

Quality Improvement: What is it and How Can it Play a Role in the Care of Persons with Bleeding Disorders

Amy Dunn, M.D.

Nationwide Children's Hospital
Columbus, Ohio

Objectives

- * 1. Define common Quality Improvement Terms
- * 2. Describe a Model of Process Improvement
- * 3. Describe a Quality Improvement Project in process
- * 4. Brainstorm Regional Quality Project/s

Quality Improvement

- * Quality improvement (QI) consists of systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups. The [Institute of Medicine's \(IOM\)](#) which is a recognized leader and advisor on improving the Nation's health care, defines quality in health care as a direct correlation between the level of improved health services and the desired health outcomes of individuals and populations

Why is Quality Improvement Important?

- * the Institute of Medicine's (IOM) report *To Err is Human* revealed that between 44,000 and 98,000 Americans die each year as a result of medical errors
- * Total costs of medical errors resulting in injury are estimated to be between \$17 billion and \$29 billion, with healthcare costs comprising over 50%

Institute of Medicine. *To Err is Human: Building a Safer Health System*. Kohn L, Corrigan J, Donaldson M, eds. Washington, DC: National Academies Press; 1999.

What is “quality improvement” and how can it transform healthcare?

Qual Saf Health Care. Feb 2007; 16(1): 2–3.

[Quality Improvement and Patient Safety Activities in Academic Departments of Medicine](#)

The American Journal of Medicine, Volume 125, Issue 8, August 2012, Pages 83–835

6 Goals for Quality Improvement in Healthcare

- * **Safe:** avoiding injuries to patients from care that is intended to help them.
- * **Effective:** providing services based on scientific knowledge to all who could benefit, and refraining from providing services to those unlikely to benefit (avoiding underuse and overuse).
- * **Patient-centered:** providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide clinical decisions.

Goals: continued

- * **Timely:** reducing waits and sometimes harmful delays for both those who receive and give care.
- * **Efficient:** avoiding waste, such as waste of equipment, supplies, ideas, and energy.
- * **Equitable:** providing care that does not differ in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

