CardinalHealth™
FOUNDATION

ZERO SUICIDE COLLABORATIVE

White Paper | 2020-2022

EDC Education Development Center

ZEROSuicide INSTITUTE

EXECUTIVE SUMMARY

In 2020, Cardinal Health Foundation (CHF) released a two-year national Zero Suicide Collaborative grant opportunity. CHF strategically partnered with the Zero Suicide Institute at Education Development Center (EDC) to provide funding, training, and expert support for health care systems to focus on the provision of safer suicide care. A total of 17 hospitals from across the United States participated in the Zero Suicide Collaborative from 2020 through 2022. The work captured in the following report directly touched more than 1.4 million unique patients in care settings across these systems. The purpose of this report is to describe the larger function and purpose of the project, key project outcomes and lessons learned, and implications and recommendations for future Zero Suicide Collaborative projects.

It is important to recognize and celebrate the efforts of these 17 teams. At the initiation of this project, the COVID-19 pandemic had yet to reach the unprecedented level of impact it had on the nation and our healthcare workforce. Teams submitted their RFP responses weeks before shut-downs became a reality across the country. Stressors to health systems peaked and remained at critical levels throughout most of this cohort's experience. While Zero Suicide implementation is always challenging, and better understood as continuous quality improvement initiative, efforts to do this work during the pandemic were undoubtedly harder fought over these two years. Yet, these teams persisted. They showed up and pushed through work. Some pivoted efforts to focus on workforce wellbeing and mental health, as it was deservedly needed. Even amongst these challenges, more than 1.4 million patients were cared for in departments, service lines and units dedicated to providing safer suicide care.

INTRODUCTION

Suicide has long-been recognized as a growing public health crisis and a leading cause of death both nationally and worldwide. Over the past two decades, suicide death rates have continued to increase in the United States. Although the suicide rate declined by 3% from 2019 to 2020, the overall suicide rate remains 30% higher in 2020 compared to 2000. In 2020, suicide accounted the deaths of nearly 46,000 people in the United States, amounting to one death every 11 minutes (CDC, 2022). Suicide is a leading cause of death in all age categories between 5 to 64 years, and the second leading cause of death for youth ages 10-24. In 2020, for the first time, preliminary data identified suicide as the 10th leading cause of death in children ages 5 to 9.

While these statistics establish suicide as a public health crisis, they represent a limited scope of the impact of suicide. For every death by suicide, it is estimated that there are approximately 25 suicide attempts. In the United States in 2020, 1.2 million people made a suicide attempt and more than 12 million reported experiencing serious thoughts of suicide (CDC, 2022). Other researchers found that between 2007 and 2015, emergency department visits by children and teens for suicidal ideation and suicide attempt nearly doubled (Burstein, Agostino & Greenfield, 2019). Multiple findings confirm that individuals at risk for suicide are frequently seen in emergency departments and other healthcare settings, lending credence to national efforts to standardize the identification of suicide risk and care delivery in emergency and primary healthcare systems.

Contact with healthcare providers in the period leading up to suicide is common. Luoma and colleagues (2022) examined 40 studies and found that in the month prior to death by suicide, 45% of individuals had a primary care encounter. This rate increased with age; for individuals 55 and older, 58% saw a primary care provider in the month prior to death, and for the elderly, that rate increased to 70% or more. In fact, one-third had seen a healthcare provider *in the week prior to death* (Valente, 2002). In contrast, only about 20% of individuals who die by suicide have contact with a mental health provider in the month prior to their death, and less than half have a diagnosis of a mental health disorder.

Medical specialty and primary care visits without a mental health diagnosis are the most common healthcare contacts for decedents in the year prior to death, followed by emergency department visits without a mental health diagnosis (Ahmedani, Simon, Stewart, et al., 2014). Outpatient mental health specialty visits were the fourth most common.

These findings suggest that mental health and suicide risk should be assessed more thoroughly, particularly in general medical settings. However, a multitude of barriers prevent successful identification of suicide risk in general health care settings. One challenge may be the lack of suicide-specific training and low competence in suicide-specific care across medical providers. Less than half of emergency department physicians and nurses believe that suicide is a preventable death, and providers with lower self-confidence in their skills are less likely to screen patients for suicide risk (Betz, Sullivan, Manton, et al., 2013).

