

Boston Children's Hospital FY21 Final Report

Project Title: Building Capacity of Mental Health Practitioners to Assess and Manage Risk for TVT in Community Settings

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Funding Opportunity Number: DHS-21-TTP-132-00-01

Project Period: 10/1/21-03/31/24

1. Project Overview

The primary goal of this project was to build capacity of mental health practitioners (MHPs) to assess and manage risk for TVT in collaboration with local multi-disciplinary threat assessment teams through two objectives: (1) the development of a clinically useful risk assessment/management tool, the Targeted Violence and Terrorism: Strengths, needs, and risk Assessment & Management (T-SAM); and (2) the provision of T-SAM training and consultation for community-based MHPs across the country, in collaboration with the DHS-funded Prevention Practitioners Network.

Goal 1 was to develop an empirically informed risk assessment/management tool for TVT that can be easily incorporated into general mental health practice through review of at least six existing approaches for risk, needs, and threat assessment/management (Obj 1.1) in order to develop the Targeted Violence and Terrorism Strengths, needs, & risks Assessment and Management tool (T-SAM) (1.2). Tool development was followed by piloting the T-SAM in both youth and adult TVT prevention programs (1.3).

Goal 2 was to disseminate the T-SAM through training of at least 30 community-based MHPs from at least five distinct locations in the U.S. (Obj 2.1), and then to provide on-going consultation to six Learning Communities (5 MHPs in each Learning Community) via monthly calls (2.2).

Goal 3 was to disseminate best practices related to TVT risk assessment and management for mental health through the development of four written materials with guidelines and recommendations related to TVT risk assessment/management for MHPs/clinical agencies seeking to increase collaboration with Multidisciplinary Threat Assessment & Management Teams (MTAMTs) in their local community and to support threat management approaches (Obj 3.1). The development of these written materials would also support finalization of the T-SAM and all associated companion materials for the T-SAM training program (Obj 3.2).

Key activities completed from this project include literature reviews, convening of subject matter experts, training MHPs in the T-SAM, and providing them with six months of T-

SAM consultation. Preliminary analyses of data have been conducted in addition to manuscript development to support dissemination of findings. Findings from this project have also actively contributed to the development of a final version of the T-SAM and associated training materials in support of further T-SAM dissemination through our DHS FY23 grant initiative.

2. Key Accomplishments and Outcomes

For Goal 1, Objective 1, (*“Review of at least six existing approaches for risk, needs, and threat assessment/management”*), seventeen tools were reviewed after obtaining any needed licensing permits. A literature review on TVT risk and protective factors was also conducted with attention to dynamic factors that can be uniquely and effectively assessed and managed by MHPs. Potential applications of the evidence-based treatment framework, the Collaborative Assessment and Management of Suicidality (CAMS), to risk assessment/management of TVT were explored through ongoing consultation with the CAMS developer, Dr. David Jobes. In addition, the project team convened three meetings with 14 Subject Matter Experts in the fields of both violence and suicide prevention in order to enhance our understanding of best practices for identifying, assessing, and treating high-risk patients in community settings. Execution of all of these activities led to the development of the first draft of the T-SAM, accomplishing Goal 1, Objective 2 (*“Develop version one of the T-SAM”*)

For Goal 1, Objective 3 (*“Pilot the T-SAM in two established TVT prevention programs, one serving youth and one serving adults”*), this first draft of the T-SAM was then piloted with youth by two clinicians embedded in the Massachusetts Area Prevention Program at Boston Children’s Hospital (our FY20 CP3 funded initiative; Grant number: EMW-2020-GR-00068-S01; PI: Heidi Ellis, Ph.D.). This initial version of the T-SAM was also piloted with adults by three social work case managers at Life After Hate (LAH). A usability/feasibility survey was administered to all MHPs participating in the T-SAM pilot after approximately three months of T-SAM use, which led to further refinement of the T-SAM (Goal 1, Objective 2).