Important Terminology

- * AIM statement
- * Metrics
- * Test of Change
- * PDSA cycle

Aim Statement

Defining an Aim Statement



S

= specific

M

= measurable

A

= attainable

R

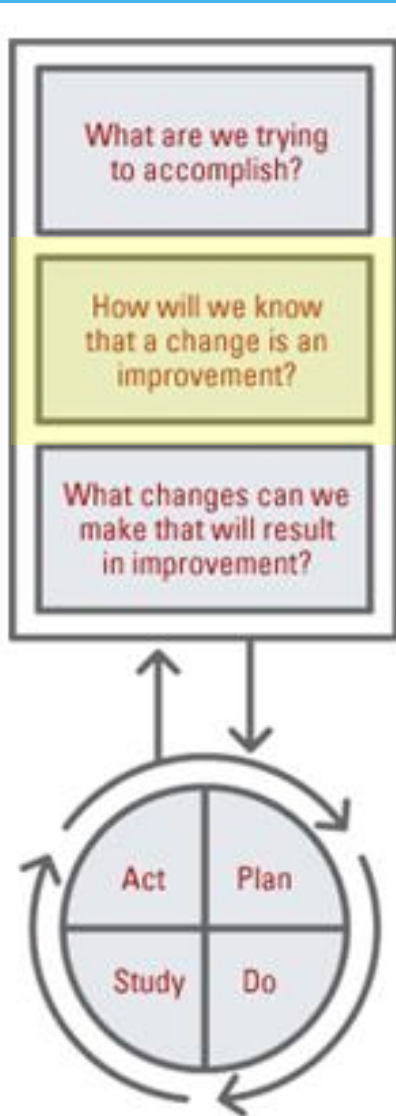
= relevant

T

= time-based


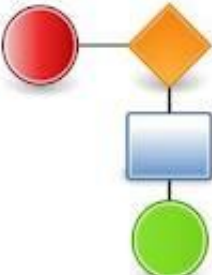

Metrics

Metrics



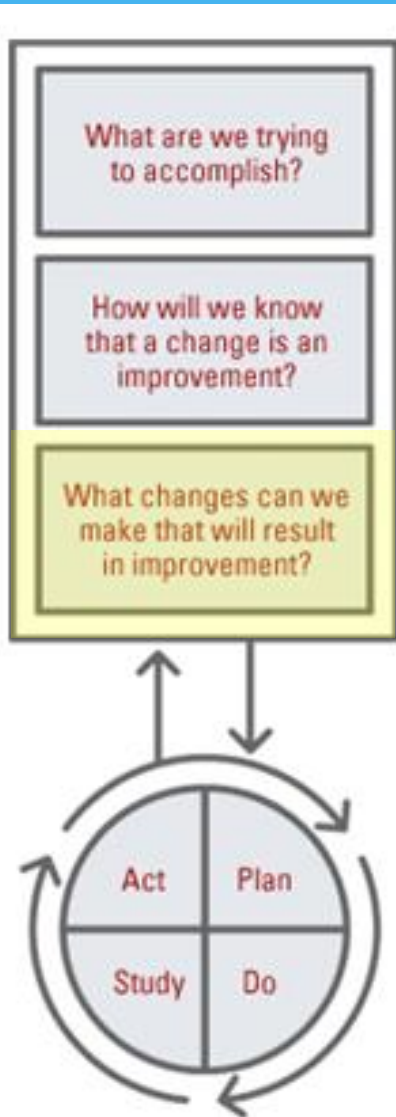
If you didn't measure it, you can't improve it!

Metrics

Type of Measure	Measure
Outcome Measures 	<ul style="list-style-type: none">•How does the system impact the values of patients, their health and wellbeing? What are impacts on other stakeholders?
Process Measures 	<ul style="list-style-type: none">•Are the parts/steps in the system performing as planned? Are we on track in our efforts?
Balancing Measures 	<ul style="list-style-type: none">•Looking at a system from different directions/dimensions: Are changes designed causing new problems in other parts of the system?

Test of Change

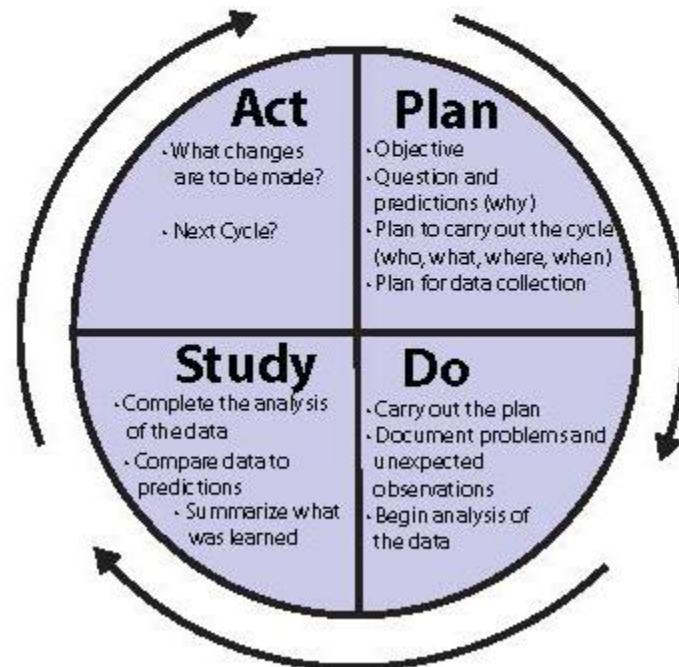
Tests of Change




- * Focus on Variation
- * Error Proofing
- * Focus on the Patient Experience
- * Eliminate Waste
- * Improve Work Flow
- * Change the Work Environment
- * Manage Time
- * Optimize Resources

Continuous Cycle of Improvement

The PDSA Cycle for Learning and Improving



An Example of a local QI Project

The slide features a solid blue background. At the bottom, there are several overlapping, wavy, light blue shapes that create a sense of motion or a decorative border.