Alarmingly, recent research has noted the scope of this lack of competency may also extend to behavioral health professionals, with several findings indicating a lack of preparation for suicide-specific care. Less than 50% of psychology graduate students report receiving any training in suicide prevention during their graduate program. In a study of more than 2,000 outpatient mental health clinicians, over half reported not receiving sufficient training to effectively support clients experiencing suicidality (Labouliere, Green, Vasan, et al., 2021). The majority surveyed reported receiving less than 4 hours of suicide prevention trainings across their entire career, typically in the form of continuing education experiences that may not be carefully regulated or evaluated.

While clinical competency is a critical issue for the delivery of effective suicide care, providers also experience various implementation barriers including more demanding productivity expectations, increasingly rigorous regulatory standards, and greater complexity in patient care. Suicide prevention efforts may best be deployed in the context of a multi-faceted systems approach that can address training and competency, but also implement suicide-specific care in a coordinated way with leadership and workforce support, optimization and integration of the electronic health record (EHR) or other documentation systems, and clinical decision support, such as those developed by Coffey and colleagues (2007) and the National Suicide Prevention Lifeline. Each of these efforts share common themes and strategies, and provided compelling evidence that healthcare systems can significantly reduce suicide by creating cultures with commitments to preventing suicide, providing linkages to care, and prioritizing continuous quality improvement (Coffey, 2007; Knox, Litts, Talcott, et al., 2003).

USING CARE FRAMEWORKS TO TRANSFORM SYSTEMS

"The concept of health care providers playing an ongoing instead of visit-oriented role is as useful for suicide prevention as it is for the management of other chronic health conditions." (Hogan & Grumet, 2016).

Quality improvement is a data-informed systematic approach to improve efficiency, ensure positive patient outcomes, and reduce costs within healthcare systems. Quality improvement initiatives, while relatively new in healthcare spaces, have long been established in other disciplines that contend with "high risk, high reward" situations. For example, in the last 2 decades, commercial

aviation fatalities decreased 95% in the United States and operates “at an unprecedented level of safety" (Federal Aviation Administration [FAA] , 2018). This record of safety is attributed to the FAA’s “continued evolution” in how it approaches safety oversight. Key to its success is a “longstanding commitment to sharing data through an open and collaborative safety culture to detect risks and address problems before accidents occur.”

Introducing the Zero Suicide Framework

Suicide prevention garnered the attention of the healthcare industry on a large scale for the first time in 2016. Although attention had been paid to suicide occurring in inpatient settings, in 2016, the Joint Commission, a leading accrediting body for healthcare providers across the United States, released *Sentinel Event Alert 56, Detecting and Treating Suicide Ideation in All Settings*, establishing suicide prevention as a healthcare priority. While this effort was a seminal contribution to expanding the role of healthcare providers in the prevention of suicide, it was informed and supported by years of cross-disciplinary suicide-specific research on not only what suicide prevention best practices are, but how to scale and implement them in real world care contexts.

Following the 2001 Institute of Medicine’s (IOM) Crossing the Quality Chasm report, Henry Ford Health began work to outline a project they coined “Perfect Depression Care,” an effort to improve depression outcomes in their behavioral health population. However, when presenting their work to IOM, they were confronted with the notion that “reducing depression” was not compelling quality improvement; meaning that it did not enact enough movement toward flawless depression care. Challenged to redefine their measures, Henry Ford set “zero suicides” as the goal for a system providing perfect depression care.