For Goal 2, Objective 1, (*“To provide training in the T-SAM to at least 30 community-based MHPs from at least five distinct locations in the U.S.”*) we were able to recruit a total of 50 community-based MHPs from across all five regions of the U.S. to participate in a day-long, virtual T-SAM training, exceeding our target number of 30 MHPs. Efforts were made to recruit

more senior, licensed clinicians into the T-SAM training program to facilitate a deeper understanding of tool utility/feasibility. In addition, several threat assessment professionals working in mental health were recruited for the T-SAM training program given CP3's ongoing efforts to strengthen threat assessment/management capabilities across the country. Recruitment surpassed our target numbers due to the fact that a central activity of our FY22 CP3 (Grant number: DHS-22-TTP-132-00-01; PI: Heidi Ellis, Ph.D.) was to train school counselors and psychologists in the T-SAM as one element of a broader effort to build capacity within Massachusetts public school districts to assess and respond to threats. As such, approximately 21 school-based MHPs from our partnering school districts expressed interest in attending the full-day T-SAM training; of those, 15 attended the full-day, virtual T-SAM training. (Of note, none of the FY22 school-based MHPs were eligible to participate in our T-SAM Learning Community due to the fact that they had opportunities to partake in other capacity building initiatives through their participation in the FY22 grant-funded effort).

Our target was to have at least 30% of T-SAM trained MHPs be youth-serving practitioners; this goal was exceeded with approximately 63% of T-SAM trained MHPs reporting prior experience working with youth. Almost all MHPs completed pre- (50 respondents) and post-training surveys (47 respondents); as such, we also exceeded our goal of a 90% response rate.

Goal 2, Objective 2 (*“To provide on-going consultation to six T-SAM Learning Communities [five community-based MHPs trained in each T-SAM Learning Community] via monthly calls”*), included several different activities, each with multiple anticipated outputs. **Activity 2.2.1** was directly related to the convening of the T-SAM Learning Community (*“Activity 2.2.1, Convene six T-SAM Learning Community consultation calls on a monthly basis”*). Our target was to have all 100% of MHPs trained in the T-SAM engaged in the initial Learning Community. Excluding school-based MHPs who were recruited through the FY22 initiative, we had a total of 24 MHPs (69%) express initial interest in participating in the T-SAM Learning Community when surveyed immediately after the full-day training. Of those, 21 (84%) were able to attend at least one Learning Community call.

We originally planned for six Learning Community calls per month for a nine-month period, for a total of 54 calls. However, meeting at this frequency proved to be too demanding for both our participating MHPs and the T-SAM consultants given other work commitments and

large clinical caseloads. Consequently, we decided to hold three, 90-minute Learning Community calls over a six-month period, with the expectation that MHPs participating in the T-SAM Learning Community would only be required to attend one consultation call per month. (The 21 participating MHPs were divided into three groups, each of which was assigned a once monthly call time). Our goal was to have 80% of MHPs stably engaged in the T-SAM Learning Community. “Stable engagement” was defined as participation in at least five Learning Community calls. 13 MHPs (62%) were able to remain stably engaged in the T-SAM Learning Community. Barriers to participation included job transitions, urgent patient care requirements, and other competing work commitments due to managerial responsibilities within their own agencies.

In order to run the T-SAM Learning Community, our project team also held a consultant meeting once a month to prepare T-SAM case presentations and plan topics for discussion (*Activity 2.2.2, “Monthly T-SAM Consultant meetings”*). Our original target was to have nine planning meetings with T-SAM consultants with 100% of consultants at each consultant meeting. However, due to the fact that we shortened the T-SAM Learning Community to six months, we held six planning meetings with T-SAM consultants instead. These planning meetings were attended by 100% of consultants. *Activity 2.2.3* was related to buildout of a database to support T-SAM-related data collection (*Activity 2.2.3, “REDCap database developed to support entry of de-identified patient data”*). The project team created a REDCap database to collect clinician survey data, including the pre- and post-training survey, monthly use surveys, and a final survey to evaluate both the T-SAM training program and the usability/feasibility of the T-SAM itself. However, in order to provide clinicians with an extra layer of data security, the project team used Boston Children’s Hospital’s secure, confidential document transfer portal to collect all de-identified T-SAM forms; de-identified data was then entered manually into an SPSS data for analyses (*Activity 2.2.4, “De-identified patient data entered into REDCap by trained MHPs participating in the Learning Communities”*). There were multiple anticipated outputs associated with *Activity 2.2.4*:

- Our target was to have 80% of referred TVT cases accept services; clinicians reported a total of 67 clients that were referred for TVT risk over the course of six months. Of these 67 clients, 55% reportedly accepted services (37 clients total).

