Hospital-based violence intervention: Risk reduction resources that are essential for success

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INTRODUCTION: Hospital-based violence intervention programs (VIPs) aim to reduce violent injury and recidivism. The aim of this study was to determine the most significant risk reduction variables associated with success in our VIP. We hypothesized that our recidivism rate declined since VIP's inception and that we could identify risk reduction variables that were independent determinants of program success.

METHODS: We analyzed our prospectively collected data for 2005–2011 from our VIP database. Success was defined as more than 50% needs met without recidivism or attrition. Impact and outcome evaluation was performed per a model promoted by the Centers for Disease Control. Rates of risk reduction and injury recidivism were calculated. Case management time spent per client (dose) was defined as low (0–1 hours per week), medium (1–3 hours per week), moderate (3–6 hours per week), and high (>6 hours per week). Correlation coefficients and logistic regression were used to examine associations between variables and success in the VIP.

RESULTS: Two hundred fifty-four clients received services. Meeting needs in mental health (odds ratio, 5.97; 95% confidence interval, 2.72–13.07) and employment (odds ratio, 4.41:95% confidence interval, 1.56–12.46) proved significantly associated with success ($p < 0.005$). The 6-year program recidivism rate was 4% versus historical control of 16% ($p < 0.05$). Moderate and high exposure to intensive case management in the first 3 months was also significantly associated with success ($p < 0.05$). Success in our VIP was not associated with age, gender, education level, previous incarceration, probation status, or length of time in program.

DISCUSSION: For 6 years, our recidivism rate has decreased fourfold compared with the rate before VIP inception. For startup and maintenance of a VIP, it is essential to know where to focus collaborative efforts in communities to target the most critical risk reduction resources. This study provides guidance—securing mental health care and employment for our clients appears to be predictive of success. The value of early "high-dose" intensive case management is also essential for reducing recidivism. (*J Trauma Acute Care Surg*. 2013;74: 976–982. Copyright © 2013 by Lippincott Williams & Wilkins)

LEVEL OF EVIDENCE: Care management study, level III.

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Despite a downward trend in national violent crime during recent years, homicide remains one of the leading causes of death among youth and young adults ages 15 to 34 years.[1] Recurrent violence-related trauma accounts for up to 45% of all hospital trauma admissions.[2–7] This health crisis has inspired the development of a national network of hospital-based violence intervention programs (NNHVIPs) in several major cities throughout the United States. In response to the epidemic of violent injury, we developed a violence intervention program (VIP), "the Wraparound Project" (WAP), for the patient population at San Francisco General Hospital, San Francisco's only Level I trauma center.

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The foundation of our VIP is built on identifying high-risk youth and young adults injured by violent acts and providing them with intensive, individualized case management services. These clients are shepherded through community-based organizations to attain risk reduction resources. We have established that the trauma center is a unique setting in which we can take advantage of the "teachable moment" and implement prevention strategies immediately after the time of injury, starting with bedside introduction to the violence prevention case manager.[2,6,8]

Preventing injury, premature death, and disability in this population has tremendous economic and social benefits.[9] In previous studies by our group, it was determined that our VIP is cost-effective. We estimated in the year 2009 that the hospital cost of treating a reinjured patient is roughly $49,000. With a budget of $138,000 during the same year, prevention of repeat violent injuries in 3.5 individuals per year made our violence prevention program costs neutral. Hence, implementation of our violence prevention program can save more than half a million dollars per year by reducing recurrent injury and rehospitalization rates in additional clients (unpublished data, under review) despite increased costs associated with maintenance of our program.

The NNHVIP provides an illustration of the successes of these programs. However, to date, there have not been any studies that clearly identify which components of the program are necessary for success.

In this current study, we evaluate the long-term effectiveness of our program and show that risk reduction resources are essential for success. We aim to examine the overall effectiveness of our established violence prevention program by examining the process, the effect, and the outcome of prevention strategies. We hypothesize that the overall hospital recidivism rate would decline since our program's inception and that we could identify risk reduction variables that are independent determinants of program success for an individual.