The Henry Ford approach included a number of foundational practices as it aimed for zero: systematic suicide assessment for all patients, lethal means counseling, a program of follow-up outreach to patients, and a focus on educating providers. The Perfect Depression Care effort reduced suicide deaths in the Henry Ford Health system by more than 75%, an improvement that was sustained for more than a decade (Coffey, Coffey & Ahmedani, 2013). The Henry Ford approach shared a number of elements in common with an effective suicide prevention program in the US Air Force, which prioritized leadership engagement and education; training in suicide prevention, assessment and intervention; coordinated referrals and resources for those in need; community education and gatekeeper trainings; revisions to policy; and a suicide event surveillance system (Knox, Litts, Talcott, et al., 2003). Zero Suicide is based on the recognition that people at-risk for suicide often fall through the cracks in fragmented and distracted systems; and recognizes that transformative change cannot be borne solely by individual practitioners delivering care. Zero Suicide is a system-wide approach to improve care and bridge gaps in systems.

COMPONENTS OF THE ZERO SUICIDE FRAMEWORK

In an effort to operationalize the principles of these effective approaches to suicide prevention into a workable model for broad-scale application, Education Development Center (EDC) defined seven critical elements of the Zero Suicide framework, which exists as a publicly-available online toolkit providing guidance, tools, and examples for organizations interested in implementing suicide safer care. These components include: leadership, training, screening and assessment, systematic suicide care protocols, evidence-based treatment of suicidality, provision of excellent support during care transitions, and measuring outcomes and conducting quality improvement.

Initial feasibility studies demonstrated that the components of Zero Suicide could be implemented in real world care settings, built into routine clinical workflows, and measured successfully. Early adopters of this work experienced outcomes similar to Henry Ford's foundational work: Centerstone of Tennessee, part of the nation's largest not-for-profit community mental health provider, saw a 64% reduction in suicide deaths in the first 2 years of implementation (SPRC, 2018). In a recent landmark cross-sectional study of 110 mental health clinics, higher fidelity to Zero Suicide best practices was correlated with lower incidence of suicide-related events (Laymen et al., 2021).

CARDINAL HEALTH FOUNDATION'S COMMITMENT TO ZERO SUICIDE

As a global company providing vital connections between the clinical and operational sides of healthcare, Cardinal Health improves lives every day. Serving nearly 90% of hospitals in the United States, Cardinal Health touches more than 3.4 million patients and employs approximately 44,000 employees worldwide. Corporate citizenship is a care philosophy of the organization. Cardinal Health works to build a better tomorrow through strengthening communities, innovating technology solutions, and creating cost-effective and outcomes-driven connections in healthcare. Cardinal Health Foundation (CHF) has prioritized philanthropy in mental health a number of ways. They invested $2.6 million in suicide prevention, increased access to mental health services, and are changing the culture and conversation around mental health across their organization with the Mind Matters program, focusing on addressing the mental health needs of employees.

In 2020, CHF released a two-year national Zero Suicide Collaborative grant opportunity. Strategically partnering with the Zero Suicide Institute at Education Development Center (EDC) to provide funding, training, and expert support for health care systems to focus on the provision of safer suicide care, this opportunity also provided up to $100,000 to healthcare systems across the country that were committed to the implementation of the Zero Suicide framework and the provision of safer suicide care.

The aim for this project was not to examine direct outcomes of Zero Suicide interventions on specific patient level outcomes (i.e., reduction in ideation, attempt, death), but rather to systematically support healthcare systems' efforts to improve the care they provide to persons at risk for suicide, and to examine feasibility of implementation, breadth of impact, shared challenges, and the collective impact and value of a cohort model of implementation.

MAKING PROGRESS

As the "maiden voyage" of the CHF Zero Suicide Collaborative initiative, measurement goals for this project focused primarily on tracking implementation process and progress, data literacy and capacity improvements, and identifying lessons learned and areas of opportunity. As many of the participating organizations entered the collaborative with little to no suicide-specific data collection capacity, all participating agencies may not be represented in the outcome metrics below. Select key outcomes are listed below. A comprehensive summary of the project methods and other outcomes is included as an appendix.

