Institute for Healthcare Improvement

Patient Safety Essentials Toolkit:

Developing Reliable Processes

Reliable processes and systems can reduce defects, increase consistency, and improve patient outcomes — all desirable goals within a health care organization. Creating and sustaining reliable processes, however, requires thoughtful planning and execution. This checklist of four steps — segmentation, visualization, standardization/simplification, and back-up planning — will help ensure your systems are designed with reliability in mind.

- The first step — segmentation — requires you to select a segment of the population to begin testing a process. (Starting with a segment of a population allows teams to design reliable processes they can then spread and customize, if necessary, to other segments.) Population segments should be easy to identify, should engage staff willing to participate, and should have high enough volume to enable daily tests of change.
- The second step — visualization, ideally via a flowchart — provides representation of the sequence of steps in a process you want to make more reliable for the segment of the population you have identified. Understanding a process and its potential defects is critical to improving that process.
- Next, standardize and simplify. The goal of this step is to ensure that the process steps are simple, easy, and based on roles (not dependent on specific individuals).
- Lastly, step four requires you to develop a back-up plan. Even after you have standardized all steps in your process and corrected any defects, there may still be occasions when the process you have designed doesn't work. A back-up plan creates some redundancy and resilience in the process and creates a safeguard to protect patients and staff.

One important note: This methodology should be used only for non-catastrophic events, i.e., events in which patients will not be severely harmed in the next 3–4 hours.

IHI's Patient Safety Essentials Toolkit is a helpful companion for you and your organization on the journey to delivering safe, reliable care every time, for every patient. Each of the nine tools in the toolkit includes a short description, instructions, an example, and a blank template. NOTE: Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

- Action Hierarchy (part of RCA²)
- Ask Me 3®
- Cause & Effect
- **Developing Reliable Processes**
- Five Whys
- Flowchart
- FMEA
- Huddles
- SBAR

Copyright © 2019 Institute for Healthcare Improvement. All rights reserved. Individuals may photocopy these materials for educational, not-for-profit uses, provided that the contents are not altered in any way and that proper attribution is given to IHI as the source of the content. These materials may not be reproduced for commercial, for-profit use in any form or by any means, or republished under any circumstances, without the written permission of the Institute for Healthcare Improvement.

Instructions

Segment

1) Identify the entire population of patients that are affected by the process that you are trying to make more reliable (e.g. all surgical patients).
2) Select a segment of the whole population where patients are easy to identify, where staff are willing to engage, and where the patient volume is sufficient to allow daily tests of change (e.g., the larger population includes all surgical patients; the subset can be patients undergoing knee and hip replacement surgery).

Visualize (via a high-level flow diagram of 3 to 5 boxes)

1) Get the "right" people in the room — those who know the process best.
2) Start by defining the first and the last step in the process — so that everyone has a shared understanding of where the process you're working on begins and ends.
3) Using a high-level flow diagram, fill in all the steps in the process from first to last. Show the process as it actually works (not as it should work).
4) Review the flow diagram to check for accuracy and completeness.
5) Identify all potential defects and prioritize those that might lead to other defects or that pose the most significant risk.
6) Identify the defect that you intend to fix first.

Standardize and Simplify

1) Determine which defect you want to standardize and why.
2) Ask people who do the work to contribute ideas.
3) Standardize the processes by answering the following questions:
    a. Who will complete the task? (Answer with a named role, not a named individual.)
    b. What is the task they will complete?
    c. When will they complete the task? (Try to make it part of normal or existing workflow if possible.)
    d. Where will they complete the task? (Answer in terms of physical location.)
    e. How will they complete the task? (Answer in practical terms: What will the person physically do to complete the task?)
    f. What will they use to complete the task? (Is there a tool, template, or checklist needed to support completion of the task?)