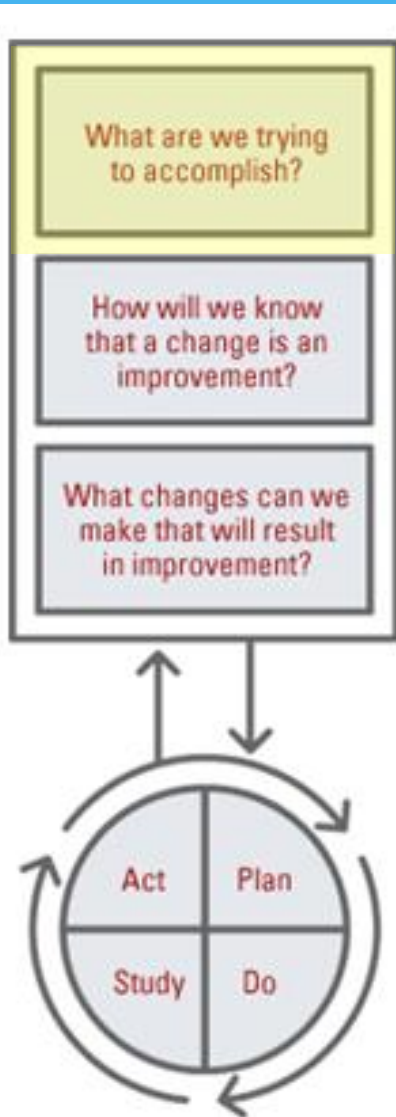
Project Background

- A patient with a bleeding disorder presented to another specialty service within our institution with knee pain: Bleeding was not identified as a potential cause of the knee pain and appropriate treatment was delayed
- Electronic medical documentation of bleeding disorders was not very visible

Aim

To ensure that patients with a diagnosis of a severe bleeding disorder are accurately identified anywhere in our system.

IOM 6 “Aims for Improvement” in Healthcare



- **Safe:** Avoid injuries to patients from the care that is intended to help them.
- **Effective:** Match care to science; avoid overuse of ineffective care and underuse of effective care.
- **Patient-Centered:** Honor the individual and respect choice.
- **Timely:** Reduce waiting for both patients and those who give care.
- **Efficient:** Reduce waste.
- **Equitable:** Close racial and ethnic gaps in health status.

Options


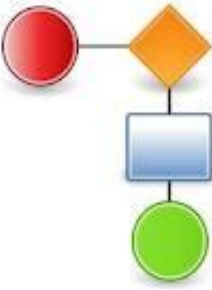

- * Utilize problem list and priority function
- * Pop-up banner

Changes to be Implemented

- To increase the number of patients with severe bleeding disorders that have this diagnosis on their EPIC problem list
- To increase the number of patients with severe bleeding disorders that have this diagnosis as #1 on their EPIC problem list
- To increase the number of with severe bleeding disorders that have the severity of the bleeding disorder highlighted within the problem list