Zero Suicide Element	Activity/Goal	Select Data/Outcome*
LEAD	Increase leadership commitment to suicide safe care	75% saw an increase in leadership commitment to reduce suicide and improve suicide safer care.
TRAIN	Develop and support a competent, confident, and caring workforce	92% started or continued to provide staff training on evidence-based suicide risk screening.
IDENTIFY	Increase use of a standardized risk assessment tool and risk formulation	92% embedded or continued evidence-based suicide risk screening in their EMR or made screening easily identifiable in their written documentation.
ENGAGE	Increase implementation of collaborative care plan for those who screen positive for suicide risk	75% started or continued to provide staff training on evidence-based safety planning.
TREAT	Increase implementation of evidence-based single or ongoing suicide-specific treatment interventions	83% created or continued written agency policy and protocol for evidence-based lethal means counseling, an evidence-based strategy.
TRANSITION	Establish care transitions use caring contacts, appointment reminders, and bridge appointments	57% established caring contact policies/procedures to support effective care transitions.
IMPROVE	Collect and examine data routinely, and maintain fidelity to the processes established for the system	75% developed or continued a Zero Suicide Implementation team that meets regularly and develops and shares guidelines with staff, while 41% also incorporated process and policy modification based upon real time data review and staff input.

*Additional data available in appendix

ADDITIONAL OUTCOMES

A significant barrier in the present cohort existed in consistent data monitoring and reporting of the five required metrics (suicide screening, assessment, attempts, deaths, and one self-selected metric). It is not uncommon for health systems to encounter challenges establishing reliable data monitoring systems. Many will not have infrastructure in place until several years into implementation. This cohort did have several teams new to Zero Suicide implementation, whose work focused on defining target populations for their efforts, identifying tools and aligning policies, which impacted access to baseline data. Additionally, creating processes to monitor process fidelity is far easier than outcome monitoring, thus many teams were unable to finalize reliable outcome metrics during the life of the project. As many of these data were missing, data analysis on change to the required five metrics over time was not possible upon the conclusion of the project. However, it should be noted that the core function of this project was to examine the processes, successes, and barriers of Zero Suicide implementation in diverse health systems, and all participating agencies saw significant improvements in the development of awareness, commitment, and infrastructure for suicide-safer care (as noted in the table above).

Some unique approaches and achievements that can be highlighted:

- One team's work in creating lethal means toolkits for internal and community providers contributed to statewide and national legislative efforts around child suicide prevention and lethal means safety.
- Two teams began to integrate peer supports or peer navigators into care delivery.
- One team commenced Project ECHO (Extension for Community Healthcare Outcomes) focused on supporting their physicians around the management of depression and suicide. Two of the eight sessions focused on suicide, one on non-suicidal self-injury. This team celebrated no attrition of physician and resident attendees throughout the series.
- One team created a residency training program for suicide safe care. Pilot testing demonstrated increased self-efficacy after training.

Other noteworthy trends include:

- Most teams prioritized work in 4 of the 7 elements of the framework: LEAD, TRAIN, IDENTIFY, & IMPROVE.
- Fewer than half of the teams successfully incorporated lived experience into their efforts.
- Due to the COVID pandemic, most teams experienced significant delays or diversions from their initial implementation plan, particularly related to training roll-outs.
- TREAT was a universally challenging element for teams due to initial training cost, training/supervision infrastructure development, workforce retention issues, etc.
- Most teams began planning care transitions communications, but were not yet able to optimize the health record to support those activities before the close of the project.

THE EXPERIENCE OF TEAMS

"We appreciate the support we've received from Zero Suicide Institute and Cardinal Health as we look forward to expanding our Zero Suicide efforts, particularly in terms of collaboration with community partners, such as schools and churches."

"An associate was in the hallway of one of our hospitals and found a visitor who was crying and clearly upset. When our associate made contact with this visitor, she reported to the associate that she was planning to end her life by suicide and needed help.

It was a blessing that the associate had been through training as a result of the Zero Suicide initiative. This training gave her the resources and skills to be able to immediately get this individual the help she needed. "

"Through aggressive data collection and reporting we have been able to identify gaps in care and training for our processes and associates. Due to the commitment of the organization, we have been able to make necessary changes to these processes. This work has been the springboard for system policy change leaning into best practice for suicide care."

"Zero Suicide saves lives. The Zero Suicide initiative has saved lives within our community. The advocacy and attention brought to suicide care has caused this critical issue to reach the ears of frontline staff and senior executives alike. We are honored to be part of this critical initiative."