METHODS

Study Subjects and Procedure

In this retrospective cohort study, we defined violent trauma as intentional injury resulting from gunshot, stabbing, or assault. Associated *International Classification of Diseases, Ninth Revision* codes were used to identify victims and demographic information from the San Francisco Trauma Registry between January 2005 and December 2011. Data gathered by case managers in the program regarding potential, current, and former clients are stored in a unique database called Quesgen. Quesgen is manufactured and maintained in Menlo Park.

Process and Outcome Evaluation

For our analysis, we looked at three primary criteria adapted from the Centers for Disease Control (CDC) blueprint for program evaluation: process, impact, and outcome. The purpose of process evaluation is to learn whether the program is serving the target population as planned and whether the number of people being served is more or less than expected. We analyzed screening, recruitment, and enrollment to elucidate successes and barriers in our program process. The purpose of outcome evaluation is to learn how well the program succeeded in achieving its ultimate goal of violence prevention. Hence, the primary outcome measured was rate of injury recidivism in our client population. In addition, the percentage of met needs and predictors of success in the program were analyzed to assess the program's impact.

Screening

Inclusion criteria for our VIP consist of victims aged 10 to 30 years at high risk for reinjury. This age limit has been broadened since the inception of the program as we have seen and increasing number of violent injuries in younger victims during recent years. Trained case managers performed risk assessments to distinguish high- versus low-risk individuals, oftentimes by identifying physical signs (i.e., elusive tattoos), social cues (i.e., multiple gang member visitors), or emotional volatility (i.e., anger and/or discussion of retaliation) that may perpetuate the cycle of violence. Low-risk victims were offered standard risk reduction resources; high-risk victims were offered participation in the WAP (see Fig. 1). All violent trauma victims were entered into an extensive screening database. Case managers screen patients from this database and approach those who are eligible. Electronic screening data are available for 2010–2011.

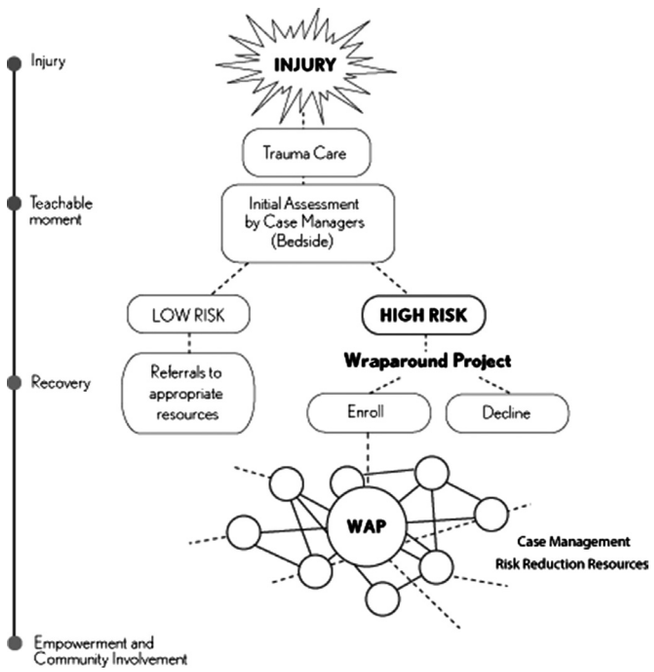

Figure 1. WAP design.

Recruitment and Enrollment

Once a victim of violence was deemed eligible for participation, a case manager introduced the VIP at the bedside during the index hospital admission. A needs assessment was performed on enrolled clients at intake. On the basis of the needs of the clients, case managers then linked clients with resources through community-based organizations and other institutions. Case managers also performed court advocacy and assisted with terms of parole for clients in need among other individualized services they provided. We expected clients to stay in the program for 6 months to 1 year. Those who declined participation were offered standard referrals (Fig. 1).

Data Analysis

Screening, recruiting, and enrollment rates were calculated for program clients. Prospectively collected data on enrolled clients were analyzed using χ^2 test, and Fisher exact test, Mann–Whitney test, Kruskal–Wallis tests, and binary logistic regression models to evaluate predictors of success in the VIP. Analysis was performed for clients between 2005 and 2011. Clients with missing data were excluded from the analysis. In addition, current clients (n = 34) who have not yet completed the program were also excluded. We defined the case manager exposure by the number of hours spent with clients during individual visits, which was recorded by the case managers on a weekly basis. Success was determined by the following criteria: at least 50% of risk-reduction needs met, no attrition from the program and most importantly, and no recidivism from violent injury.

