Evaluation of the Suicide Safer Pathways to Care Mini-Grant Project 2021

Produced by
JoEllen Tarallo, Ed.D., Director
Thomas Delaney, Ph.D., Evaluation Consultant, UVM
Gabriel Reif, Ed.M., Evaluation Consultant, VT-SPC
Vermont Suicide Prevention Center

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Background

Overview

The Suicide Safer Pathways to Care Mini-Grants Project was a six month initiative aimed at strengthening identification, assessment, and referral for care and follow-up for individuals at risk for suicide. Primary Care Practices (PCP) partnering with local Vermont Designated Agencies (DA) to make changes in their care processes such as adopting new screening approaches and enhance referral processes, and coordinated their work through collaborative meetings with partners, monthly meetings with the project team and the other PCP/DA sites and participation in a variety of trainings. The project was developed in the fall of 2020 under COVID Relief Funding from the Vermont Department of Mental Health, by the Vermont Suicide Prevention Center (VT-SPC), a public-private partnership of the Center for Health and Learning. It was informed by a variety of sources including the Vermont Zero Suicide pilot projects and Zero Suicide 2020 initiative that involved DAs, previous Quality Improvement (QI) work done by the Vermont Blueprint for Health with PC practices, and national suicide prevention efforts including Zero Suicide and the Columbia Lighthouse Project.

PCP and DA received financial support aimed at defraying some of the costs associated with participating in the project. Participating sites were also supported by regional Blueprint QI Facilitators and members of the project team from VT-SPC. All of the PCP and DA sites participated in a program evaluation that had four main components: 1) completion of a detailed end-of-project survey, 2) collection of de-identified client/patient level data related to risk identification, referral and follow-up, 3) review of meeting minutes and other materials collected throughout the project and 4) Suicide prevention trainings participation data. This report summarizes the evaluation findings in order to provide a window to the successes and challenges encountered by the participating organizations and to guide the development and implementation of future efforts aimed at strengthening the coordination of PCP and DA systems for caring for people at risk for suicide.

Project Requirements

Designated Agencies (DA) (n=6)

The focus of the designated agencies for this project was to Increase capacity to implement activities that support the suicide safer pathway through training, adoption of protocols and collection and reporting of Zero Suicide outcome measures.

The DA were required to report on the following: monthly joint work meetings with D.A., Blueprint Project Manager and QI, engagement of clinical staff, through training, in C-SSRS, Calm and/or CAMS, the development of work flows, and writing and adopting suicide specific protocols. The outcomes measured for the DA consisted of strengthening capacity for collecting measures for ZS screening, assessment and safety planning and tracking referrals to and from PCP during the project period.

Primary Care Practices (PCP) (n=17)

The focus of the PCP for this project was to increase the overall knowledge, comfortability, and clinical competency of providers in Blueprint Patient Centered Medical Homes to assess for suicide, safety plan with patients, and make referrals when appropriate for higher level of care.

The PCP were required to report on the following: The PCP were required to report on the following: monthly joint work meetings with D.A., Blueprint Project Manager and QI, engagement of clinical staff, through training, in C-SSRS, Calm and/or CAMS, the development of workflows, writing and adopting suicide specific protocols. Further reporting consisted of screening and care coordination, specifically, utilization of screening tools (C-SSRS, CALM and/or CAMS) for patients in need of that level of care, appropriate referrals in the pathway, and engagement with patients' care team in care coordination. The outcomes measured for the PCP consisted of screening and referral data and reporting on the number of staff who completed C-SSRS, CALM and/or CAMS training. There was also the option to report on a workforce development survey.

Suicide Safer Care Mini-Grant Project Participants

Designated Mental Health Agencies (n=6)
Health Care Rehabilitation Services (HCRS)
Howard Center
Lamoille County Mental Health
Northeast Kingdom Human Services
Northwest Counseling and Support (NCSS)
Rutland Mental Health

Primary Care Practices (PCP) (n=17)

Burlington
Champlain Center for Natural Medicine
Community Health Center of Burlington
Rutland
Community Health Center of Rutland Region
Lamoille Valley
Appleseed Pediatrics
Morrisville Family Health Center
Stowe Family Practice
Northeast Kingdom
St. Johnsbury Pediatrics
St. Albans
Cold Hollow Family Practices
Northern Counties
Concord Health Center
Danville Health Center
Island Pond
St. Johnsbury Health Center
Springfield
Ludlow Health
Mountain Valley Health
Rockingham Health Center
Springfield Health Center

Data Sources and Findings

The Project used four core evaluation data sources that were collected from the participating sites and VT-SPC records. Data was collected between January - June 2021 from the following sources:

1. *Zero Suicide Mini-Grant Survey Activities* Reporting - June 2021
2. *Client-Level Data* related to risk identification, referral and follow-up
3. Meeting notes, protocols and related materials
4. Suicide Prevention Trainings Participation data

Zero Suicide Mini-Grant Survey Activities Reporting - June 2021

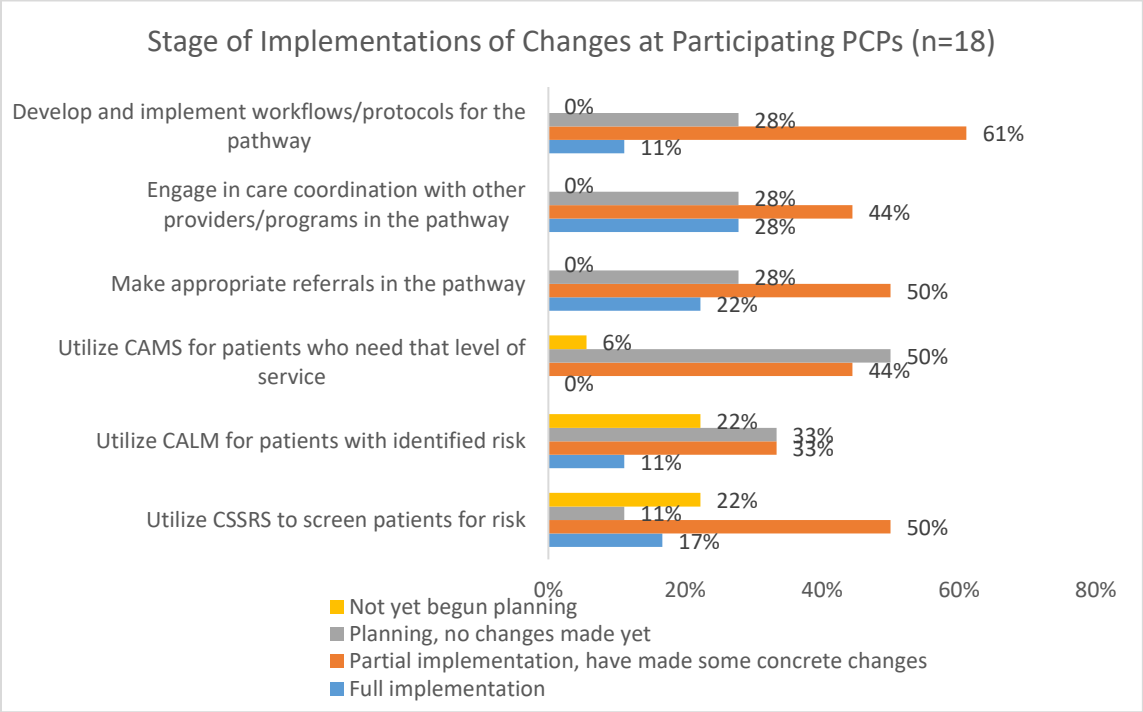
Web-based end-of-grant surveys were completed in June, 2021 by all of the PCP and DA that received mini-grants. One respondent from each practice/agency completed the survey, providing information on participation in grant activities, participants' perception of the value of different grant activities, descriptions of their organizations' implementation of approaches to strengthen pathways for care, and participants' reflections on their experiences in the program. Individuals from all 6 DA (100%) and all 18 PCP (100%) that received mini-grants completed the survey.

