



EMSC
**Quality Improvement
Collaboratives**

Quality Improvement Implementation Guide

Emergency Department (ED)

**Screening and Treatment Options for Pediatric
(STOP) Suicide**

Quality Improvement (QI) Collaborative

February 2023 through November 2023

This material complements information in the [Welcome Kit](#) and provides collaborative teams with guidance on quality improvement (QI) strategies and resources to help them design, implement, and report on achievements related to a QI project. The QI project is designed to improve ED-based clinical care processes for pediatric acute suicidality. This approach can be adapted to meet the unique needs of ED patients.

Table of Contents

Acknowledgements	3
Introduction	3
Designing a QI Project/Process	3
Quality Improvement Concepts	4
Building Your Team	4
Creating SMART Aim Statements	7
Establish Your Measures	7
Key Drivers and Key Driver Diagrams	8
Plan-Do-Study-Act Cycles	9
Process Map	10
Resources	10
References	10

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Introduction

This Quality Improvement Implementation Guide was developed by the Emergency Medical Services for Children Innovation and Improvement Center (EICC) for the ED STOP Suicide QI Collaborative initiated in 2023. This collaborative is an initiative of the Emergency Medical Services for Children Innovation and Improvement Center. The material in this guide is based on available evidence and resources and offers background information and strategies to support ED-based care teams in implementing a QI project to optimize the clinical care process for children and adolescents presenting to the ED with acute suicidality. These materials are supplemented by other resources, e.g., a [Welcome Kit](#), [launch webinar](#), an [introductory webinar](#), [intervention bundle guides](#), office hours, [fireside chats with experts](#), coaching by QI and content experts, as well as staff and subject matter expert support.

Designing a QI Project/Process

Environmental Scan

The primary purpose of the environmental scan is to better understand the current ED resources, staffing, and processes that exist to care for the population of interest. Completing the environmental scan assists a team in identifying critical deficiencies or minor gaps in the care process that can serve as the focus for improvement efforts. While teams may identify opportunities across multiple intervention areas: suicide screening, mental health assessment, ED-based interventions, and/or discharge and safety planning, it is important to use the environmental scan results to help prioritize one or more areas of focus. Each environmental scan was carefully crafted to highlight evidence-based practice, identify system-level resources that could be used to enhance or optimize the care process, and support prioritization of improvement efforts.

After completing a brief needs assessment (participant demographics form and environmental scan), teams design and implement a QI project focused on one or more specific components of the clinical care process: suicide screening, mental health assessment, ED-based interventions, and/or discharge and safety planning. Educational materials referred to as intervention bundle guides are available [online as resources](#) for each of these topic areas to help guide teams. In addition, foundational QI training covered the following topics:

- Strategies to identify gaps in care/conduct needs assessments
- The [Institute for Healthcare Improvement Model for Improvement](#)
- Creating SMART (specific, measurable, achievable, relevant, and timely) aims
- Developing key driver diagrams to identify change strategies
- Integrating additional QI tools into project/improvement efforts
- Sustainability and dissemination techniques

The success of any QI project depends on well-matched institutional and clinical care team support, available resources, and achievable goals. In this QI Implementation Guide, the appropriate steps will be described to ensure success in each of these areas. Most importantly, the success of a QI project is not dependent solely on financial resources or technology. In fact, some of the most successful QI efforts are simple and cost-effective.

Quality Improvement Concepts

“Quality Improvement”, or QI, is a framework used in health care, and many other industries, to make improvement through the standardization and optimization of processes and structures to improve outcomes. The goal of this approach is to 1) reduce variation in processes, 2) achieve predictable and repeatable results, and 3) improve the outcomes of patients, systems, and organizations).¹ There are different models of QI; the EIC follows the [Institute for Healthcare Improvement \(IHI\) Model for Improvement](#).

The “Model for Improvement” seeks to answer three questions²

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?