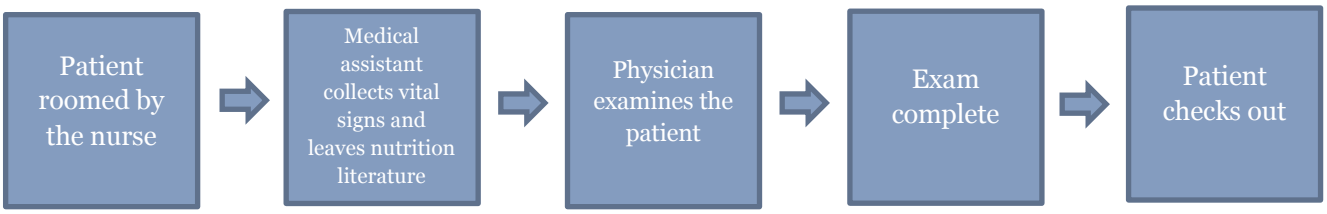
Develop a Back-up Plan

1) Identify which process steps require a back-up plan.
2) Develop your back-up plan using the principles described above (standardization and simplification) by answering the following questions:
    a. Who will complete the task? (Answer with a named role, not a named individual.)
    b. What is the task they will complete?
    c. When will they complete the task? (Try to make it part of normal or existing workflow if possible.)
    d. Where will they complete the task? (Answer in terms of physical location.)
    e. How will they complete the task? (Answer in practical terms: What will the person physically do to complete the task?)
    f. What will they use to complete the task? (Is there a tool, template, or checklist needed to support completion of the task?)
3) Incorporate your back-up plan into the existing workflow.

Example: Developing Reliable Processes

Problem: A primary care practice identified that many of its teenage patients were not receiving nutrition literature during a visit to the office. The improvement team developed a clear aim: At least 95 percent of the teenage patients (the segment of the population) will receive nutrition literature during their next visit.

They visualized the process (via a flow chart):



Next, they standardize the process:

Who: Medical assistant
What: Gives patient nutritional information
Where: In the exam room
When: When the patient is roomed
How: Handing nutrition literature to the patient
With what: (There is no tool to complete this task)

After testing and standardizing this process, the improvement team discovered that the process worked between 80 and 90 percent of the time. (The biggest defect was that, occasionally, the medical assistant did not leave behind the literature.) It was time to move to Step 4, developing a back-up plan.

The team collected several suggestions to build an effective back-up plan. Because every patient has to check out with the office secretary, the improvement team decided to test using the secretary as the back-up plan. As a patient is exiting the office, the secretary will ask the patient if he or she received nutrition literature. If the response was "yes," there was no action to take. If the response was "no," the secretary would contact one of the nurses to remedy the defect (not receiving the literature).

They standardized the back-up plan:

Who: The office secretary
What: Ask teenage patient if he or she received nutrition literature
When: At checkout, prior to patient exiting office
Where: Checkout desk
How: Ask patient
With what: (There is no tool to complete this task)

This added process was part of a function that the secretary easily added to his workflow. As a result, the team achieved its aim of 95 percent of teenage patients receiving nutrition literature. The team is now meeting to determine whether to roll out the process to all patients in the practice.

Before filling out this template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: Developing Reliable Processes

Standardize and Simplify

1) Determine which defect you want to standardize and why.
2) Ask people who do the work to contribute ideas.
3) Standardize the processes by answering the following questions:

    a. Who will complete the task? (Answer with a named role, not a named individual.)

    _____

    b. What is the task they will complete?

    _____

    c. When will they complete the task? (Try to make it part of normal or existing workflow if possible.)

    _____

    d. Where will they complete the task? (Answer in terms of physical location.)

    _____

    e. How will they complete the task? (Answer in practical terms: What will the person physically do to complete the task?)

    _____

    f. With what will they complete the task? (Is there a tool, template, or checklist needed to support completion of the task?)

    _____

Develop a Back-up Plan

1) Identify which process steps require a back-up plan.
2) Develop your back-up plan using the principles described above (standardization and simplification) by answering the following questions:

    a. Who will complete the task? (Answer with a named role, not a named individual.)

    _____

    b. What is the task they will complete?

    _____

    c. When will they complete the task? (Try to make it part of normal or existing workflow if possible.)

    _____

    d. Where will they complete the task? (Answer in terms of physical location.)

    _____

    e. How will they complete the task? (Answer in practical terms: What will the person physically do to complete the task?)

    _____

    f. With what will they complete the task? (Is there a tool, template, or checklist needed to support completion of the task?)

    _____

3) Incorporate your back-up plan into the existing workflow.