RESULTS

In 2010, 331 victims of violent trauma were admitted to San Francisco General Hospital; and in 2011, 517 victims were

TABLE 1. Demographic Distribution of VIP Clients (2005–2011)

Race/Ethnicity	N	% Total
African American	146	58.8
Hispanic	64	25.8
White	13	5.2
Asian	5	2.0
Native American	1	0.04
Other/multiple	10	4.0
Unknown	7	2.8
Gender		
Male	222	87.4
Female	32	12.6
Education status		
Dropout	62	30.5
GED/high school graduate	97	47.8
Enrolled (high school, trade school, or post high school)	42	20.6
College graduate	2	0.07
Housing status		
Permanent	130	67.7
Temporary	49	25.5
Homeless	7	3.6
Foster care	3	1.6
Other	3	1.6
English fluency	185	72.8
Undocumented	37	14.5

admitted, for a total of 848 persons for a 2-year period. The age of victims ranged from 5 to 88 years with 74% (n = 627) between the ages of 10 and 30.

Three culturally competent and experienced case managers screened individuals who met inclusion criteria by age and mechanism and approached 89% of those who were eligible; there were 72 (11%) missed individuals. One hundred ninety-eight were determined to be high risk and eligible for participation in our VIP. One hundred forty-one (71%) were subsequently enrolled for WAP services. Fifty-seven individuals declined enrollment. Of those missed, 72% were admitted and discharged over a weekend. In addition, trauma registry data confirm that most victims were admitted between midnight and 8:00 AM, also contributing to differences among injuries and recruitment rates ($p = 0.001$).

Among patients screened, 184 (39%) were victims of gunshots, 176 (38%) were victims of stabbing, and 107 (22%) were victims of assault. Among patients missed, 3 (27.2%) were shot, 5 (45.4%) were stabbed, and 2 (18.1%) were assaulted with a blunt object. One missed patient had incomplete records.

Demographics of Enrolled Clients

For 6 years of the VIP, 254 clients have enrolled and received case management services. Nearly 70% of all clients were injured by gun violence, 25.6% by stabbing, and 7% by blunt assault. Of the participants, 59% were African American and 25.8% were Hispanic (Table 1). The mean age of VIP clients is 20.9 years. Client ages range from 12.1 to 30 years. There were 222 male clients (87.4%) and 32 female clients (12.6%). Seven clients (3%) became incarcerated after starting VIP.

Recidivism

Recidivism from violent injury is the critical long-term outcome in our hospital-based violence prevention program. In the 6-year period of our VIP (2005–2011), 23 clients (9%) had been previously admitted to San Francisco General Hospital for violent injury before enrollment. Sixteen clients (6.2%) were reinjured after WAP services, 5 of whom had open cases with WAP case managers at the time of reinjury. These results translate to a current recidivism rate of 4.5%; the historical injury recidivism rate at our institution was 16%.[10]

WAP Program

Needs were identified in 234 cases (92%) during initial assessment (Table 2). While controlling for all other needs being met, we identified mental health resources and employment as risk reduction resources significantly associated with success in the program. If mental health needs were met, a client was six times as likely to be successful in our VIP. If employment needs were met, a client was four times as likely to be successful (Table 3).

Case Manger Exposure

Our data show that a "high dose" of case manager exposure in the first 3 months of the VIP is associated with a higher rates of success. Case manager exposure in all other periods was not associated with success. Cumulative exposure to case managers did not predict success in the program. Those who received a moderate exposure (3–6 hours per week) in the first 3 months are nearly five times as likely to be successful as those who had low exposure (0–1 hours per week) (odds ratio [OR], 4.8; 95% confidence interval, 1.6–14.9; $p = 0.007$). Those with a high exposure (>6 hours per week) were nearly 5.6 times as likely to be successful than those with low exposure (OR, 5.6; 95% confidence interval, 1.6–20; $p = 0.006$). There were no differences in exposure level in the first 3 months of the VIP when stratified by race or gender. However, our data did show that age differed in the exposure level. The mean age in the low exposure group equaled 21.8 years, moderate exposure 21.3 years, and high exposure 18.8 years ($p = 0.039$).