To answer these questions, the IHI lays out a road map for testing change and making improvements:

1. Build your team
2. Set your SMART Aim
3. Establish your measures
4. Select the changes you would like to make
5. Test your changes through the use of Plan-Do-Study-Act (PDSA) cycles
6. Implement your changes
7. Spread those changes

Building Your Team

To create effective and lasting change, you will want to make sure you have the right people at the table. Below are key steps for you to consider as you establish your teams.

KEY 1: Build a Team

The achievements of an organization are the results of the combined effort of every individual. It takes the commitment of the QI team lead, QI team members, and the larger ED care team to ensure that the QI efforts the team selects positively impact the pediatric patients served. Consider the following ideas as models for building a local QI team - the information is not all-inclusive nor required. For the [ED STOP Suicide QI Collaborative](#), participation requires that each ED site team include two or more ED professionals. Some teams include two people, while other teams are quite large (15+ professionals). See [Participation Details](#).

It is most important that the QI team include individuals with diverse representation or multidisciplinary perspectives of the care process and who have a vested interest in the patient outcomes of interest. This might include clinicians, mental health professionals, technicians, Internet Technology staff, pharmacists, leadership, risk management personnel, and family representatives. A stakeholder grid can be used to help teams identify critical individuals.

As each team moves through the QI collaborative process, it is wise to consider having at least a few people to share ideas, strategies, and workload. It is hoped that teams that decide to expand are multidisciplinary. Below is a sampling of the types of professional currently participating in this collaborative:

- Nursing professionals - registered nurses, nurse practitioners, those with advanced/doctoral degrees
- Physicians - MDs, DOs
- Social work professionals at various levels of training and certification

- Master's degree or doctoral degree graduates
- Child Life Specialists (licensed)
- Counselors (licensed)
- Mental health care providers (licensed)
- Emergency medical technicians at various levels of training and certification
- Intake personnel

Thinking through who is involved in the team, the levels of influence each would have, and how best to engage these individuals is critical to success. Select resources might include:

- IHI asset mapping [presentation on stakeholder engagement](#). Slides 20-22 might be most helpful.
- Project Management.com [Stakeholder Analysis](#) using the Power Interest grid.

With a larger team, participants should be involved in all decision making and final implementation of the QI project or clinical care process improvement plans. Because projects have aims and quality measures along with options for data collection, it is important to find one or more team participants who are familiar with the sites medical record system, generation of electronic reports, data abstraction, and data compilation. Familiarity with staff education, credentialing, and/or regulatory requirements can also be helpful. These approaches will support your team in creating viable and potentially sustainable improvement strategies.

KEY 2: Seeking Support from Stakeholders

It is important to keep the ED leadership (directors and managers) and other hospital administrators informed of the important work being done by the team as well as the collaborative as a whole. It should not be assumed that ED or hospital leadership inherently understand the importance of a QI effort. Teams can ensure that the leadership understands the goals and potential value of this work given numerous competing priorities in the healthcare setting prior to beginning any QI efforts to ensure barriers to success are minimized. Many teams have Pediatric Emergency Care Coordinators (PECCS) or pediatric champions who can garner support from the ED care team at the onset of each team's mobilization of the QI project or process improvement(s). Early in the planning process, teams should consider how and when they will communicate activities and progress to the ED and hospital leadership. As an added incentive to participation in QI collaboratives, the ED STOP Suicide QI Collaborative serves as an approved activity for Improvement in Medical Practice (Maintenance of Certification [MOC] Part 4) credit. Physicians who participate in collaborative sessions regularly and attend fireside chats, complete session and collaborative evaluations, actively contribute to the QI project implementation, and who submit the attestation form, can receive up to 25 MOC credits. The collaborative also offers nursing contact hours and educational credits for social work (for fireside chats only) and other licensed professionals based on individual participation in collaborative sessions and fireside chats. Registration details and video recordings/slides for collaborative sessions and other events are available at [Session Information and Materials](#). Certificates of completion can help validate improvement efforts. See the section on "Continuing Education Credits" [here](#).