- Our target was to have 90% of referred TVT cases assessed/managed with the T-SAM. 73% of the clients who accepted services were assessed/managed with the T-SAM (27 clients total).
- Our target was to have 90% of referred TVT cases anonymized and entered into REDCap; ultimately, we were able to collect de-identified data from all 27 clients who were reported to have been assessed/managed using the T-SAM (so, 73% of the total # of referred cases, but 100% of T-SAM clients).
- Our target was to have 80% of referred TVT cases demonstrate stable engagement in treatment; per clinician report, 43% of referred TVT cases (or 16 clients) “demonstrated stable engagement in clinical services while using the T-SAM.”
- Our target was for 75% of referred TVT cases to demonstrate reduced risk of TVT. The primary way to track reductions in TVT risk through the T-SAM is via the T-SAM Re-Evaluation Form. However, we were only able to collect one, completed T-SAM Re-Evaluation Form throughout the project period. In order to reduce the burden of data entry and collection on clinicians participating in the T-SAM training program, we emphasized collection of T-SAM Initial Assessment Forms over and above collection of T-SAM Re-evaluation Forms. As such, we were unable to achieve this target. Nevertheless, it is important to note that the one clinician from whom we were able to collect a de-identified T-SAM Re-evaluation Form reported that her client was able to manage his/her violent behavior in the past week and scored low in feeling justified in hurting others.
- Our target was that T-SAM trained clinicians would have a measurable increase in the number of contacts with local MTAMTs by 50%. In our final survey given to clinicians at the end of the six-month Learning Community call period, 45% of clinicians reported that being a T-SAM trained clinician increased their connection to local threat assessment teams.
- **Activities 2.2.5 and 2.2.6** were related to the evaluation of the T-SAM training program (**Activity 2.2.5**, “Develop post-consultation evaluation to assess trainees’ satisfaction with and experiences of T-SAM consultation in addition to their confidence/competence with TVT referrals” and **Activity 2.2.6**, “Administer post consultation evaluation to trainees”). The project team built a survey in REDCap and administered to all participants in the T-

SAM training program. Our response rate was 86% (18 of the 21 clinicians who engaged in at least one Learning Community call completed the survey), thereby exceeding our target response rate of 80%. An additional target was to demonstrate a measurable increase in provider confidence by 50%. Table 1 below depicts changes in clinician confidence ratings over the course of the T-SAM training program. Specifically, in a survey that was administered at three separate time points over the course of the T-SAM training program, clinicians were asked to rate on a scale from one to ten how confident they felt identifying, assessing, and treating clients at risk of TVT.

Table 1: Averaged scores for MHP confidence at each timepoint

	Identifying	Assessing	Treating
Pre- T-SAM Training	5.21	5.18	4.67
Post- T-SAM Training	7.15	7.06	6.49
Post- TSAM Learning Communities	7.33	7.83	6.72

From these results, we see that identifying saw about a 41% increase from pre-training to final survey score; assessing saw about a 51% increase from pre-training to final survey score; and treating saw around a 44% increase from pre-training to final survey score.

For our analyses, we used IBM SPSS 27 to conduct Friedman tests to determine whether scores for Identifying, Assessing, and Treating significantly differed across the three timepoints. The results showed that there were significant differences in clinician confidence scores for identifying, $\chi^2(2) = 12.154, P = .002$, assessing, $\chi^2(2) = 15.569, P < .001$, and treating, $\chi^2(2) = 10.429, P = .005$ between the timepoints. A Wilcoxon test was run as a post hoc analysis, which showed that there were significant differences for identifying between T1- T2 ($Z=-4.726, P < .001$) and T1-T3 ($Z=-2.124, P = .034$), assessing between T1- T2 ($Z=-4.812, P < .001$) and T1-T3 ($Z=-2.567, P = .010$), and treating between T1- T2 ($Z=-4.762, P < .001$) and T1-T3 ($Z=-2.064,$

$P = .039$). There was no significance between T2-T3 for identifying ($Z = -.659$, $P = .510$), assessing ($Z = -.212$, $P = .832$), and treating ($Z = -.595$, $P = .552$).