"During the height of Covid our Zero Suicide coordinator began a Zoom group for isolated seniors. This group has allowed a sense of connection and as a result of these connections we know of two seniors who were helped through their suicidal intentions and severe mental health crisis situations. This was only possible because of the work being done by the Zero Suicide Initiative."

"The national and state Zero Suicide team has done an exceptional job of bringing the community together to collaborate around suicide care. Our monthly learning collaborative calls have allowed for great networking."

"Over the past two years, we have worked to begin implementation of Zero Suicide. The response to this project has been overwhelmingly positive. I've found that our associates take pride in being an organization committed to suicide prevention, for both our patients, and our associates. By teaching our staff how to talk to patients about suicide, and implementing best practice initiatives in suicide prevention, it not only optimizes safety and quality of care for our patients, but it increases engagement and commitment among our associates."

Quotations slightly altered for the sole purpose of system anonymity.

IMPLICATIONS & RECOMMENDATIONS

In addition to the Zero Suicide capacity improvements noted in the previous section, CHF and Zero Suicide Institute identified several additional themes and trends that may be critical for future Zero Suicide Collaborative initiatives.

01. Data Collection Capacity

Most agencies were unable to systematically monitor suicide attempt and death rates. A common issue in suicide prevention in healthcare systems, future initiatives should prioritize data collection capacity and literacy to track the impact of Zero Suicide interventions on suicide attempt and death. This is a challenge experienced by most implementation teams across the United States. Few states have built surveillance infrastructure to support valid reporting of suicide death data. Many states may rely on CDC-released data, which is time-delayed and cannot be isolated to individual healthcare systems. Systems may also establish formal partnerships with local medical examiners' or coroners' offices, but again, these data have to be intentionally retrieved on a regular basis in order to inform real-time systems transformation.

02. Population/Context-Specific Focus

As many of the interventions and strategies included in the Zero Suicide framework were designed to be tailorable for specific populations and/or settings (i.e., inpatient vs. outpatient, adult vs. child, etc.), future collaboratives could incorporate target populations in the inclusion criteria for awardees. This would allow for more focused attention in Communities of Practice on topics and strategies that will be more salient for the entire cohort.

03. Lived Expertise Perspective

Over the past decade, the field of suicide prevention has increasingly relied upon the lived expertise of persons whom have been directly affected by suicide (i.e., attempt and loss survivors) and in fact, this is a foundational component of the framework. While a recommended practice, engaging persons with lived expertise may be challenging (i.e., internalized stigma, lack of training/resource in how to invite and incorporate the lived expertise perspective). Future projects could incorporate the lived expertise component as a requirement for funding/participation in the Community of Practice to promote advocacy and inclusion of this critical perspective.

ACKNOWLEDGEMENTS

This project would not be possible without the efforts of the participating organizations:

- Ann & Robert H. Lurie Children's Hospital of Chicago Foundation, Chicago, Illinois
- Arkansas Children's Foundation, Little Rock, Arkansas
- Aurora Health Care, Inc., Milwaukee, Wisconsin
- Centura Health – Mercy Regional Medical Center, Durango, Colorado
- The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania
- Dell Medical School, UT Health Austin, Austin, Texas
- Dignity Health Foundation – East Valley, Chandler, Arizona
- The Ohio State University Foundation, Columbus, Ohio
- OhioHealth Foundation, Columbus, Ohio
- Weill Cornell Medical College, New York, New York
- Weston County Health Services, Newcastle, Wyoming
- Ohio Children's Hospital Association (OCHA) Foundation, for OCHA member hospitals:
  - Akron Children's Hospital, Akron
  - Cincinnati Children's Hospital, Cincinnati
  - Dayton Children's Hospital, Dayton
  - Nationwide Children's Hospital, Columbus
  - ProMedica Russell J. Ebeid Children's Hospital, Toledo
  - University Hospitals Rainbow Babies & Children's Hospital, Cleveland

CONTACT

Cardinal Health Systems
7000 Cardinal Place,
Dublin, OH 43017
www.cardinalhealth.com