Case Managers

The mean time spent in the program by client per case manager was significantly different, ranging from an average of 13.6 months to

TABLE 2. WAP Needs and Cases, 2005–2011

Need	Met, N (% Total Identified)	Total Identified, N
Education	54 (65)	83
Housing	54 (62)	86
Mental health	86 (80)	111
Family counseling	20 (66)	30
Court advocacy	53 (85)	62
Vocational/professional training	36 (72)	50
Employment	54 (59)	91
Driver's license	19 (46)	41
Substance abuse	2 (40)	5
Other	52 (89)	58

TABLE 3. WAP Needs and Success in the Program, 2005–2011

	Need Met, N (%)		Significance	
	Successful	Not Successful	*p*	OR (95% CI)
Housing	40 (75)	13 (25)	0.772	1.12 (0.49–2.57)
Education	38 (72)	15 (28)	0.288	0.625 (0.263–1.486)
Mental health*	71 (86)	12 (14)	<0.001	5.967 (2.723–13.075)
Family counseling	16 (80)	4 (20)	0.222	2.257 (0.611–8.344)
Court advocacy	38 (76)	12 (24)	0.566	1.286 (0.544–3.042)
Vocational/professional training	35 (70)	15 (30)	0.484	0.692 (0.246–1.941)
Employment*	44 (86)	7 (24)	0.005	4.407 (1.559–12.457)
Driver's license	17 (89)	2 (11)	0.124	3.531 (0.708–17.618)
Substance abuse	1 (50)	1 (50)	0.830	0.699 (0.027–18.265)
Other	34 (66)	17 (34)	0.309	1.481 (0.695–3.156)

OR, odds ratio; CI, confidence interval.
*Significant as a predictor in the WAP program.

7.1 months ($p < 0.0001$). However, there is no difference in success between case managers. Also, case managers showed no differences in the gender distributions of their clients, but they did show significant differences in race of clients with whom they worked.

DISCUSSION

Hospital-based prevention and intervention efforts must prove efficacious, sustainable, cost-effective, and replicable if they are to be widely accepted in our trauma centers. Our hospital-based VIP, the WAP, has proven effective at interrupting the cycle of violence as evident by the decrease in injury recidivism from a rate of 16% to 4.5% in high-risk youth and young adult victims in our institution. Given this nearly fourfold decrease in injury recidivism, we embarked on this study to understand what components of a VIP are critical for this level of success. Defining these components could provide new programs with limited resources the fundamental information necessary to be successful by defining which risk reduction strategies on which to focus. Furthermore, we think that fully grasping these components could aid in the evolution of our program to better serve traumatically injured young adults in our community.

To do so, we looked to the CDC's general guidelines for program evaluation as a blueprint for the structure of this analysis. Program evaluation is subdivided into four key components: formative evaluation, process evaluation, impact evaluation, and outcome evaluation.[11,12] Formative evaluation occurred early in the inception of our program; the focus of this discussion will be the latter three components.

In our assessment of process, we noted that recruitment strategies have significantly improved since the inception of our VIP. Our three case managers were able to approach 94% of eligible victims. Previously, recruitment rates were as low as 59%.[2] Personnel additions are largely responsible for this improvement, as at the outset, there were fewer case managers. The number of case managers should be appropriate for the volume of violent trauma experienced at individual institutions.

We were able to secure an additional case manager after lobbying and successfully receiving additional financial support for the program. A diverse array of funding resources has supported our VIP during its 6 years of existence. Initially, a grant from the American Association of Surgery for Trauma awarded to the director of the program was used to partially fund a case manager. Other funding sources were sought and included a large grant from the CDC. Current support from the Department of Children, Youth and Their Families and the San Francisco Mayor's Office maintains the program. The operational budget is roughly $320,000 and includes salaries/benefits for three case managers.