This project also collected qualitative feedback from MHPs on the tool and the training program. For more detailed information on this clinician feedback please see page 13 below in this Final Report.

For Goal 3, Objective 1 (*“To develop four written materials with guidelines and recommendations related to TVT risk assessment/management for MHPs/clinical agencies seeking to increase collaboration with MTAMTs in their local community and to support threat management approaches”*), we disseminated best practices related to TVT risk assessment and management for mental health by developing the following written materials:

1. One brief that provided an overview of the larger project of [“Building Capacity of Mental Health Practitioners to Assess and Manage Risk for Targeted Violence and Terrorism in Community Settings.”](#) referencing features of the T-SAM and anticipated project impact.
2. One brief that provided an overview of the “Targeted Violence and Terrorism Strengths, Needs, and Risks: Assessment & Management Tool (T-SAM),” including the development process, key features of the tool, results from the training, and testimonials from those who have attended the training.
3. A draft manuscript that contrasts and compares risk and protective factors for suicidal thoughts and behaviors with that of violent thoughts and behaviors (to be submitted to the American Journal of Preventive Medicine this summer)
4. A draft manuscript that describes the method for developing the T-SAM and results of usability/feasibility testing (to be submitted to Clinical Psychology: Science and Practice this summer)

In addition, Dr. Cardeli attended at least three conferences/key stakeholder meetings over the course of the two-year project period and presented on the T-SAM's development, key features, and its potential utility in the mental health field.

For Goal 3, Objective 2 (*“Develop version two of the T-SAM”*), the project team conducted descriptive analyses of de-identified patient data to better understand response themes as well as core drivers of TVT risk. (See Appendix for a PowerPoint that summarizes results of descriptive and thematic analyses of de-identified patient data). In addition, descriptive and thematic analyses of quantitative and qualitative data collected through clinician surveys further

informed final revisions to the T-SAM Initial Assessment and Re-Evaluation Forms, the T-SAM Administration Manual, and the T-SAM Training slide deck.

We reviewed 17 existing tools and measures for risk, needs, and threat assessment/management, completed one literature review on TVT research in order to identify dynamic risk/protective factors related to TVT that can be uniquely and effectively assessed and managed by MHPs, and held approximately six meetings with Dr. David Joes, the developer of the Collaborative Assessment and Management of Suicidality (CAMS), to explore potential applications of this evidence-based treatment framework to risk assessment/management of TVT (*Activities 1.1.1. - 1.1.3.: 1.1.1. “Review of at least six existing approaches for risk, needs, and threat assessment/management”; 1.1.2. “Review existing TVT research and identify dynamic risk/protective factors related to TVT that can be uniquely and effectively assessed and managed by mental health”; 1.1.3. “Explore potential applications of the evidence-based treatment framework, the Collaborative Assessment and Management of Suicidality [CAMS], to risk assessment/management of TVT”*).

We brought together 14 subject matter experts (SMEs) in the fields of suicide and violence prevention and held three meetings to discuss best practices in assessing and treating high risk patients in community settings. We completed one draft of the T-SAM Initial Assessment Form and shared the draft with project consultants for review. We also held feedback meetings with project consultants feedback to brainstorm form revisions (*Activities 1.2.1. - 1.2.4.: 1.2.1. Identify subject matter experts (SMEs) in the fields of suicide and violence prevention to participate in a Delphi process”; 1.2.2. “Convene three virtual meetings for each SME group”; 1.2.3. “Draft initial version of the T-SAM”; 1.2.4. “Obtain feedback from project consultants on T-SAM items”*).