1. Primary Care Practices (PCP) respondents indicated that representatives from their PCP attended the vast majority of monthly meetings with their partner DA to discuss the suicide-safer pathway to care. Overall, PCP attended 93% of meetings and 14 of the PCP (78%) attended meetings in all six months of the mini-grant period.

In the end-of-grant survey, participants reported the stage of implementation of six grant outcomes. The areas in which PCP respondents indicated the most advanced stages of implementation were making appropriate referrals in the pathway and engaging in care coordination with other providers/programs in the pathway. Specifically, half of respondents (50%) said their PCP have partially implemented the practice of making appropriate referrals in the pathway, while 22% reported they have fully implemented this approach. Meanwhile, 28% of participants indicated that their PCP has fully implemented the strategy of engaging in care coordination with providers/programs in the pathway, and 44% said they have partially implemented this practice. The positive feedback regarding making referrals and engaging in care coordination with partners in the pathway was reflected in open-ended responses. When respondents remarked on the most successful aspects of their experiences in the mini-grant, numerous participants highlighted their experiences coordinating with other agencies and the benefit of learning about tools and resources being utilized in other organizations. Additionally, a multitude of individuals remarked on how the mini-grant provided them with opportunities to build trusting relationships and foster communication across organizations.

The areas in which respondents reported the least advanced stages of implementation were utilizing Counseling on Access to Lethal Means (CALM) and Collaborative Assessment and Management of Suicidality (CAMS). A quarter of respondents (22%) said that their PCP have not begun planning how to use CALM with patients with identified risk. In open-ended comments, several participants expressed that they wanted more opportunities for trainings and indicated that their PCP faced challenges getting staff to attend these trainings because they were offered toward the end of the grant period and participants were not provided with adequate notice to plan their schedules around the trainings. Respondents at numerous PCP reported that going forward, they will offer more trainings and develop protocols and workflows for utilizing approaches like CALM and CAMS.

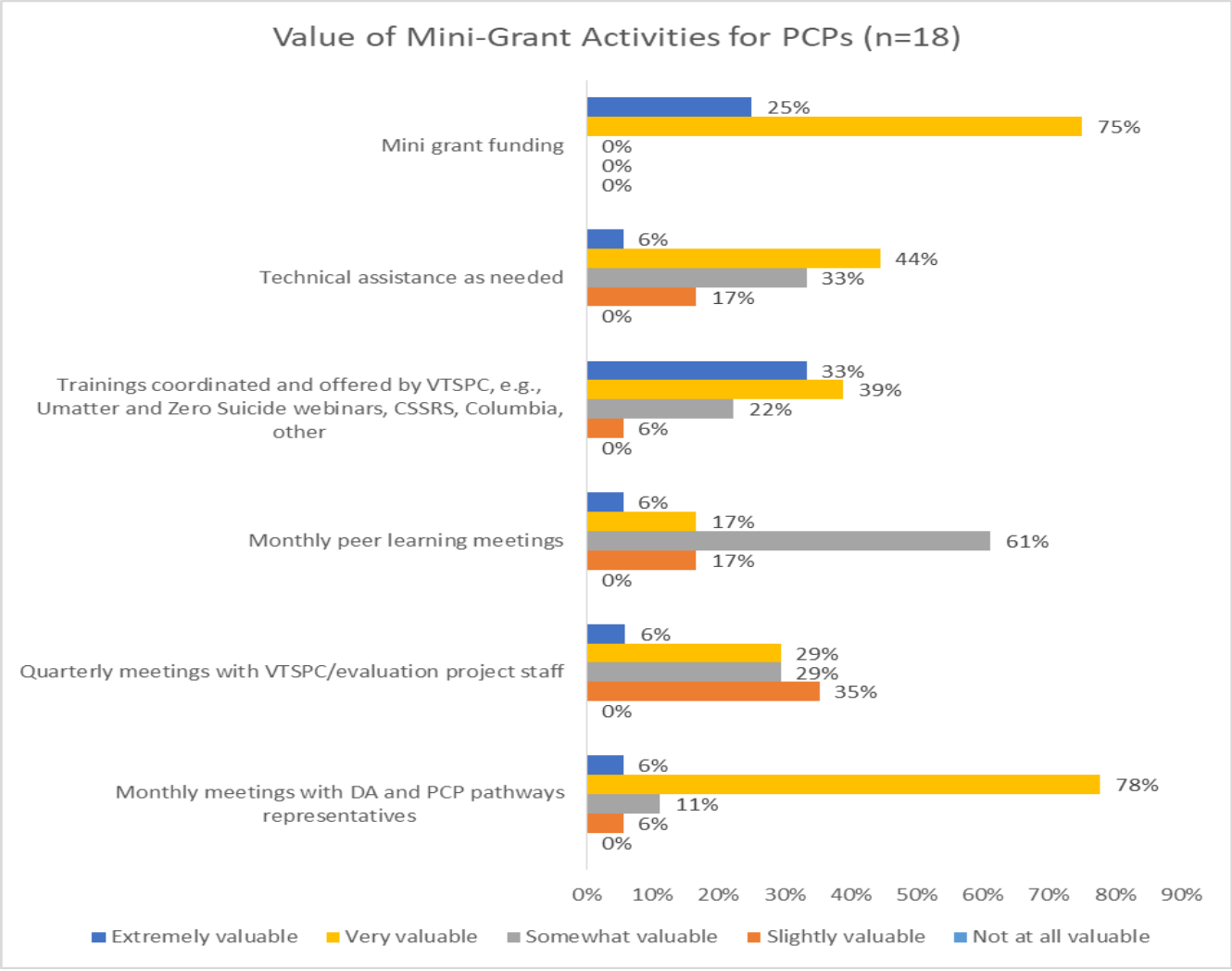
Figure 1. Stages of Implementation - PCP[1]