Subgroup analysis proved that there was no difference in the gender distributions of clients by case managers. However, a significant difference in racial/ethnic distribution of clients does exist. This discrepancy likely reflects the client's willingness to trust and connect with certain case managers based on shared cultural experiences; culturally competent case managers and the trust they are capable of establishing are therefore a crucial link in the chain of injury prevention.

Success in our VIP is primarily determined by case managers meeting 50% of the needs of the client based on the needs identified during an initial assessment. A successful client helps to interrupt the cycle of violence in San Francisco communities by reducing risk for violent injury to themselves and to others. Successful clients also avoid possible future incarceration, become part of the workforce, and further their education, all of which contribute to neighborhood and community stability and the building of social capital.[6,9] Our VIP relies heavily on partnerships with local community-based organizations. Our case managers shepherd high-risk victims of youth through community-based organizations so they can gain access to resources such as mental health services, tattoo removal, GED programs, employment, and housing.[2]

Each client has different needs as determined by an initial, objective, and detailed assessment performed at intake. After adjusting for other factors, attaining mental health resources and employment opportunities for clients proved predictive of success (OR, 6 and 4, respectively). These results suggest that mental health and employment referral/placement resources have a tremendous impact on community violence and are a necessity for a violence prevention program working with

clients who have been hospitalized after violent injury.[13,14] In other words, for a fledgling hospital-based VIP, it is important to develop ties to employment resources and mental health resources in the community. We individually shepherd our clients to these resources as we have found that simply making a referral is not enough to ensure that there will be follow through. Connecting clients to resources strengthens trust between client and case manager, maintains our connection with our community partners, and reduces the risk of clients "falling through the cracks."[15]

Our data show that high dose of case manager exposure (>6 hours per week) in the first 3 months after enrollment is significantly associated with a higher proportion of successful clients, whereas case manager exposure in other periods was not. Although some clients require longevity and persistent interaction with case managers, it is exposure to intense case management in the first 3 months that are the most critical to success. Understanding the intensity of the first 3 months allows a violence prevention program a practical understanding of how it should be staffed and general case load expectations per case manager. This information can be used when creating a business plan and budget justifications for personnel.

Penetrating injuries account for 17% to 20% of traumatic injuries at San Francisco General Hospital. Stab wounds comprise 45% and gunshot wounds 55% of violent penetrating trauma. High-risk individuals are recruited for our program. Not surprisingly, penetrating trauma, specifically gunshot victims and those persons with high injury severity, are among the highest risk and consequently make up most of our clients. Still, other Level I trauma centers could benefit from such a program at their institution, regardless of the demographic makeup of their trauma patients. Our program works because we seek to aid youth and young adults at the highest risk for reinjury and link them with resources available through community partners via culturally competent case managers. Although adaptation to suit the needs of the particular community would be necessary and a great priority, we think program exportation to Level I trauma centers in urban areas with high volumes of violent trauma is possible.

Limitations

The biggest limitations of this study are the small sample sizes, missing data, and single-institutional data. To validate our findings, a multi-institutional study with our partners in the NNHVIP is necessary, appropriate, and currently underway.

There does not currently exist a universally agreed on definition of programmatic success. Our definition is based only on those of us doing the work of violence prevention. A set standard of programmatic expectations would aid in exportation and evaluation of the host of programs that currently exist and are developing.

CONCLUSION

In conclusion, for 6 years, the injury recidivism rate at our institution has decreased fourfold compared with the rate before inception of the VIP. For startup and maintenance of a VIP, it is essential to know where to focus collaborative efforts in communities to target the most critical risk reduction resources. This study provides guidance: providing mental health care and employment opportunities for our clients appear to be predictive of success. The value of early "high-dose" intensive case management is also essential for reducing recidivism.

AUTHORSHIP

RD and RS designed, conducted, analyzed, and wrote this research. AE and KB assisted in data collection. SD contributed to the analysis.

DISCLOSURE

The authors declare no conflicts of interest.

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DISCUSSION

Dr. Edward E. Cornwell (Washington, D.C.): I begin by offering the authors and their institution my utmost admiration for their long-term commitment to address the challenge associated with the pursuit and presentation of a violence intervention program.