We piloted the T-SAM within two established TVT programs, the Massachusetts Area Prevention Program (MAPP) at Boston Children’s Hospital (a youth-serving program) and LAH (an adult-serving program). Two MAPP clinicians were trained in the T-SAM and used the tool with at least ten clients. Three social workers at LAH who were operating as case managers for the program also received training in the T-SAM. The social work team at LAH was able to pilot the T-SAM with several clients; the exact number is unknown due to challenges with data sharing across agencies. We distributed the T-SAM usability/feasibility survey to both MAPP and LAH clinicians; four of the five clinicians completed the usability/feasibility survey. We

then finalized our first draft of the T-SAM based both on consultant feedback and data collected through the usability/feasibility assessment (*Activities 1.3.1. - 1.3.6.: 1.3.1. "Pilot the T-SAM within Boston Children's Hospital's Adolescent Services Coordination Team (ASCT) -youth population"; 1.3.2. "Work with the PPN to identify an adult-serving program for T-SAM pilot"; 1.3.3. "Pilot the T-SAM within an adult-serving TVT program"; 1.3.4. "Development of usability and feasibility surveys"; 1.3.5. "Usability and feasibility assessment of the T-SAM"; 1.3.6. "Refine T-SAM based on data collected from usability and feasibility evaluation"*).

We administered three surveys to evaluate the T-SAM training: one immediately prior to the day-long T-SAM training; one immediately after the day-long T-SAM training; and one upon completion of the T-SAM Learning Community call period. Although each survey included similar questions in order to assess changes in confidence/competence, knowledge, and skills over time, the survey administered after the T-SAM Learning Community call period included several additional questions in order to obtain broader feedback from T-SAM trained clinicians on the usability/feasibility of the tool and their perspectives on the T-SAM training program. We identified 50 eligible MHPs for T-SAM training and administered 50 pre-training surveys. We completed one day-long T-SAM training with 47 MHPs, and we collected post-training surveys from all 47 MHPs (*Activities 2.1.1. - 2.1.5.: 2.1.1. "Develop pre- and post- T-SAM training pre-evaluations and corresponding databases"; 2.1.2. "Identify eligible MHPs for T-SAM training"; 2.1.3. "Administer pre training evaluation to trainees"; 2.1.4. "Host a one-day virtual training in the T-SAM"; 2.1.5. "Administer post training evaluation to trainees"*).

We convened 18 T-SAM Learning Community consultation calls over a six-month period. We held six monthly consultant call meetings in order to sufficiently plan for T-SAM Learning Community calls. We developed one database to support entry of de-identified patient data and manually entered data from 30 de-identified T-SAM forms into the database. We developed one post-consultation evaluation to assess trainees' satisfaction with and experiences of the T-SAM training program in addition to evaluating changes in their confidence/competence with TVT referrals as a result of participation in the T-SAM training program. We administered this post-consultation evaluation to 18 MHPs who demonstrated stable engagement in the T-SAM training program over time (*Activities 2.2.1. - 2.2.6.: 2.2.1. "Convene six T-SAM Learning Community consultation calls on a monthly basis"; 2.2.2. "Monthly T-SAM Consultant meetings"; 2.2.3. "REDCap database developed to support entry of de-identified patient data";*

2.2.4. “De-identified patient data entered into REDCap by trained MHPs participating in the Learning Communities”; 2.2.5. “Develop post-consultation evaluation to assess trainees’ satisfaction with and experiences of T-SAM consultation in addition to their confidence/competence with TVT referrals”; 2.2.6. “Administer post consultation evaluation to trainees”).

For Goal 3, we completed one set of preliminary analyses on de-identified patient data, drafted one manuscript describing T-SAM tool development and results of our usability/feasibility evaluation, and one manuscript comparing TVT risk and protective factors with that of suicidal thoughts and behaviors. We have developed two briefs pertaining to T-SAM development, and Dr. Cardeli has presented at more than three conferences/stakeholder meetings on the T-SAM. Clinician feedback on the T-SAM training program and the tool itself is being incorporated into T-SAM forms and companion training material for further dissemination through our FY23 CP3 grant (*Activities 3.1.1. - 3.1.6. & 3.2.1. - 3.2.2:* 3.1.1. “Conduct descriptive and multivariate analyses of de-identified patient data”; 3.1.2. “Develop manuscript describing T-SAM tool development and detailing preliminary findings from descriptive and multivariate analyses of de-identified patient data”; 3.1.3. “Aggregate and review [quantitative and qualitative] feedback from the Learning Communities”; 3.1.4. “Develop manuscript describing lessons learned, challenges, and general recommendations for effectively training MHPs in TVT risk assessment and management”; 3.1.5. “Develop two briefs corresponding to the aforementioned manuscripts”; 3.1.6. “Presentations at conferences and/or key stakeholder meetings”; 3.2.1. “Review findings from quantitative and qualitative data collected”; 3.2.2. “Make iterative improvements to the T-SAM”).