Survey participants from PCP rated the value of mini-grant activities. The most highly rated activities were mini-grant funding and trainings coordinated by the Vermont Suicide Prevention Center, including those on *Umatter* and the Columbia-Suicide Severity Rating Scale (C-SSRS). Every respondent (100%) rated the funding as very or extremely valuable, while a third (33%) said that trainings were extremely valuable and 39% said they were very valuable. The activity that participants found the least valuable were quarterly meetings with VT-SPC/evaluation project staff, although two-thirds (65%) rated these meetings somewhat, very, or extremely valuable.

[1] While there were 17 PCPs that participated in the program, the PCP survey had 18 respondents. There was not a clear one-to-one match between the PCP and the individuals who completed the survey (e.g., some survey responses reflected a group of PCP and other PCP did not submit individual responses). Therefore, findings reflect the responses from the 18 survey respondents. The data reflect that no individual practice submitted a response multiple times and no PCP were completely excluded from results. This indicates that the results are comprehensive and accurate.

Figure 2. Value of Activities for PCP



When asked about the challenges PCP faced participating in the mini-grant, respondents cited staff capacity, staff turnover and the pandemic as contributing factors that left staff with little "time to participate in training and implementation activities" and created "some difficulty coordinating with others." Several respondents also stated that they encountered difficulties regarding data collection and tracking, as well as developing and implementing workflows. Participants requested more models of workflows and opportunities for clinicians to become familiar with them.

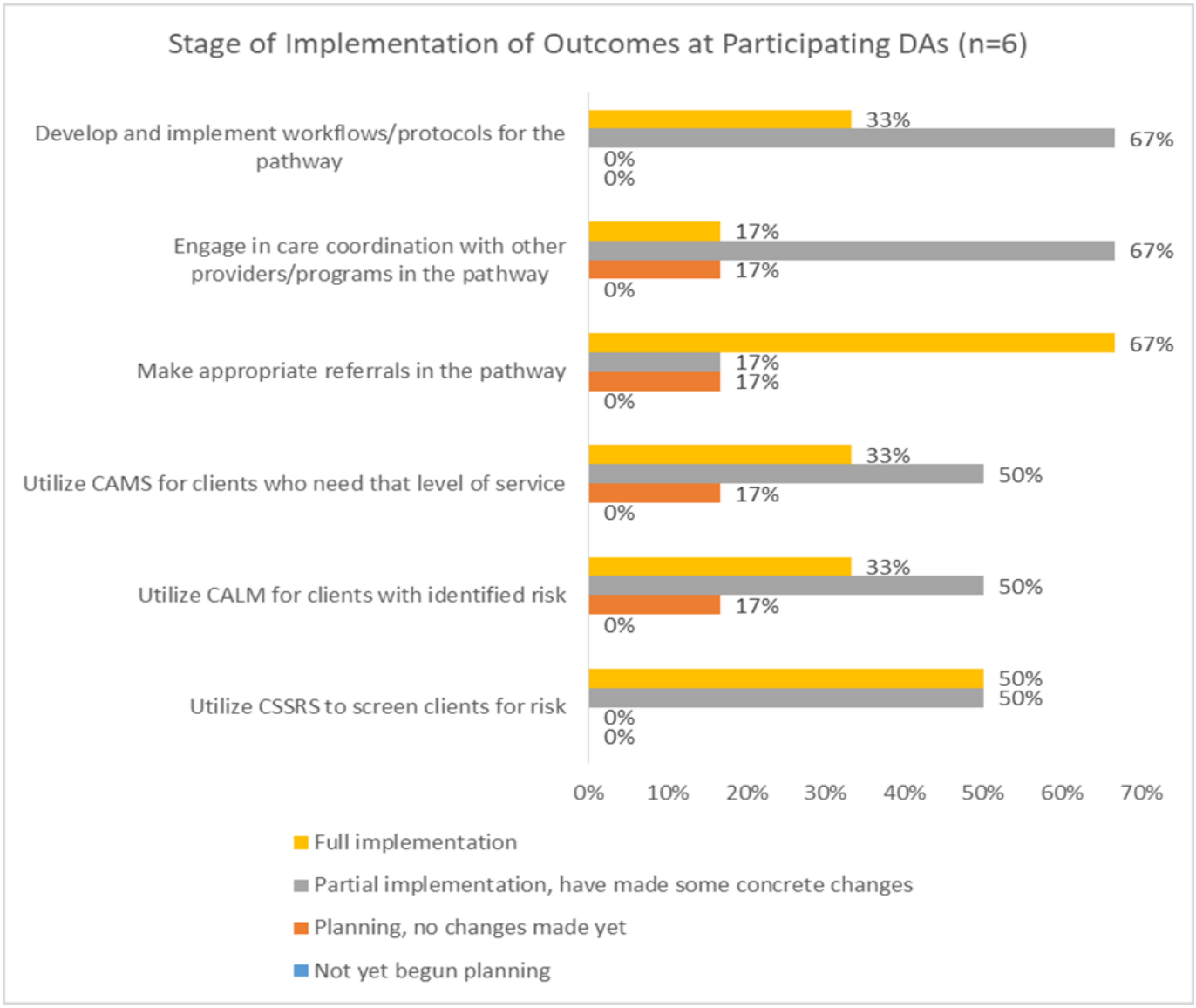
2. Designated Agencies Most participants from the six DA indicated that representatives from their agencies attended monthly meetings with individuals from corresponding PCP to discuss the suicide-safer pathway to care. Respondents from four DA (67%) said that they attended these meetings in all six months of the mini-grant period, while one participant said they were unsure of which months someone from their agency was able to attend. One participant commented that someone from their DA was only able to attend two of the six monthly meetings. The overall participation rate in these meetings was 87% (excluding the agency that did not know if someone attended).