Few subjects offer more hazards to achieving a sociable discourse and funding priorities in our body politic than youth violence with its attendant considerations of health care funding,

criminal justice, poverty, absent fathers, cultural glamorization of violence, race, and access to guns.

These challenges are heightened by the prospect of defining, quote, success in a program designed to curb a problem as generational as violence recidivism and to present it to a gathering of people such as ourselves, impatient trauma surgeons who define a seven-day hospital stay as a long-term admission.

The authors have evaluated the particulars of their wrap-around services offered to survivors of interpersonal violence and have correlated the deliverance of specific needs, that is mental health and employment services, with the best hope to avoid recidivism.

My respect for the challenges that the authors have tackled not withstanding, my comments and questions are born of my personal preference for violence prevention activities initiated in the community setting to youth at risk.

This is not an either/or critique of my colleagues but the admission of a weary provider with only so many resources and hours in the day that priorities have to be established.

Recognizing several things, that hospital-based violence interventions suffer from the challenges of relying on something as random as the trajectory of a bullet that is causing injury serious enough to require hospital admission but not serious enough to require death on arrival; and that hospital-based programs occur further down the cascade of psycho-social dysfunction in the life of a child at risk than true prevention programs; and that these programs will be impractical in communities such as East Baltimore in the early 2000s, where an extraordinary percentage of gunshot wounds were multiple gunshot wounds to the head or chest or both. I have a few questions for the authors.

First, you compare your present recidivism rate from 4.5% to a historical rate of 16%. This is a remarkable figure that deserves further scrutiny. Your current wrap-around program is for willing participants and may, in part, account for the differences from the overall population of gunshot wound victims. Can you give us further details on how the baseline 16% figure was tabulated?

Second, how is your program funded? Is there a formula in your use for FTEs of case managers to trauma admissions due to violence? Are there criteria other than recidivism that you must present in order to justify continued funding?

And, finally, consider the hypothetical scenario of a case manager who picks up the case of a 17-year old high school dropout who survived a gunshot wound to the abdomen. In his needs assessment, the case manager finds that the patient lives at home with his 33-year old mother and 15-year old brother who is about to drop out of the same underperforming school that was previously attended by his brother. Assuming that the case manager determines that the 15-year old is in the same high-risk category as the 17-year old brother, except that he has not yet been shot, would your program allow the case manager to get involved with this heretofore-uninjured 15-year old?

There are few happy stories involved in the specter of youth violence and fewer still roles for the uncommitted or the faint of heart.

I congratulate the authors for their staying power in pursuing an endeavor where even the definition of success is a sobering reality. And I thank the association for the privilege of the floor.

Dr. David A. Spain (Stanford, California): Thank you, Ari. Randi, that was an excellent presentation. I have two quick questions. I think the answer to the first one is going to be no, but has there been a similar secular trend in recidivism rate over that same time period?

And then, secondly, similar to what Eddie asked about, if you're a busy trauma center with the demographics of your place, you may have to hire three case managers to be culturally competent for most of the patients. That could be prohibitive in terms of costs. So is it critical that they're culturally competent or is it enough that they be socially competent?

Dr. Carnell Cooper (Baltimore, Maryland): Dr. Smith, an excellent presentation. You've attempted to ask one of the really leading questions about hospital-based violence intervention programs and that is what we do, what is it that's most important?

It's a very important question. And I congratulate you and Dr. Dicker and your attempts to do that, to answer that question for us. I have a few questions.

First, sort of going to what Dr. Spain just asked, could you tell us a little bit about what it takes and how do you choose to be a counselor? What characteristics are you looking for that allow them to take on what is a very difficult job?

I'm interested in how not-well-defined issues are explored in terms of risk factors for violence injury and I'd be interested in hearing how you define those patients with mental health issues.

Finally, I'd be interested in knowing what happened to that low-risk group that you chose to not include in the program.

And the fourth question was your rate of success, which is quite good, actually, I'd be interested in what if you could shed light in terms of the sort of things you do at the bedside that get your patients enjoying your program.

Again, congratulations to you for an excellent presentation.

Dr. Adil Haider (Baltimore, Maryland): Dr. Smith, great presentation and congratulations to you and your senior authors on continuing this important work.