Many clinicians provided positive feedback about the T-SAM training in the post-training survey. The following are direct quotes from several clinicians who completed the survey:

- “I think the content is really interesting, and I appreciate the work that the trainers have put into this day. The ability to hear from and connect with other clinicians was really valuable for me, too. Glad to be a part of it!”
- “It helped explain the tool/assessment and provided practical information and wording to use during implementation.”
- “I now have more information on how to assess violence risk, I had not had a good assessment tool prior to this.”

- *“It helped me tease out threat assessment and understand a way to incorporate a plan for action.”*

When asked for feedback on the T-SAM Learning Community, many clinicians also shared positive experiences. The following are direct quotes from several clinicians who completed the post- T-SAM Learning Community survey:

- *“I took away a great deal from the case presentations and walking through the T-SAM with the other people on the call. Seeing its usefulness play out in real-world situations, as well as seeing how others approached using the tool was tremendously informative. The consult calls helped me to develop more confidence in my ability to effectively use T-SAM by helping me to gain a deeper understanding of and familiarity with the tool. The training laid a wonderful foundation, and the consult calls really built upon that and strengthened my skills & confidence with regard to using the tool.”*
- *“The calls were helpful to learn more about the T-SAM, other ways in which providers are using the T-SAM/information obtained from such, and from listening to case presentations and other providers' responses regarding such. The consult calls allowed me to become more familiar and comfortable with the T-SAM form and administration.”*
- *“Opportunity to collaborate with others in the field. Assisted to understand other ways to utilize the T-SAM and clarify some questions that came up while using this. Provided additional insight into the use of the T-SAM.”*

BCH website with information on T-SAM development and training:

<https://www.childrenshospital.org/programs/trauma-and-community-resilience-center/multidisciplinary-violence-prevention/capacity-building/targeted-violence-and-terrorism>

3. Project Participant Testimonials, Impact Stories, or Case Studies

Many clinicians provided positive feedback about the T-SAM training in the post-training survey. The following are additional, direct quotes from clinicians who completed the survey:

- *“I appreciate the effort to help those in clinical practice assess violence risk, especially since not everyone will have the interest, time, money, effort, support, resources to focus on becoming a threat assessor. I think some folks that are threat assessors may/have been*

critical of the efforts here, but again not everyone can and will or should be an expert in threat assessing, yet this is helpful to guide clinicians in how to basically assess violence and seek assistance when the red flags ping in an assessment like this. Good job.”

- *“This training helped to delineate the subtleties between threat assessment and risk assessment. I also greatly appreciate the emphasis on the collaborative approach and the normalization of the language used in threat/risk assessment.”*

When asked for feedback on the T-SAM Learning Community, many clinicians also shared positive experiences. The following are additional, direct quotes from several clinicians who completed the post- T-SAM Learning Community survey and shared their overall experiences with the T-SAM training program:

- *“Was able to see how others are using the assessment and the struggle they are also encountering. Helped to build on the knowledge that was presented in training. The information was thorough and then the calls helped to show how to administer and the barriers that could come through with that administration of the assessment.”*
- *“Despite not completing any [T-SAM forms] due to current work setting and caseload, it was helpful to hear and engage regarding the process for others, certainly more so than I would have been prepared after completing the T-SAM training. The training along with the calls would enable me to approach the process with more confidence and competence.”*

All testimonials above are in the clinician’s own words.