Respondents were asked to indicate the service area that has been most involved implementing suicide-safer care as part of the DA work in Zero Suicide. Four DA identified emergency/crisis services as the area most involved in the work, while another respondent wrote “urgent care.” The final DA said that the area most involved in the work was behavioral health.

Subsequently, participants reported the stage of implementation of six grant outcomes in the areas they indicated above. The areas where respondents indicated the most advanced stages of implementation were making appropriate referrals in the pathway and utilizing C-SSRS to screen patients. Specifically, two-thirds of respondents (67%) said their PCP have fully implemented the practice of making appropriate referrals in the pathway, while 17% reported they have partially implemented this approach, and 17% said that they have begun planning this work. Meanwhile, 50% of participants indicated that their PCP have fully implemented the strategy of utilizing C-SSRS, and the other 50% said they have partially implemented this practice.

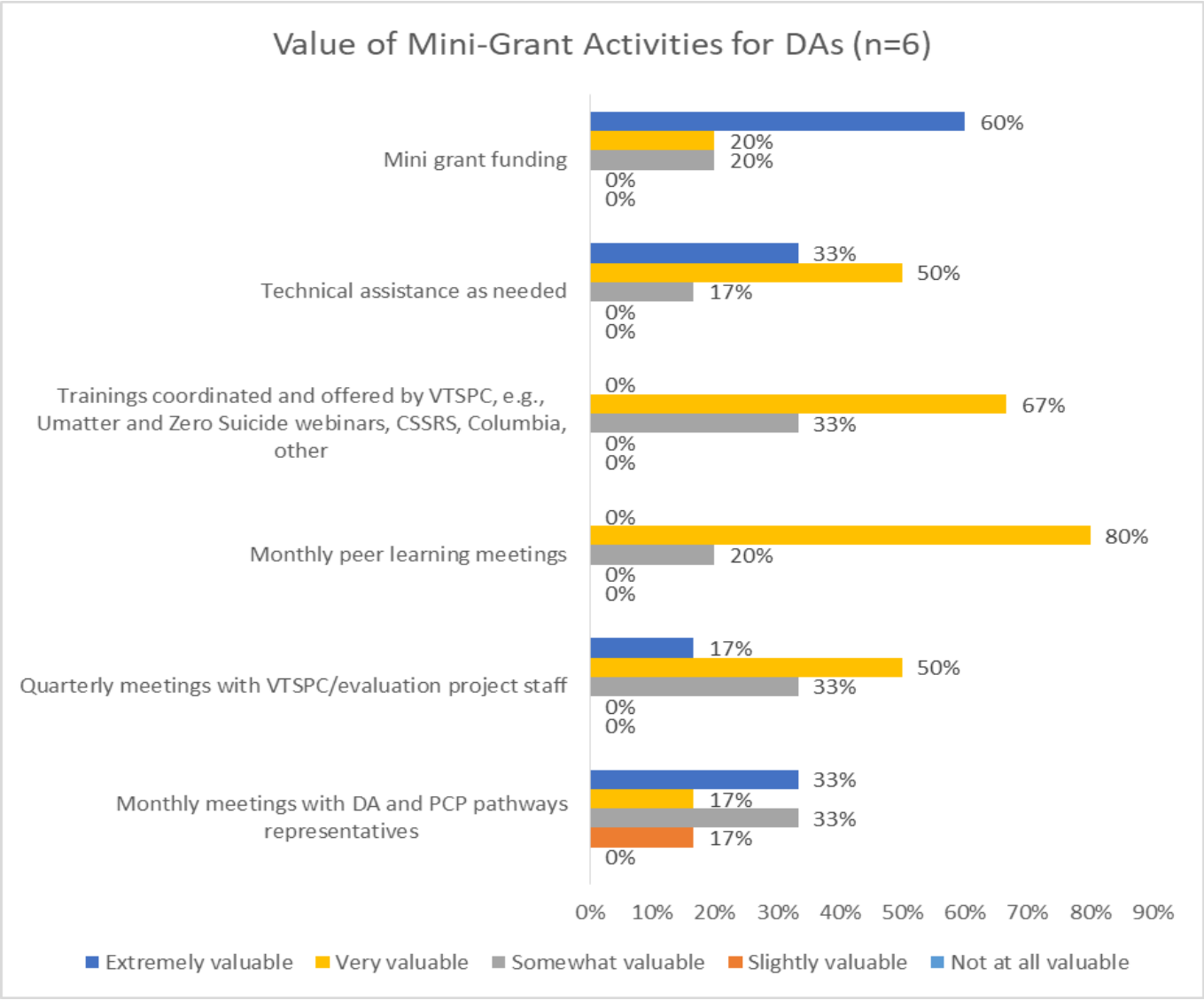
In open-ended responses, every respondent mentioned the effectiveness of collaborations they had with PCP on the mini-grant. They highlighted the openness and respectfulness of the parties involved and how these factors enabled PCP and DA to provide better services to clients. The open communication between these parties may have facilitated the implementation of DA making referrals to primary care providers.

Figure 3. Implementation of Changes at DA



Participants from DA rated mini-grant funding as the most valuable mini-grant activity, with 60% indicating that the funding was "extremely valuable." The second-highest rated activity was the technical assistance provided to grantees, followed by the monthly T.A. and Peer Learning Meetings with PCP pathways representatives and training offered by the Blueprint and VT-SPC. A majority of respondents (83% and 67%, respectively) rated these learning-related activities as very or extremely valuable. A multitude of participants commented that they plan to conduct more training in their agencies going forward (e.g., CAMS and CALM), indicating that those offered by VT-SPC as part of this mini-grant were not adequate in number or accessible to enough staff, given time and scheduling constraints. Regarding challenges they encountered during the grant period, participants highlighted staff capacity and turnover, as well as the COVID-19 pandemic, as barriers to progress.

Figure 4. Value of Activities for DA



Client-level Data Related to Risk Identification, Referral and Follow-up

Client/Patient Level Reporting

The goals of the client-level evaluation of the Mini-Grants project were to 1) assess the adoption or expansion of using tools and processes for identifying, initiating treatment and following-up with patients/clients at risk for suicide, 2) examine trends in the adoption/use of tools and processes, and 3) identify opportunities for making improvement in the adoption of the tools and processes.

Primary Care Practice (PCP)

The summaries presented in this section use the patient-level data reported by the PCP to understand trends relating to the use of: 1) suicide risk screening tools, 2) processes such as warm hand-offs, referrals and coordination of care, and 3) use of evidence-based practices (CALM and CAMS). Each month of the project, a designated person from the

practice or the Blueprint coordinator reviewed patient records to identify positive suicide risk screens, which were then examined in order to provide the information below. These data were combined across PCP and months in order to assess changes in suicide prevention-related changes in care.