My question is regarding how you help people with employment. We've had many instances where we've tried to help people get a job because that's the most important thing to them. Especially when they come back to clinic, the say "If I got a job, I wouldn't be in this situation again."

But then people have a past, you know, they may have a rap sheer or don't have the right education. How do you help people get jobs?

Dr. Randi Smith (San Francisco, California): Thank you, Dr. Cornwell, for your thoughtful discussion and stimulating questions and to the rest of the discussants.

I will attempt to answer your questions and first I want to explain our historic injury recidivism rate. So it's been published in multiple bodies of literature that the injury recidivism rate across the nation is as high as 35 percent.

Early in the '90s M. Geno Tellez did a study looking at our institution over a three-year period, and he found that the injury recidivism rate was 16%. Of course there have been temporal trends and cultural changes in San Francisco which led to us repeating that calculation. So in the feasibility study that I mentioned that was published by Dr. Dicker in 2009, that calculation was repeated.

This time we looked over a five-year period and found very similar rates, approximately 16%. So we feel very comfortable

in our comparison of that historic control which was up until 2005 to our now injury recidivism rate of 4.5%. We think we're comparing apples and apples.

As far as funding, in this economic climate there are a lot of programs that are fighting for resources. We have a very diverse array of funding sources. In fact, the AAST in 2005 gave a scholarship to Dr. Dicker which was used to partially fund one of our case managers. And from there, we were able to secure funds from the CDC and from the Department of Child, Youth and Families in San Francisco.

Interestingly, back in that 2009 paper we were missing a lot of clients who were coming in in the wee hours of the morning during the weekend and staying in the hospital for less than 48 hours. And at that time we only had two case managers. So we were able to use that data and go and lobby for another full-time employee, a full-time case manager.

So now with the three we're approaching 89% of the people who are eligible and enrolling 71%, which is great. This is based on the amount of violent trauma that we're seeing at our hospital.

And then your final question, what do we do with siblings who haven't been injured but have the same risk factors. That question comes up all the time; it's a great question.

Our case managers would love to see everyone who comes through the door, but they're limited by time and they want to keep the quality of their case management high. They will refer them to appropriate resources—they have really strong partnerships with community-based organizations that will take people who have not been injured. But they are also a support system for those siblings and it can be siblings, neighbors, friends. It doesn't matter.

We're also getting a lot of referrals from the Department of Pediatrics from their patients who have been victims or perpetrators of bullying. So we never turn our back on anyone.

Regarding Dr. Spain's questions about culturally-competent case managers, we actually have found that that is tremendously important, especially in our community in San Francisco where language can be a big barrier to care. We choose our case managers by their expertise in the community. A lot of them have grown up in the areas. They are very familiar with the families of our victims. They are strongly partnered with community-based organizations. We feel that by actually shepherding our clients, holding their hand and taking them to the community-based organizations, that makes the difference.

It is not handing them a piece of paper and saying, "Call this organization." That just doesn't work. By having our culturally-competent case managers who know the community and know the system, that's where we feel we are making the biggest difference.

As far as secular trends, to date we haven't seen any huge decreases of this nature from 16% down to 4.5%, so that's why we feel that our data is novel.

Dr. Cooper, I believe I answered part of your question about choosing the case managers. And then for mental illness, it is a hug risk factor. We think that it is under-diagnosed and hence under-treated in our population.

Right now we are actually involved in a PTSD study where we are piloting a few different questionnaires that we will be able to administer in a pre- and post-test fashion to our clients to see what their prevalence of PTSD is and hopefully get them the services that they need. Because we know from the literature that mental illness does play a part in injury in the first place, but also injury recidivism.

In terms of tactics for enrollment, I think it, again, goes back to our community-based organizations. We have a strong partnership with Goodwill services where they will take our clients—it doesn't matter what their rap sheet looks like—teach them how to use the computer, teach them how to develop a resume, teach them different skills, computer skills or any type of vocational training, and help them get a job either in their facility or others. So I think it goes back to having that strong partnership with your community-based organizations. And that was for Dr. Haider as well.

So thank you guys very much. I appreciate the privilege of the podium.