4. Deliverables

Over the two-year project period, the following deliverables were completed:

1. Development of the T-SAM, the first, clinically-useful TVT risk assessment/management tool in the United States
2. Development of T-SAM training materials, including a slide deck and an administration manual

3. One brief that provided an overview of the larger project of “[Building Capacity of Mental Health Practitioners to Assess and Manage Risk for Targeted Violence and Terrorism in Community Settings.](#)” referencing features of the T-SAM and anticipated project impact.
4. One brief that provided an overview of the “Targeted Violence and Terrorism Strengths, Needs, and Risks: Assessment & Management Tool (T-SAM)”, including the development process, key features of the tool, results from the training, and testimonials from those who have attended the training.
5. A draft manuscript that contrasts and compares risk and protective factors for suicidal thoughts and behaviors with that of violent thoughts and behaviors (to be submitted to the American Journal of Preventive Medicine this summer)
6. A draft manuscript that describes the method for developing the T-SAM and results of usability/feasibility testing (to be submitted to Clinical Psychology: Science and Practice by late spring)
7. [BCH website with resources on the T-SAM](#) (previously submitted in draft form)
8. [BCH website with information on T-SAM development and training](#) (previously submitted in draft form)

The T-SAM and its associated training material should NOT be shared outside of DHS. All other documents provided can be shared outside of DHS. Manuscripts will be available upon publication.

5. Challenges and Lessons Learned

Challenges faced through this project include:

1. Timeline challenges due to:
 - a. Challenges of creating and disseminating a brand-new risk assessment/management tool in a two-year time period
 - b. Building in extra time for Institutional Review Board (IRB) and Compliance Assurance Program Office (CAPO) approvals
 - c. Scheduling the T-SAM Training and the Learning Community consultation calls to allow maximal participation from as many participants as possible.
2. Challenges related to clinician participation in the training program, including:

- a. Low rates of survey completion (e.g., monthly use survey to assess # of instances of T-SAM use and availability of appropriate referrals) throughout the Learning Community call period
- b. Difficulties maintaining high attendance at each Learning Community call, as MHPs had numerous external factors influencing their ability to participate (e.g., high caseloads, administrative expectations, managerial responsibilities, etc.)
- c. Difficulties collecting de-identified T-SAM data from MHPs due in part to challenges navigating BCH's secure file sharing platform

Something that could have been done differently if planning and implementing the project again is to consider the true estimated timeline that the project would take, including all of the delays in IRB and CAPO, and limit activities to what can be done reasonably within that timeframe. We would also reduce the burden of data collection on participating MHPs (e.g., shortening surveys to ask only that which is essential) and/or include funds in the budget for participating clinicians in order to incentivize data collection.

We would advise others aiming to do similar work to:

- Start building and strengthening partnerships early
- Work closely with DHS program coordinators and regional managers to communicate all delays, provide project updates, and ask clarifying questions.
- Prepare for the possibility of resistance from the community you are working with, and be ready to address their concerns
- Be flexible with data collection requirements in order to sufficiently address the communities' concerns and needs
- Make participation components enjoyable, and keep participation requirements and survey requests to a minimum
- Keep meticulous track of the project in a systematic way, through spreadsheets, meeting notes, documentation, etc.

6. Sustainability

This project is continuing after this period of performance through the activities of our DHS FY23 grant from CP3. Sustainability is further supported through development of the T-SAM Business Plan, which was approved by BCH Leadership. The T-SAM Business Plan allows clinical members of the project team to train other healthcare and social service agencies in the T-SAM without needing grant funding to support these efforts. Dr. Cardeli is also working with BCH's Technology & Innovations Development Office, which helps with the commercialization process of BCH innovations.

7. Contributions to the Field and Next Steps (if applicable)

As the first-ever, clinically useful TVT risk assessment/management tool, the T-SAM will hopefully prove to be a long-term contribution to the TVTP field by helping community-based MHPs assess and manage risk for TVT.

8. Contact Information

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9. Appendices

Appendix A is a slide deck of raw output data and findings from the FY21 project: [DATA.pptx](#)

Appendix B is a zip file containing the T-SAM training program material, which includes the initial assessment form, the re-evaluation form, the administration manual, and the T-SAM training slide deck.