Key 3: Communication

Developing a comprehensive communication plan for the entirety of the QI effort is essential for any ED site team. The ED site team should be willing and able to share knowledge and ideas to transmit a sense of urgency and enthusiasm to members of the larger care team as well as ED and other hospital leadership. Below are some ideas to guide a team's communication strategy when seeking buy-in/participation from key stakeholders, formally introducing the ED STOP Suicide QI Collaborative work to the ED, and reporting on your progress and achievements.

Step One: Identify the Purpose of Your Communication

- Seek buy-in and participation from the care team
- Formally introduce the ED STOP Suicide QI Collaborative to ED staff
- Identify and share change strategies
- Report progress to the care team and leadership regularly

Step Two: Identify Your Audience

- ED leadership/ED care team
- Hospital leadership
- Hospital staff in areas outside of the ED
- EMSC representatives
- Community stakeholders (e.g., [Pediatric Mental Health Care Access](#) awardees) or families

Step Three: Plan and Design Your Message

- Prepare and always be ready to share a 3-minute elevator pitch
- Consider having a fact sheet or slide set to distribute
- Posters appropriately placed in care team areas can help promote ongoing engagement and enthusiasm
- Tailor messaging to audiences

Step Four: Consider Your Resources

- Talking points in prepared slide set or fact sheet
- Collaborative session recordings and slides
- Fireside chat recordings and slides
- Talking points from other teams
- Resources available below or [online](#) and the ED STOP Suicide QI Collaborative [webpages](#)

Key 4: Strategic Planning

Planning strategically involves developing a detailed implementation plan. The following steps include suggestions. Each ED site team may already have its own decision-making process in place.

Phase One: Foundational Planning

- Work with team members to identify and assess gaps through completion and review of environmental scan.
- Review intervention bundle guides for each area of the clinical care process and attend fireside chats.
- Declare an intervention bundle guide or area to focus the QI project or improvement process on.
- Considering that each ED site/hospital team may have several gaps; select a bundle or improvement area that addresses common deficiencies that have a higher likelihood of impacting a larger population and afford the staff and the team a WIN. Only after establishing success in these key areas should the team address multiple or more complex intervention bundle topics.
- Review data variables and map these to the patient care record, as feasible, to assist with data entry or data collection specific to this project.
- Consider the team composition and staff resources to decide whether to include others in team discussions.

Phase Two: Understand the Environment and Facility Framework

- Meet with team participants and discuss time commitment and availability for this project.
- Discuss barriers and assets to completing this work.
- Determine competing and/or high-priority initiatives that may impact the improvement process.
- Formally select an intervention bundle guide or improvement area to focus on and inform relevant leaders and stakeholders or the designated area of improvement.

Phase Three: Research Gaps and Change Strategies

- Survey existing ED processes (e.g., through discussions and completion of the environmental scan).
- Consider available resources such as Electronic Medical Record collection/reporting capabilities.
- Decide on a baseline data collection strategy (see intervention bundle guides for ideas). If relevant and depending on the type of data collection (if any) consider whether to announce baseline collection of data or not to the ED care team (to avoid catalogue or bias or the [Hawthorne Effect](#)).
- Share and review current performance and define the ED site/project-specific SMART aim statement.
- Identify key or secondary drivers and potential change strategies.

Phase Four: Team Agreement on Change Strategies

- Seek input from team participants on bundle selection, improvement process, relevant SMART Aim, and change strategies.

Phase Five: Develop an Improvement Plan (in Conjunction with Phases)

- Develop an implementation plan that includes a SMART Aim, change strategies, processes, timeline, and other QI strategies as discussed in this guide.
- Agree on a team meeting schedule or regular check-ins in between the collaborative sessions that works for the team or group and ensures that the team is prepared to report on progress/barriers/challenges/achievements as needed during collaborative session breakout groups.

