry to make your program the standard of care. Make it evidence based first!

Pitfall #10: Data Silo vs. Data Sharing

The last pitfall, but in no means the least in importance, relates to data ownership and management. Data silos are undoubtedly the biggest detriment to program growth and the least patient centered approach. The silos are within the institution as they are within community partners. At the institution level, data silos can be vertical or horizontal. Within IVPP, the lack of centralized data, without shared access for all program coordinators, allowed for patients to be present in two IVPP programs simultaneously, one dealing with youth violence, the other dealing with alcohol abuse, without the ability to connect and share vital information, and with a missed opportunity for synergistic effort to benefit the patient. Similarly establishing an IVPP violence data base dealing with the social determinants and risk factors of violence without direct linkage to the clinical elements of the Trauma Center Data Registry resulted in multiple missed opportunities such as the ability to match the severity of injury with the susceptibly of the patient to enroll in BTG.

For BTG, the need to share data between three entities: the IVPP case management database, the Trauma Center clinical Trauma Registry, and the Emergency department database, resulted in the realization that greater than 40% of patients in the BTG database, have already been in the ED database, for minor injuries or health problems. There was an obvious missed opportunity to evaluate if certain risk factors could have been identified prior to the violent injury that resulted in trauma admission. More alarming, of those BTG patients with gang involvement, 82% were already in the ED database prior to their admission. The Databases and those in charge of their management have not been communicating even within the same institution.

This ability to break the horizontal data silos across departments and share data resulted in the need for the VCUTC to address the prevention aspect of violence and the creation of the Emerging Leaders program, an IVPP program poised to address youth at risk of violence, and offer alternate positive pathways to deter the risk of injury and admission to the Trauma center.

At the community level, the data silos are far more pronounced, with the inability of the various partners to share important and detailed data about their program participants, especially juvenile participants, who are the main targets of youth violence prevention programs. As noted above, this is an important opportunity for the Trauma center to offer leadership in finding feasible solutions with significant longstanding and far-reaching impact, without violating the various sensitive information laws that apply to law enforcement, judicial, or health such as the Health Insurance

Portability and Accountability Act (HIPAA) and the standards for the electronic exchange, privacy, and security of information. One possible aspect, as the various agencies are dealing with the bureaucracies and restrictions imposed at the top level, is to employ a bottom up approach and seek a shared assent and consent from the participants enrolled in a network of partners involved in youth violence prevention. This implies the need for partners to agree to be in the network where data is shared. This is easier said than done, especially when data are perceived as representing an advantage for the institutions who generate them and use them for competitive funding [40]. Again, the potential solution would be not only shared data, but shared funding as well. The guide for this collaborative model is a youth centered approach in all aspects of the model.

Conclusions

Hospital community-based injury and violence prevention programs can be effective in reducing the various risks of re-injury [41]. However, there are significant pitfalls to avoid both internal within the institution as well as external with the community partners. BTG, among other hospital community-based injury and violence prevention programs, has shown that community partnerships are essential for effective violence prevention programs [7, 14, 16, 17•, 18–25, 41]. These partnerships are often challenging given each organization's individual and sometimes competing agendas and may lead to poorly executed programing.

In this review, the pitfalls noted are by no means comprehensive, and more importantly are limited to the experience of one Trauma Center. Specifically it deals with VCUTC's injury and violence prevention programs (IVPP) in its efforts to implement and sustain its youth violence prevention program Bridging the GAP. It described how the creation of supportive partnerships influence program development and outcomes. This review uses Bridging the GAP as a case study with subsequent analyses to identify common pitfalls and methods to avoid them. Furthermore, it showed the importance of obtaining multi-level institutional support at administrative and clinical levels to fund, pilot, and incorporate the program as a best practice model. The authors recognize that many of the pitfalls are local and relate to the situation of VCU and the Richmond community. Nonetheless, there are some common and universal pitfalls and lessons that could be applicable to any prevention or intervention program whether it targets violent or nonviolent injuries or both. Table 3 depicts few of the evaluated hospital community-based injury and violence prevention initiatives and programs with a summary of their characteristics, evaluation designs, and outcomes. Each of these programs has a wealth of experience to share as it relates to pitfalls and lessons learned. To achieve a more comprehensive approach a collective multi-institutional study would be needed, via already established networks such the National Network of Hospital-based Violence Intervention Programs (NNHVIP) or the various trauma and injury societies such as the American College of Surgeons Committee on Trauma (ACS COT) - Injury Prevention & Control subcommittee, the American Association for the Surgery of Trauma (AAST), the Eastern Association for the Surgery of Trauma, The American Trauma Society-Trauma Prevention Coalition, and others [42].

Compliance with Ethical Standards

Conflict of Interest The authors declare no conflicts of interest relevant to this manuscript.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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