Zero Suicide Institute
Education Development Center
7300 Fifth Avenue, Suite 2010
Waltham, MA 02451
www.zerosuicideinstutte.com
www.edc.org

Report created by the Zero Suicide Institute within Education Development Center in collaboration with Cardinal Health Foundation

APPENDICES

PROJECT COMPONENTS & METHODS

01. Participants

A competitive request for proposals (RFP) was open to any U.S. nonprofit healthcare organization ready to commit to the implementation of the Zero Suicide framework. All applications were submitted electronically via the Zero Suicide Institute website and consisted of demographic information about the system, a written proposal, and a letter of support for the work by the organization's chief executive officer. Applications were scored on their readiness for Zero Suicide implementation (as demonstrated by existing suicide safer care, or other systems transformation work), appropriateness and strength of the identified implementation team members, the ability to align with other internal transformations or projects, and the overall strength of the narrative and project goals. Applications were also scored on the inclusion of health equity in their application.

A total of 20 applications were received. A team of three reviewers from EDC scored the applications. The top 11 applications were accepted into the cohort, joining a previously identified cohort of six Ohio-based children's hospitals, totaling 17 healthcare systems from across the country. In addition to the six OCHA hospitals, four additional teams focused exclusively on youth populations and/or were children's hospital systems, specifically. Two systems identified adults as their population of primary focus; and five identified the lifespan. System demographics varied significantly, and represented inpatient psychiatric, inpatient medical, ambulatory/outpatient medical, neurosciences, outpatient behavioral health, emergency, and oncology settings.

The smallest system consisted of one service site and employed 180 staff, while the largest system included 28 hospitals, 500 sites of care, and more than 75,000 employees. Two of the awarded systems were classified as both inpatient/integrated healthcare delivery systems, as well as Federally Qualified Healthcare Centers (FQHCs). Geographically, teams were diversely represented across the US, with majority in the Midwest region. Ten of the 17 teams were from the Midwest; three from the West; three from the South; and one team from the Northeast. Some of the systems accepted into the collaborative demonstrated previous work in Zero Suicide within their system, while others had no previous experience. Further, there was vast diversity in each system's implementation goals. Some systems focused implementation in Emergency Department, others in specialty behavioral health or primary care, while others focused efforts on preparing physician provider populations to address suicide-related concerns in practice. Some were planning brand new implementation efforts, while others were building on existing Zero Suicide infrastructure.

02. Intervention

The CHF Zero Suicide Collaborative was designed to support hospitals nationwide through their implementation of the Zero Suicide framework. In addition to the grant award of $100,000, the support provided to awarded teams included a 90-minute virtual workshop to introduce the Zero Suicide framework and overview the two-year project, two 60-minute webinar sessions focused on implementation team composition and responsibilities and data reporting, team participation at a 2-day Zero Suicide Academy© Online, participation in a nine-session bimonthly Community of Practice following the Academy, and 3 individual system consultation calls.

Participation in the training and consultation services began in fall 2020, with the virtual webinar event. In this 90-minute webinar, implementation teams were introduced to the overall project and provided an overview of the Zero Suicide framework, including its history and philosophy. Time was spent in this session reviewing ideal implementation team member roles and discussing the data reporting requirements of the project. Following this event, the majority of teams did initiate transitions in the composition of their implementation teams, replacing higher-level leadership with members more closely tied to clinical care, quality or process improvement.

In October 2020, teams participated in a 2-day Zero Suicide Academy, delivered online as a result of the novel coronavirus pandemic. The Zero Suicide Academy is EDC's signature training for health and behavioral health organizations seeking to reduce suicide deaths by using the Zero Suicide framework. Led by our expert Zero Suicide Institute staff and faculty, the Zero Suicide Academy provides teams from health and behavioral health organizations with an opportunity to kick-off their Zero Suicide implementation, learn about the Zero Suicide framework and seven elements, begin strategic implementation planning, and prepare for commonly faced challenges. Specific implementation guidance, recommendations, and lessons learned are shared by Zero Suicide Institute faculty and other experienced Zero Suicide implementers, tailored to the needs of the participating teams. Using the Zero Suicide framework, participants learn how to incorporate best and promising practices into their organizations and processes to improve care and safety for individuals at risk of suicide. The event includes both interactive presentations and small group sessions. There is time for our staff and faculty to collaborate with participants—and for participants to work with their own organization's team—to develop organization-specific action plans.