Creating Smart Aim Statements

A [SMART Aim](#) defines what change you are wanting to make. As mentioned, SMART stands for specific, measurable, achievable, relevant, and time bound. Your aim should also clearly define who this change will impact (i.e., a patient population, a particular system or structure).

Your SMART aim will guide your team's work, establishing a clear scope of work and to avoid [scope creep](#). Below are a few examples of SMART aims:

- Reduce ICU mortality by 20 percent within 9 months.
- By November 2023, transfer 80% of admitted patients from the Emergency Department to an inpatient bed within 1 hour of the order to admit.

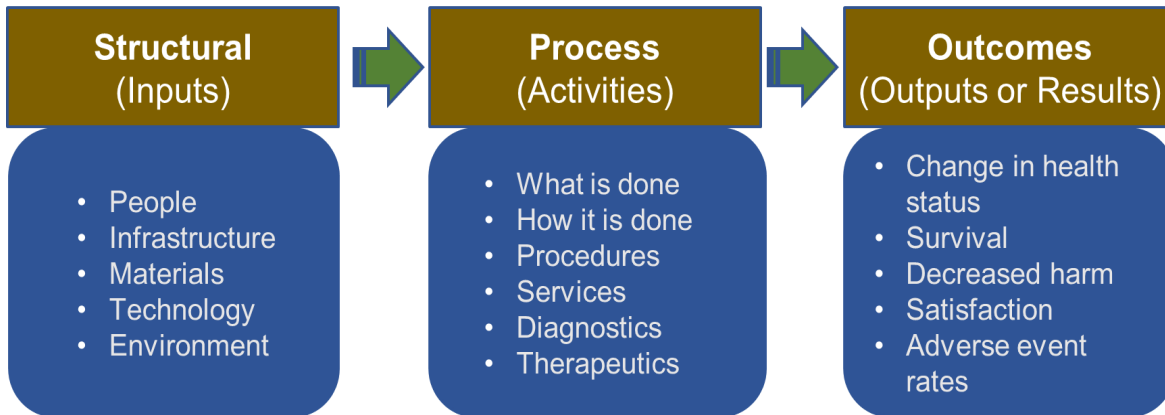
Establish Your Measures

To recognize whether the change made an improvement, it is important to know what the baseline was and what the goal is. Measurement is critical in defining success and knowing if the change that was implemented resulted in improvement. Typically, measures reflect one of the recognized [six domains of quality](#): safe, efficient, effective, equitable, timely, or patient-centered. Measures should not only identify whether a change occurred after implementing an improvement strategy but also show by how much. Most importantly, when identifying a measure to demonstrate improvement, it is important to ensure the data is available or obtainable. Depending on the measures and associated variables, sometimes this involves creating a staff survey or knowledge assessment. Other data points may be collected from patient records or may be time-dependent variables that are collected during the ED workflow. Teams should review the current data collection strategy and determine whether the systems and/or standards are already in place. As mentioned, data analysts can be important members to add to the QI team.

Whichever measures are chosen, they should be relevant to the specific ED site, important to improving patient outcomes, and supported by the ED leadership and care teams. Each intervention bundle guide includes quality measures that are either structural or process focused. Some bundles include "stretch goals" that are optional and typically focus on outcomes or require data abstraction. Most teams would like to focus on outcome measures, or those measures that demonstrate the impact of improvement efforts on patient care. However, without the