Data were received for 349 patient encounters at PCP across the six months of the project (see Table 1). The denominator for the percentages represent the total number of positive screens for suicide risk that were documented. The data are presented by month in order to display possible trends over time during the course of the project. The averages presented in the tables represent average percentages based on the total data received for each month of data, rather than based on percentages for individual PCP or DA.

Table 1. Positive Risk Identifications by Month at Participating PCP

# Patients/Clients Identified	% of Total
48	14%
60	17%
68	20%
66	19%
62	18%
45	13%
349	***100%***

A central goal of the evaluation was to learn about the use of the PHQ-9 and C-SSRS in the context of positive identifications. Among all of the cases reported, there was evidence that a PHQ-9 had been performed for 314 individuals (90%) and for the C-SSRS the figure was 76 individuals (22%). Table 2 summarizes these numbers by month.

Table 2. Percentages of Screenings/Assessment Tools Used by Month at Participating PCP

	# Identifications	% with PHQ-9	% with C-SSRS
Jan	48	96%	10%
Feb	60	82%	15%
March	68	91%	19%
April	66	88%	24%
May	62	92%	31%
June	45	93%	31%
Overall	***349***	***90%***	***22%***

In addition to the numbers presented in Table 2, other screeners that were reporter used in relation to the positive identification of suicide risk included: CRAFFT, GAD-7, SRA, PHQ-2, SI assessment, SDOH, MSE and Mood Disorder Questionnaire and Bipolar Assessment, among others.

The evaluation also collected data, based on the same 349 cases, for documentation of warm hand-offs and referrals for patients identified as at risk for suicide. For approximately 88% of individuals there was evidence that a referral for additional care had been made, or that services were already in place for that patient. Warm hand-offs were documented for approximately 42% of patients. An additional measure assessed whether coordination of care had occurred for patients with identified risk, and that was highly variable in terms of how it was documented across the

PCP. Examining this information showed there was a clear indication that coordination had taken place for approximately 60% of all patients. The reasons cited for why coordination not occurred were often patient refusal, a safety plan had been created with the patient, or that information had been provided (e.g., crisis lines).

Table 3. Use of CALM and CAMS at Participating PCP

	# Identifications	% with CALM	% with CAMS
Jan	48	8%	13%
Feb	60	18%	0%
March	68	15%	1%
April	66	9%	2%
May	62	13%	15%
June	45	18%	11%
Overall	***349***	***14%***	***7%***

Client-level Findings for Primary Care Practices (PCP)

PCP data reflect consistent, frequent use of the PHQ-9 as a screening tool, while the C-SSRS was used less often. However, there is a slight trend towards increased use of the C-SSRS across the six month measurement period, from 10% in the first month to 30% in month six. Use of CAMS and CALM with patients who screened positive for suicide risk varied considerably across months, and did not show increasing trends over time. CALM was used with twice as many patients as CAMS, possibly reflecting that these PCP had greater capacity for providing lethal means counseling than for initiating CAMS treatment. It is also possible that the actual rates of using CALM and CAMS are higher than shown in this data, for example if these services were provided after referrals had been made by the PCP.

Participating Designated Agencies

The summary below describes the client-level data obtained by the DAs during the six months of data collection. The data focus on: 1) suicide risk screening tools, 2) processes such as warm hand-offs, referrals and coordination of care, and 3) use of evidence-based approaches (CALM and CAMS). On a monthly basis a DA employee reviewed relevant client records to identify positive suicide risk screens, which were then examined in order to document the actions that were subsequently taken with the client. The data were then shared with the VT-SPC and combined with data from other DA to create a statistical summary.

Client-level data were received from five Designated Agencies, and reflected encounters with 154 clients during the six months of the project (see Table 4). This number represents the positive screens that were reported (NOT all of the positive screens at the DA) and is the denominator for the percentages presented in the tables. The data are presented by month in order to show possible trends over time during the course of the project. Table 4 below shows that the DA reported on a combined total of between 19 and 31 clients per month during the project.

Table 4. Positive Risk Identifications by Month at Participating DA

	# Patients/Clients Identified	% of Total
Jan	25	16%
Feb	26	17%
March	29	19%
April	24	16%
May	31	20%
June	19	12%
Overall	***154***	***100%***

Table 5 below shows the percent of clients with identified suicide risk who received either the PHQ-9 or the C-SSRS. In fewer than five cases a client received both, and these are not represented as a separate category in the table. Across all six months, the PHQ-9 was used less often than was the C-SSRS (36% vs. 67%) and there may be a trend towards fewer clients receiving the PHQ-9 at the end of the project. This is also the month when the highest percent of C-SSRS screening were reported, suggesting that some of the clients who previously may have received the PHQ-9 received the C-SSRS instead. Across all six months, the percent of clients receiving the C-SSRS was relatively consistent, varying between 60% in month one and 79% in the final month.

Table 5. Percentages of Screening/Assessment Tools Used by Month at Participating DA

	# Identifications	% with PHQ-9	% with C-SSRS
Jan	25	40%	60%
Feb	26	34%	65%
March	29	41%	69%
April	24	42%	58%
May	31	36%	68%
June	19	21%	79%
Overall	***154***	***36%***	***67%***

Table 6 below shows the data over time for use of CALM and CAMS at the participating DA. CALM was used with at least 50% of the client each month, and varied between 50% to 68%. Use of the CAMS was more variable, with a low value of 9% in 5th month of reporting compared to a high of 50% seen in months three and six. There are no clear trends over time in use of CALM and CAMS across the six months of data reporting, not surprising, given that the DA had largely already adopted these tools.

Table 6. Use of CALM and CAMS at Participating DA

	# Identifications	% with CALM	% with CAMS
Jan	25	52%	20%
Feb	26	58%	33%
March	29	66%	50%
April	24	50%	20%
May	31	65%	9%
June	19	68%	50%
Overall	***154***	***61%***	***30%***

Client-Level Findings for DA

Similar to the PCP, DA were able to identify positive suicide risk among their patients. Compared to the PCP, the DA appear to use the PHQ-9 less frequently (36% at DA versus 90% in PCP). In contrast, 67% of DA clients had evidence of the C-SSRS compared to only 22% of patients at PCP, suggesting the DA have more thoroughly adopted the C-SSRS as a core screening tool for suicide risk.

