

Qualitative Assessment of START Tool in Measuring Client Success in Hospital-Based Violence Intervention Program

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Background

Epidemic of Interpersonal Violence (IPV) and Community Violence (CV)

- Millions of cases of IPV among young people treated in hospitals each year¹
- Homicide is a leading cause of death among young people in the US²
- IPV/CV is cyclical with social, emotional, and physical consequences^{3,4}
- Disproportionately impacts young people of color¹

Hospital-based Violence Intervention Programs (HVIPs)⁵⁻¹⁰

- Reduce rates of injury recidivism
- Mitigate negative social determinants of health
- Improve social and health outcomes
- Save hospital systems hundreds of dollars per patient
- Challenged to assess client needs while maintaining trust and relationships

Screening and Tool for Awareness and Relief of Trauma (START) Tool

- Six-item survey that monitors clients’ social and emotional wellness and needs¹¹
- Chosen by caseworkers for use in the At-risk Intervention and Mentoring (AIM) program, a Denver-metro HVIP
- Has not been formally assessed since implementation

Methods

Data collection:

- Key-informant interviews with Violence Prevention Professionals
- 9 interviews conducted and recorded over video call
- Standard questionnaire structured in the science framework, Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM)
- Interviews transcribed by Otter (Otter.ai, Mountain View, California)

Data Analysis:

- Transcripts assessed for thematic analysis using a hybrid deductive and inductive approach in Dedoose (SocioCultural Research Consultants, Los Angeles, California)
- Code written to assess for RE-AIM components
- Inductive code added to address informational gaps
- Themes reviewed for qualitative analysis by contributing researchers

Results

Strongest themes identified were associated with the reach, adoption, and maintenance of the START tool. These themes were further subdivided into the modifiers listed, allowing for distinct recommendations. Examples provided below.

RE-AIM Focus	Modifier	Quote
Reach		
	Setting	<p>“I just want to meet your needs right now. So... this is the reason why I've never done it in the hospital bedside setting.”</p> <p>“I don't think that it should be used there (bedside). I think it should be used as that follow up when you go to their house. Because you know, like they're dealing with a little less. Like they're just a little more relaxed and can answer the questions better all with it, verses, you know, “I just got shot. I'm trying to manage this pain, and we're trying to go through something.”</p>
Adoption		
	Access	<p>“And you know, what, I think that because I was struggling before accessing it...this is the reason why I wasn't...using them”</p> <p>“When people don't have technology...[t]hen we're unable to do the START tool with them at all...So just equipping ourselves as much as we can to eliminate those barriers would help.”</p>
	Language	<p>“We still have language barriers. We still have people who have difficulties in certain areas.”</p> <p>“Yes, I think so but then if we don't have anything for them that's in Spanish, then it doesn't make sense to do it with them.”</p>
Maintenance		
	Training	<p>“...in the beginning, it was just I didn't know how...I didn't really understand what it was for. Because we hadn't had like, a ton of training on it, it had just come up, like I would hear about it.”</p> <p>“So when people are on-boarded, it needs to be something that they are taught from the beginning.”</p>
	Investment	<p>“...we have to move with the times, and our communities and where they're at. And if there are new ideas that can get our people engaged, then we need to explore those.”</p> <p>“I think that in order for a tool to be effective, our outreach need to receive a lot of training and growth in that area.”</p>

Recommendations

- Initiate use of START tool in first post-hospital visit, avoiding use in initial hospital stay
- Provide technologic resources to case workers with centralized access to the tool
- Provide clients with both electronic and hard copies of recommended resources
- Dedicate resources to development of electronic resource materials
- Develop and validate Spanish-language version of tool and recommended resources
- Renew training for current Violence Prevention Professionals
- Implement distinct START Tool training in onboarding
- Review alternative assessment tools
- Reassess measures after implementation of these recommendations

Conclusions

- Limitations include limited number of interviewees, subjective nature of free response format, and lack of control against which to compare the START tool.
- The data will be integral to the optimization of START tool use. Future investigation will be necessary to measure the impact of these changes.

References

- Centers for Disease Control and Prevention. WISQARS leading causes of death reports, 2000-2020. 2023.
- Centers for Disease Control and Prevention. WISQARS Nonfatal Injury Data.
- Rowhani-Rahbar A, Zatzick D, Wang J, Mills BM, Simonetti JA, Fan MD, Rivara FP. Firearm-related hospitalization and risk for subsequent violent injury, death, or crime perpetration: a cohort study. *Ann Intern Med*. 2015 Apr 7;162(7):492-500. doi: 10.7326/M14-2362. PMID: 25706337.
- Zatzick D, Jurkovich G, Russo J, Roy-Byrne P, Katon W, Wagner A, Dunn C, Uehara E, Wisner D, Rivara F. Posttraumatic distress, alcohol disorders, and recurrent trauma across level 1 trauma centers. *J Trauma*. 2004 Aug;57(2):360-6. doi: 10.1097/01.ta.0000141332.43183.7f. PMID: 15345986.
- Gorman E, Coles Z, Baker N, Tufariello A, Edemba D, Ordonez M, Walling P, Livingston DH, Bonne S. Beyond Recidivism: Hospital-Based Violence Intervention and Early Health and Social Outcomes. *J Am Coll Surg*. 2022 Dec 1;235(6):927-939. doi: 10.1097/XCS.000000000000409. Epub 2022 Nov 15. PMID: 36102509.
- Cooper, C., Eslinger, D. M., & Stolley, P. D. (2006). Hospital-based violence intervention programs work. *The Journal of trauma*, 61(3), 534–540. <https://doi.org/10.1097/01.ta.0000236576.81860.8c>
- Romo, N. D., Castillo, C., Green, J., Lin, J., Mendelsohn, E., Dawkins-Hamilton, C., Reddy, S. H., & Blumberg, S. M. (2023). Improving Adolescent Violent Trauma Outcomes With a Hospital-Based Violence Prevention Initiative. *Hospital pediatrics*, 13(2), 153–158. <https://doi.org/10.1542/hpeds.2021-006428>
- Cunningham, R., Knox, L., Fein, J., Harrison, S., Frisch, K., Walton, M., Dicker, R., Calhoun, D., Becker, M., & Hargarten, S. W. (2009). Before and after the trauma bay: the prevention of violent injury among youth. *Annals of emergency medicine*, 53(4), 490–500. <https://doi.org/10.1016/j.annemergmed.2008.11.014>
- Zun, L. S., Downey, L., & Rosen, J. (2006). The effectiveness of an ED-based violence prevention program. *The American journal of emergency medicine*, 24(1), 8–13. <https://doi.org/10.1016/j.ajem.2005.05.009>
- Becker, M. G., Hall, J. S., Ursic, C. M., Jain, S., & Calhoun, D. (2004). Caught in the Crossfire: the effects of a peer-based intervention program for violently injured youth. *The Journal of adolescent health* : official publication of the Society for Adolescent Medicine, 34(3), 177–183.
- Roman, Daniel. “Results.” *Start2Heal*, 5 Jan. 2018, start2heal.org/general/results/.