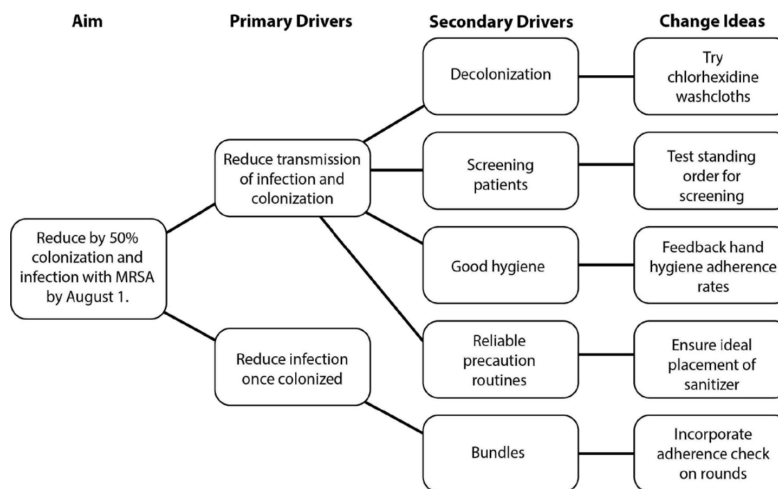
necessary structures or optimization of processes, it is not possible to impact outcomes. Therefore, structural and/or process measures are often the first areas of focus in improvement projects. The Donabedian Model for Evaluating Quality can be helpful.³

Types of Measures - Donabedian Model for Evaluating Quality



Key Drivers and Key Driver Diagrams

Example: Driver Diagram



[Institute for Healthcare Improvement](#)

The Driver Diagram (or Key Driver Diagram) is a visual tool used to display what “drives” the work in achieving the project aim. Driver diagrams help to convey the work a team is doing to achieve their goals. Drivers represent the “what”, whereas change strategies represent the “how.” Drivers are items that contribute to achieving the project’s aim. These include primary drivers (items that directly contribute to achieving the aim, oftentimes called Key Drivers), and secondary drivers (components of primary drivers that do not directly impact the aim). Connected to these drivers are the change strategies that the team will use. It can be helpful to think about drivers as living within common buckets: people, resources, environment, methods (e.g.,\ communications or education), and technology. Above is an example of a driver diagram.²

Plan-Do-Study-Act Cycles

The PDSA is a simple yet effective strategy for implementing small tests of change in the ED or other health care setting. These tests are designed to be short in duration and provide immediate feedback on whether a change strategy was successful. The steps are as follows:

- **PLAN:** Make a plan for the change to test and how to measure its success. What small change is elected to test? Who needs to be involved? How long will it take to test? How will information be gathered about the test?
- **DO:** Once the plan is set, put it into action. The test should take no longer than 2 weeks to implement. These cycles are meant to be rapid tests of change, with immediate feedback so the team can keep moving forward or plans can be adjusted.
- **STUDY:** Once the change test is completed, assess the outcome. Was it successful? Did the team receive enough information to make a decision? What feedback was able to be gathered?
- **ACT:** Once the change test is completed and its impact assessed, the team can either adapt the change process and implement another PDSA, adopt the change if deemed to be successful in achieving its goals, or abandon the change strategy.

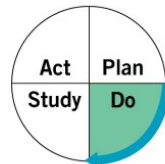
As the team works on the selected/chosen bundle(s), the PDSA will be a valuable tool to help test the change strategies the team decided to implement. It is encouraged that the team conduct several PDSA cycles to ensure that the results received are not by chance but rather are directly linked to the change strategy. Do not be afraid to abandon a change strategy - there are no failures in QI, just learning. These are great opportunities to fine tune the strategies that will lead to effective and sustainable change (Image: IHI).

Instructions



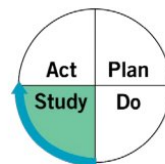
Plan: Plan the test, including a plan for collecting data.

- State the question you want to answer and make a prediction about what you think will happen.
- Develop a plan to test the change. (Who? What? When? Where?)
- Identify what data you will need to collect.



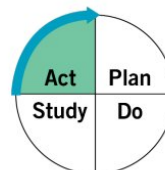
Do: Run the test on a small scale.

- Carry out the test.
- Document problems and unexpected observations.
- Collect and begin to analyze the data.



Study: Analyze the results and compare them to your predictions.

- Complete, as a team, if possible, your analysis of the data.
- Compare the data to your prediction.
- Summarize and reflect on what you learned.