Use of the CALM was approximately four times more common for DA than for PCP, 61% versus 14%. There was a similar ratio for use of the CAMS, with 30% of DA clients having this documented versus 7% at participating PCP.. It is important to note that lower rates of CALM and CAMS in some PCP (or DA) might not reflect that follow-up care is lacking, since in many cases a warm hand off or other referral may have occurred for those client, and subsequent use of CALM or CAMS may not have been documented. In terms of referrals to other providers or services, 150 (97%) of clients' data indicated a referral had been made. For 67% of clients, it was noted that a warm hand off had been made.

Client Level Data Considerations and Limitations (PCP and DA)

The client level data that were collected from the PCP and DA represent our best understanding of how the changes that were made led to changes in patient/client care. The data were collected using best practices for quality improvement projects in clinical settings, however they also might be impacted by biases and other limitations. One of these is that some PCP and DA reported more data than did others, so that when the monthly data were compiled those sites were more represented than others. In future projects, greater effort can be made to make sure that all of the participating sites collect the same amount of data. This would strengthen our ability to make reliable site-specific as well as time period-specific estimates. Other possible limitations concern sites' having different understanding of some of the terms used in the data collection (e.g., what constitutes a "screener") and not being clear about which sites are being reported on, for example a primary care practice with multiple sites reporting on the aggregate of their sites, instead of on individual sites. Both of these issues could be addressed by providing additional instructions and brief training on the data collection tools. One final limitation worth mentioning is that as with all projects like Suicide Safer Pathways to Care, what gets measured is only the services that were documented. It is possible that the "true" rates of screening, referrals, warm hand-offs, etc., are higher and that our data represent under-estimates. This issue could be addressed in future projects by working with sites (ideally in advance of the project) to ensure that their personnel and documentation systems are ready and able to document the provision of suicide prevention related services. Making improvements in documentation could also be considered as a focus area of future QI initiatives aimed at systematizing suicide safer care, particularly for PCP.

Monthly Technical Assistance (T.A.) and Peer Learning Meetings between PCP and DA

The Blueprint organized monthly T.A. and Peer Learning Meetings for representatives from the DA, PCP, Blueprint and VT-SPC, with topics and presenters assigned for discussion at each meeting.

PCP respondents indicated that representatives from their practices attended the vast majority of monthly meetings with their partner DA to discuss the suicide-safer pathway to care. Overall, PCP attended 93% of meetings and 14 of the PCP (78%) attended meetings in all six months of the mini-grant period. (Survey)

Designated Agencies Most participants from the six DA indicated that representatives from their agencies attended monthly meetings with individuals from corresponding PCP to discuss the suicide-safer pathway to care. Respondents from four DA reported that they had attended 100% of these meetings with PCP during the mini-grant period, while one respondent said they were unsure of which months someone from their agency was able to attend. One respondent commented that someone from their DA was only able to attend two of the six monthly meetings. The overall participation rate in these meetings was 87% (excluding the agency that did not know if someone attended).

Suicide Prevention Tools and Protocols

At end of project, participating PCP and DA were asked to report the stage of implementation of their use of C-SSRS, as well as the degree to which they had developed and implemented workflows and protocols for the suicide prevention pathway in their organizations. Three PCP (18%) reported that they have fully implemented use of C-SSRS, while close to half (47%) said they have partially implemented the screening tool. The remaining PCP were either in the planning stage (12%) or had not yet begun planning or implementation (24%). In regards to implementing protocols and workflows in the suicide prevention pathway, 18% of PCP said they had fully implemented such protocols/workflows. Forty-one percent reported they had partially implemented workflows or protocols, and the same proportion (41%) indicated they were planning to implement them. Looking at the assessment tools in place at participating PCP, all 17 PCP (100%) reported using PHQ-9. Other tools used at three or more PCP included GAD-7, GAD, SDOH, MSE, and the Suicide Risk Assessment.

Looking at participating DA, close to half (43%) reported having fully implemented use of C-SSRS, while another 43% indicated they have partially implemented the tool. One DA (14%) stated it is still in a planning stage for using C-SSRS. In regards to implementing protocols and workflows in the suicide prevention pathway, two agencies (29%) said they have fully implemented such protocols and workflows, while 57% said they have partially implemented them. Looking at assessment tools, five DA (71%) said they use C-SSRS and four (57%) indicated they use PHQ-9. Two DA did not list any assessment tools being used at their agencies. It must be noted that in most DA, implementation is in the Emergency/Crisis Service Areas only.

Table 7. ZS 2021 Mini-Grant Program Implementation Results - PCP

Source: DA and PCP Self Reported Monthly Tracking Sheets B,C,E			
Tool Key: CRAFFT-Substance use screening for adolescents GAD=Generalized Anxiety Disorder,, MSE=Mental State Examination, MSQ-Mental Status Questionnaire, PHQ-Patient Health Questionnaire, SDOH=Social Determinants of Health			
Name	**CSSR-S**	**Specific Tools**	**Protocols/ Workflow**
Champlain Center for Natural Medicine	Full	PHQ-9, PHQ-2, GAD-2, GAD-7	Full
CHC Rutland Region	Full	PHQ-9	Full
Appleseed Pediatrics	Partial	PHQ-9, SDOH	Full

Cold Hollow	Full	PHQ-9	Partial
Concord Health Center	Partial	PHQ-9, Suicide Assessment, GAF	Partial
Danville Health Center	Partial	PHQ-9, GAD, MSE, MSQ, Suicide Assessment, Suicide Risk Screening	Partial
St. Johnsbury Health Center	Partial	PHQ-9, GAD, Suicide Risk Assessment	Partial
Hardwick	Partial	PHQ-9, GAD, MSE, Suicide Risk Assessment	Partial
Stowe Family Practice	Partial	PHQ-9, SDOH	Partial
Morrisville Family Health Center	Partial	PHQ-9, SDOH	Partial
Lamoille Health Partners	Partial		Partial
Ludlow	Not yet	PHQ-9	Planning
Mountain Valley Health	Not yet	PHQ-9	Planning
Springfield Health Center	Not yet	PHQ-9	Planning
Rockingham Health Center	Not yet	PHQ-9	Planning
Island Pond	Partial	PHQ-9, MSE, Suicide Risk Assessment, GAD 7,	Planning
CHC of Burlington	Planning	PHQ-9, Report	Planning
St. Johnsbury Pediatrics	Planning	PHQ-9, GAD 7, CRAFFT, Suicide Risk Assessment	Planning