A month following the Academy, a meeting was held for team leads, specifically to address questions related to data capture and reporting. Topics involved data usage, data use agreements, definitions of required metrics, etc. For the purposes of this project, all data was reported to Cardinal Health Foundation, as data use was covered by the grant agreement; however several teams entered into separate data use agreements with CHF at the request of compliance or legal. CHF monitored data reporting for incomplete or absent reporting. At the completion of the project, CHF de-identified the data and provided a final report for each system to Zero Suicide Institute for data analysis.

In January 2021, the Community of Practice (CoP) commenced. The CoP was held bimonthly for 9 sessions, ending in May 2022. The CoP was open to the 4 primary implementation team members, however more flexibility was allowed for ad hoc attendees to participate in these sessions. The CoP was delivered concurrently with 3 individual system consultation calls. The calls commenced in Spring 2021 and were delivered approximately every 6 months, but could be held on-demand at the request of a team for a specific need.

For each system consultation call, the Zero Suicide Institute Senior Project Associate contacted each team lead at least two weeks ahead of the scheduled call to begin agenda planning in order to engage resources or subject matter experts to assist teams as needed. Systems had flexibility to invite anyone from their organization to attend these calls, as they determined necessary.

03. Data Collection and Analysis

The Improve element of the Zero Suicide framework compels all selected organizations to identify both process and outcome measures to monitor their progress and report results. Awarded teams were required to report on five metrics; four of which were required and defined by CHF and Zero Suicide Institute; the fifth was a metric unique to each team's own implementation plan. The required metrics included two process measures: screening (the percentage of unique patients where screening occurred in accordance with organizational policy) and assessment (the percentage of positive screens where a follow-up assessment was completed in accordance with organizational policy); and two outcomes measures: suicide death and attempt rates among all patients served. Data use agreements were established between teams and CHF, as CHF managed all data collection on identified metrics. At the end of the project, CHF deidentified all of the data sets and provided the data to Zero Suicide Institute for analysis.

Participating teams also reported progress on up to 4 active implementation goals on a monthly basis. Data was also collected through the Zero Suicide Organizational Self-Study (OSS). Teams completed their first OSS after acceptance into the Collaborative in fall 2020, and again annually in 2021 and 2022. Monthly reporting also captured qualitative data including current challenges or barriers, plans to address said barriers, and questions for the cohort, CHF, and Zero Suicide Institute. In the monthly reports, teams were encouraged to identify accomplishments or creative solutions that they might be willing to present to the cohort in one of the Community of Practice sessions. They were also encouraged to track questions for the upcoming consultation calls. These monthly reports were used primarily to identify needs and topics for the ongoing Community of Practice, and to plan agendas for the individualized consultation calls. Some teams also initiated the Zero Suicide Workforce Survey as part of their implementation work; however, this was not a required activity and was not tracked as a data measure across the cohort. All qualitative data was submitted to Zero Suicide Institute for review. The Zero Suicide Institute Senior Project Associate reviewed monthly reports at least quarterly to track consultation needs, plan upcoming CoP topics and monitor trends across teams. Annual progress reports were also submitted to Zero Suicide Institute for review.