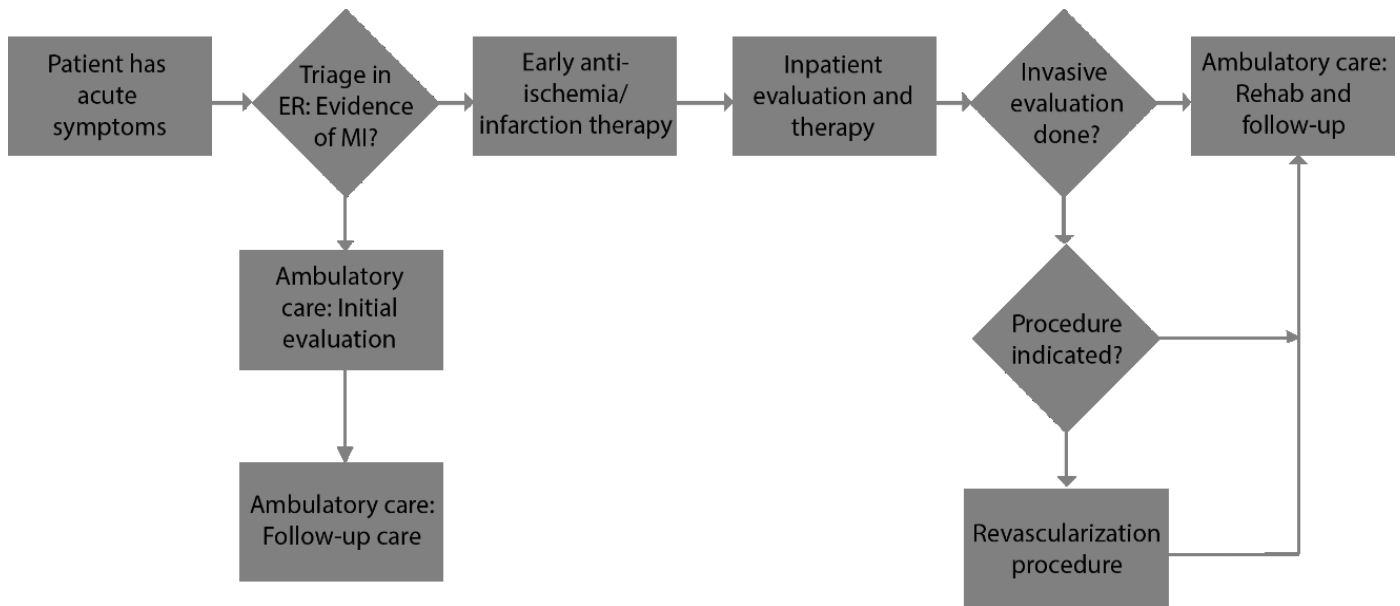


Act: Based on what you learned from the test, make a plan for your next step.

- Adapt (make modifications and run another test), adopt (test the change on a larger scale), or abandon (don't do another test on this change idea).
- Prepare a plan for the next PDSA.

Process Map

Process maps provide a mechanism of visualizing the various steps of a clinical care process to identify opportunities for improvement. Some process maps are quite simple, others more complex. While the initial process may be outlined by one individual, usually these are created with input from a multidisciplinary team. Sometimes the steps of a process occur behind the scenes (e.g., laboratory intake) and may not be well-understood by the primary care team. Taking time to understand the clinical care process and steps in full can identify where inefficiencies or challenges exist. This Institute for Healthcare Improvement describes five critical steps to process mapping: <https://www.ihl.org/communities/blogs/5-steps-for-creating-value-through-process-mapping-and-observation>.



[Institute for Healthcare Improvement](https://www.ihl.org)

These are just a few tools that each ED site team can use in this QI process. Consider each as the project is developed and begin to plan change efforts in the respective institutions.

Resources

Cultural Competency Toolkit

<https://emscimprovement.center/education-and-resources/toolkits/cultural-competency/>

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