Table 8. ZS 2021 Mini-Grant Program Implementation Results - DA

Key: Y=yes, P= partial implementation, PL=planning, N= no implementation			
Name	**CSSR-S**	**Specific Tools**	**Protocols / Workflows**
Howard Center	Full	CSSR-S	Full
Lamoille County Mental Health	Full	PHQ-9, SDOH, CSSR-S	Full
HCRS	Full		Partial
NKHS	Partial	PHQ-9, CSSR-S, CAGE-AID, PC-PTSD	Partial
NCSS	Partial	PHQ-9, CSSR-S	Partial
Rutland Mental Health Services	Partial	PHQ-9, CSSR-S	Partial
Washington County	Planning		Planning

Suicide Prevention Training Participation Data

The Tables below reflect participation by staff from the DA and PCP in various suicide prevention trainings over the course of the mini-grant. Specifically, Table 9 summarizes training participation data from CHL records and represents participation across all PCP and DA, reflecting a total of 323 trainees. Participating agencies were asked to complete a form on a monthly basis indicating how many staff members attended relevant trainings during the month and the names of the trainings. This information was tabulated at the end of the grant period. Table 10 reflects the information provided by participating DA and PCP, reflecting a total of 424 trainees. Added together and removing trainees that were counted in both tables (i.e., the 177 individuals who attended the Zero Suicide CAMS and C-SSRS trainings), **a total of 570 trainees from participating DA and PCP engaged in suicide prevention trainings.**

Table 9. Zero Suicide Trainings (CHL) - December 2020 - June 2021

DATE	TRAINING/EVENT	TTENDEES
12/9/20, 2/10/21, 4/14/21, 6/9/21	Umatter Suicide Prevention Awareness Overview Webinar (n=4)	76
1/20/21, 3/3/21, 5/12/21	Introduction to Zero Suicide in Vermont: Suicide Safer Pathways to Care (n=3)	43
1/29/21	Vermont Zero Suicide 20-21 Project Evaluation Design Overview	27
3/1/21	CAMS	82
4/27/21, 5/18/21, 6/3/21	C-SSRS (n=3)	95
Total Trainings = 12	**Total Trained**	**323**

Table 10. PCP-DA Mini-Grant # of Trainees Reported by Sites

PCP (n=17)	CAMS (CHL)	CALM (SPRC)	C-SSRS (CHL)	OTHER*
Appleseed/Stowe/Morrisville (Lamoille Health Partners)	1	12	2	0
Champlain Center Natural Medicine	0	4	0	0
CHC Burlington	3	1	0	0
CHC Rutland	6	0	17	8
Cold Hollow	1	3	9	0
Concord	0	0	0	0
Danville	0	0	0	0
Hardwick	0	0	0	0
Island Pond	0	0	0	0
Ludlow/Rockingham/MV/Springfield	8	8	0	0

St J Health Center	1	0	0	0
St J Pediatrics	2	7	2	4
PCP Subtotals by Training	**21**	**35**	**30**	**12**
DA (n=7)				
Howard	8	26	14	0
LCMHS	9	10	0	0
NCSS	25	19	3	115
NEKHS	2	8	17	40+
CCN Rutland	4	26	0	0
WCMHS (did not receive mini-grant)	N/A	N/A	N/A	N/A
HCRS (did not report)	N/A	N/A	N/A	N/A
DA Subtotals by Training	**48**	**89**	**34**	**155+**
PCP/DA Totals by Training	**69**	**124**	**64**	**167+**
***Other trainings reported by PCP and DA:** Addressing Suicide in Adolescents and Transition Age Youth, Practicing Clinical Skills to prevent suicide, Suicide Assessment and Intervention for Adults, Best Practices in Suicide Screening and Assessment, Suicide and Depression in Older Adults, Addressing Suicide in Adolescents and Transition Age Youth, Approaches to Community-Based Suicide Prevention, Non-Suicidal Self-Injurious Behavior in Adults, QPR, Lifeline Resource Center, Adult Mental Health First Aid, Suicide Specific Interventions, Zero Suicide in VT, Umatter				

PCP/DA Summary	
Clinicians trained in CAMS	69
Practitioners trained in CALM	124
Practitioners trained in C-SSRS	64
Practitioners trained in Other	167+
PCP/DA Total	424

Accounting for duplication between Tables 9 and 10, a total of 570 trainees from participating DA and PCP engaged in suicide prevention trainings.

Conclusions and Recommendations

This section reviews indicators of success and progress, areas where progress is still needed, and discusses implications for the future evolution of the project. These themes were identified across four core evaluation data sources collected from the participating sites and VT-SPC records between January - June 2021.

The sources are:

1. Zero Suicide Mini-Grant Survey Activities Reporting - June 2021
2. Client-Level Data related to risk identification, referral and follow-up
3. Meeting notes, protocols and related materials
4. Suicide Prevention Trainings Participation data

Context

It should be noted that many conversations with both DA and PCP reflected persistent challenges related to availability of clinicians in the workforce, and the pressure this places on the entire system of care. There is as one liaison stated, "a revolving door going on with the workforce," requiring that as the system is built there is an ongoing need to offer and provide training. The COVID pandemic also puts constraints on the system. Given this context, one participant offered, "Sustainability of behavioral health integration may be problematic."

Indicators of Success and Progress

Compliance: Overall, there was a high level of compliance across participating DA and PCP to project and evaluation activities. This indicates commitment to the work, in spite of the impact of the pandemic on health care services and busy clinical and administrative workloads. For example, 100% of all DAs and PCPs that received mini-grants completed the Mini-Grant Reporting Survey.

Meetings between PCP and DA: By all accounts, the mini-grant provided PCP and DA with opportunities to build trusting relationships and foster communication across organizations. Building the expectation for structured meetings was foundational to the success of the project.

Referrals: PCPs reported attending 93% of meetings with DA partners, with DAs reporting an 87% participation rate in these meetings throughout the mini-grant period. PCPs reported the greatest value of all activities to be these meetings, in which the participants focused on referral pathways, care coordination and sharing resources and tools. Further indicating the value of these activities, the areas in which respondents indicated the most advanced stages of implementation were making appropriate referrals in the pathway and engaging in care coordination with other providers and programs in the pathway. 84% of PCP indicated full or partial implementation of referrals.

Training: Limited staff capacity, staff turnover and the pandemic all combined to leave staff with little "time to participate in training and implementation activities" and created "some difficulty coordinating with others". Despite these challenges, both PCP and DA engaged staff in training and a total 570 staff participated in one or more trainings throughout the project period.