ADDITIONAL DATA

Of the 12 organizations with all three data points:

- 75% saw an increase in leadership commitment to reduce suicide and improve suicide safer care.
- 100% created or continued written agency policy and protocol for evidence-based suicide risk screening.
- 92% embedded or continued evidence-based suicide risk screening in their electronic health record (EHR) or made screening easily identifiable in their written documentation if an EHR was not present.
- 92% started or continued to provide staff training on evidence-based suicide risk screening.
- 100% created or continued written agency policy and protocol for evidence-based suicide risk assessment.
- 83% created or continued written agency policy and protocol for evidence-based lethal means counseling.
- 75% embedded or continued evidence-based lethal means restriction in their electronic health record (EHR) or made lethal means restriction easily identifiable in their written documentation if an EHR was not present.
- 67% started or continued to provide staff training on evidence-based suicide risk assessment.
- 75% created or continued written agency policy and protocol for evidence-based suicide safety planning.
- 58% embedded or continued evidence-based safety planning in their electronic health record (EHR) or made screening easily identifiable in their written documentation if an EHR was not present.
- 75% started or continued to provide staff training on evidence-based safety planning intervention.
- 67% created or continued written agency policy and protocol for implementing suicide care management plans.
- 50% embedded or continued suicide care management plans in their electronic health record (EHR) or made screening easily identifiable in their written documentation if an EHR was not present.
- 50% started or continued to provide staff training on suicide care management plans.
- 75% developed or continued a Zero Suicide Implementation team that meets regularly and develops and shares guidelines with staff, while 41% also incorporated process and policy modification based upon real time data review and staff input.

REFERENCES

Ahmedani BK, Simon GE, Stewart C, Beck A, Waitzfelder BE, Rossom R, Lynch F, Owen-Smith A, Hunkeler EM, Whiteside U, Operskalski BH, Coffey MJ, Solberg LI. (2014). Health care contacts in the year before suicide death. J Gen Intern Med. 29(6), 870-7.

Betz, M. E., Sullivan, A. F., Manton, A. P., Espinola, J. A., Miller, I., Camargo, C. A., & Boudreaux, E. D. (2013). Knowledge, Attitudes, and Practices of Emergency Department Providers in the Care of Suicidal Patients. Depression & Anxiety, 30(10),1005–1012.

Burstein B, Agostino H, Greenfield B. (2019). Suicidal Attempts and Ideation Among Children and Adolescents in US Emergency Departments, 2007-2015. JAMA Pediatr.173(6):598–600.

Coffey CE. (2007). Building a system of perfect depression care in behavioral health. Jt Comm.J Qual Patient Saf.33(4), 193–199.

Coffey, CE, Coffey, HM, & Ahmedani, BK, (2013). An Update on Perfect Depression Care. Psychiatric Services. 64(4), 396-396.

Covington D, Hogan, M, et al. (2011). Suicide Care in Systems Framework. National Action Alliance for Suicide Prevention: Clinical Care Task Force.

Federal Aviation Administration (2018, August 2). Out Front on Airline Safety: Two Decades of Continuous Evolution. https://www.faa.gov/newsroom/out-front-airline-safety-two-decades-continuous-evolution.

Goldsmith SK, Pellmar TC, Kleinman AM & Bunney WE, editors (2002). Reducing Suicide: A national imperative. Washington, DC: National Academies Press.

Labouliere CD, Green KL, Vasan P, Cummings A, Layman D, Kammer J, Rahman M, Brown GK, Finnerty M, Stanley B. (2021). Is the outpatient mental health workforce ready to save lives? Suicide prevention training, knowledge, self-efficacy, and clinical practices prior to the implementation of a statewide suicide prevention initiative. Suicide Life Threat Behav. 51(2):325-333.

REFERENCES

Layman DM, Kammer J, Leckman-Westin E, Hogan M, Goldstein Grumet J, Labouliere CD, Stanley B, Carruthers J, Finnerty M. (2021). The Relationship Between Suicidal Behaviors and Zero Suicide Organizational Best Practices in Outpatient Mental Health Clinics. Psychiatr Serv. 72(10):1118-1125.

Luoma, J.B., Martin, C.E., & Pearson, J.L. (2002). Contact with mental health and primary care providers before suicide: A review of the evidence. American Journal of Psychiatry, 159(6), 909-916.

Valente, S. (2008). Suicide Risk in Elderly Patients. The Nurse Practitioner: The American Journal of Primary Health Care, 33(8), 34-40.

Knox KL, Litts DA, Talcott GW, Feig JC, Caine ED. (2003). Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: cohort study. BMJ. 327(7428):1376.