Mini-Grants: The mini-grant funding to support infrastructure was the most highly rated aspect of the project and most likely served as an incentive for participation and compliance. 100% of respondents rated funding as very or extremely valuable.

Sustained work over time and implementation stages and outcomes

Most of the PCPs reported being in the exploring/preparing or planning/resourcing stages across all aspects of their work towards building out the pathway and measuring its success. DAs were also largely in the planning/resourcing stages, however, they reported being further into implementing and operationalizing their work.

The DAs reported significantly higher levels of full and partial implementation of all activities, with all other activities in the planning stages. No DA indicated they had not yet begun planning on any activities, a significant improvement from earlier Zero Suicide project surveys three years ago, and in spite of the impact of the pandemic and workforce shortages.

Progress Still Needed and Implications for the Future

Screening

Two thirds of PCPs reported partial or full implementation of screening, as did 100% of DAs. Two thirds of PCP reported having made some concrete changes in screening practices, reporting partial implementation overall. All 17 PCP (100%) reported using PHQ-9, with only a few reporting use of C-SSRS.

Beyond the mechanical use of the suicide-specific screening tools, training on the nuances of screening with clearly established referral pathways is critical for effective implementation. Specific to DAs, support the continued expansion and consistent use of the CSSR-S and CALM.

PCP indicated the following concerns that still need to be addressed:

- Establishing what is universal and what is selective screening
- A perception that the time screening takes results in less time building rapport with patients
- Protocol that allows for discretion about whether to screen or not
- Suicidality that presents itself at any time during time with a patient, even within the last ten minutes, requiring discretion how to respond
- Limited time for safety planning necessitating patients to be redirected in the care pathway
- Concerns about happens after screening and who responds to the needs of the patient
- The need for chart reviews to determine that appropriate follow has occurred
- How to manage this through telehealth, e.g., getting the forms to patients

Assessment, Safety Planning, Treatment

The least advanced stages of implementation in PCP were utilizing Counseling on Access to Lethal Means (CALM) and Collaborative Assessment and Management of Suicidality (CAMS). A quarter of respondents said their PCP had not begun planning how to use CALM with patients at risk. Half the PCPs had not begun or implemented CAMS and no PCP reported full implementation of CAMS in any pathway. There is continued interest in moving towards a greater number of CAMS-trained staff throughout different service areas of the DAs.

Workflow and Protocols

Warm hand-offs were documented mare often in DAs than in PCP sites. For both PCPs and DAs, there is a need to continue working together in order clarify and strengthen referral relationships, including warm hand offs and care coordination. PCP reported a desire to continue to develop protocols and workflows for utilizing CALM and CAMS.

Training and technical assistance focused on protocol and workflow development, while providing training on the actual use of the tools, will likely contribute to more protocols and workflows being developed in the future. Participants requested more models of workflows and opportunities for clinicians to become familiar with them. *"Everyone must be clear on their role in the pathway and the pathway must be specific with roles and responsibilities regarding who takes over and takes on specific tasks from one to another. This includes finding gaps that exist in the process. The pathway/protocols need to address who fills in when a step (department, social worker, therapist, PCP) is not present or able to respond."*

Expansion to all DA Service Areas

The DA have increased implementation of Zero Suicide extensively in Emergency and Crisis Service Areas. There is a need to more strategically engage other Service Areas, such as Children's Services, Adult Out-Patient, Disabilities Services, etc.

Provision of Training

All respondents expressed an interest in continuing to engage staff in training. 72% of respondents said the trainings were extremely or very valuable. PCP rated the trainings coordinated by VT-SPC as the second most valuable mini-grant activity.

PCPs reported more need for training than the DAs, likely because this was their first exposure to opportunities, whereas DAs have been building a critical mass of trained clinicians over multiple years, and have had ongoing access to training through the project.

There should be multiple training opportunities accessible to staff at both DAs and PCPs, with an emphasis on debriefing and discussing applications on-site and between providers.

Elements of the Program

Continue mini-grant funding – This is fully supported by all participants.

Continue monthly meetings between DA and PCP – These meetings were reported as critical to enhanced care coordination

Monthly Technical Assistance and Peer Learning Meetings - The overall participation rate in monthly meetings was 87%. No formal evaluation was conducted on these meetings, however, informal reports were that the exchange of information was useful.

Quarterly T.A. Meetings with VT-SPC - 65% rated these meetings as extremely, very or somewhat valuable. Consideration should be given to what the objectives are for these meetings from the point of view of the grantees. Past implementations indicated that these meetings keep the projects on track and provide a touch point for troubleshooting and sharing successes, and/or innovations they are working on.

Quality Improvement

Data Tracking and Extraction

Data tracking posed a lot of challenges across the organization. Project liaisons working on quality control indicated that it is often challenging to extract screening data from the Emergency Departments. A future focus could be on determining who will gather the data on frequency of screenings and outcomes, e.g., low, medium or high risk, ultimately tracking what happens to each level of the screen. A smaller pilot within the overall project, with several pathway-ready DA and PCP is recommended.

Client-Level Evaluation Data (PCP and DA)

The client level data that were collected from the PC practices and DAs represent our best understanding of how the changes that were made led to changes in patient/client care. A continued and expanded focus of future QI initiatives aimed at systematizing suicide safer care, particularly for primary care practices, could include:

- Adoption/use of tools and processes, e.g., structured screening, CALM, CAMS
- Improvements in making warm hand-offs and in care coordination following the identification of suicide risk.

System of Care Concerns

Behavioral Health Integration

Concern was expressed over the sustainability of behavioral health integration.

Consideration of the role of independent providers

Care Coordination needs to include private therapists/outpatient therapists to integrate with other work they are doing with the patient. Many private practice therapists are not trained in CAMS. "*The challenge with this is that then you may have two therapists or the private therapist may refer to the D.A. without much continuity of care."*

Integration of Best Practices for Telehealth

Telehealth is likely a permanent component of patient care and there is a need for further development of best practices and protocols, e.g., *"…this includes very basic issues such as how to get forms to patients."*

Coordination with Substance Misuse Disorder Treatment

"*Reducing deaths by suicide for patients with substance use disorders is key and something we need to make progress on."*

Conclusion

The project provided a framework and structure to encourage and support the expansion of Zero Suicide principles and practices between a DA and a PCP. All elements of the project demonstrated some efficacy and with modifications may provide the basis for further supporting this work in these pathways of care, and/or in generating new opportunities for DA and PCP to work together. The project results greatly inform a set of lessons learned which can be applied to further expand the approach to training and the focus on quality improvement