Metrics

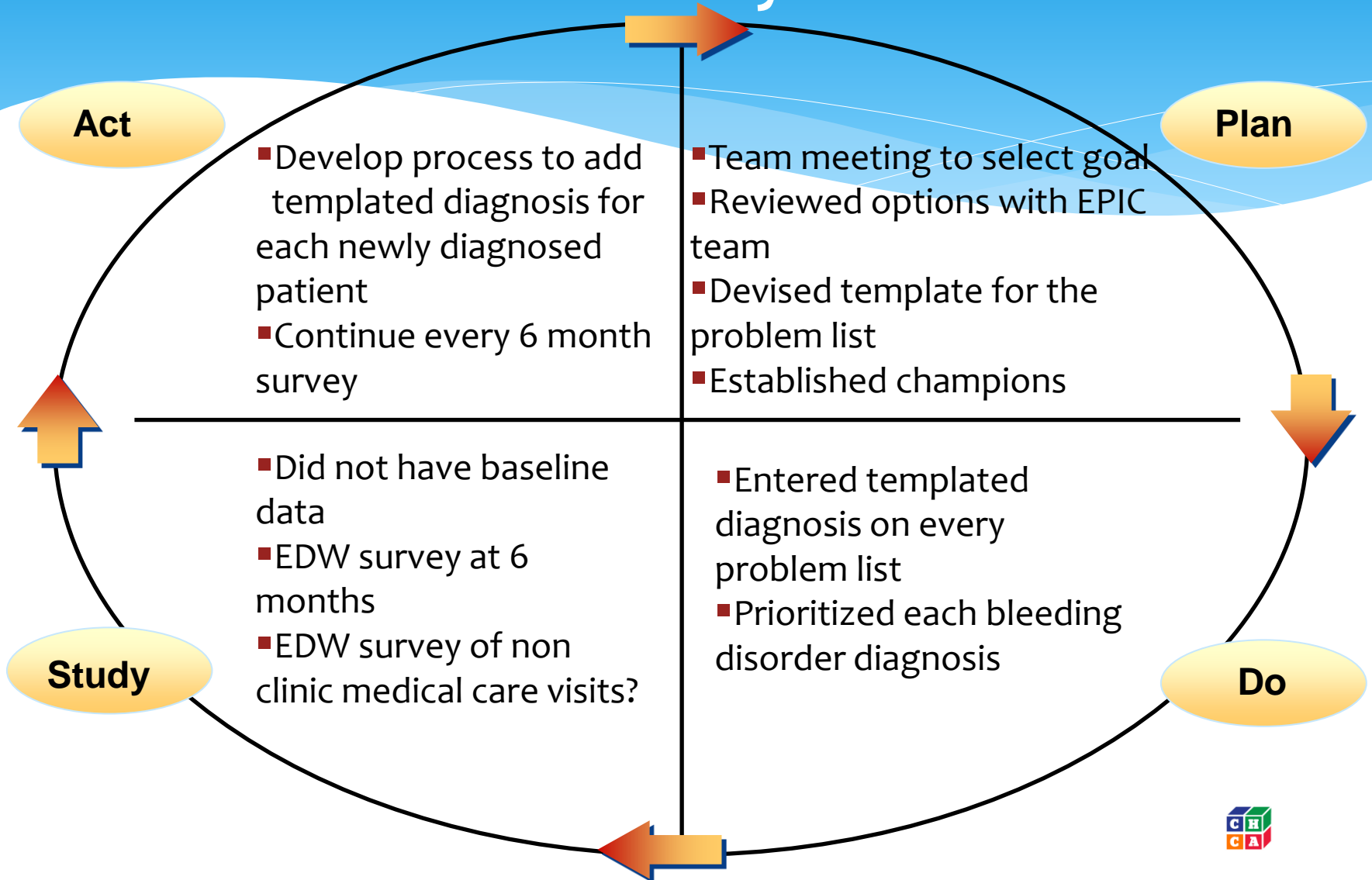
Type of Measure	Measure
Outcome Measures 	<ul style="list-style-type: none">• Increased number of patients with their bleeding disorder diagnosis listed as high priority on their problem list• No missed diagnoses leading to delay in care
Process Measures 	<ul style="list-style-type: none">• Utilization of the process for all patients with severe bleeding disorders• EDW query development
Balancing Measures 	<ul style="list-style-type: none">• No complaints from other specialty services about the priority of bleeding diagnosis• No staff quit as a result of being asked to add “one more thing” to their plate



Outcome Measures

- * Number of patients who have hemophilia on their problem list.
- * Number of patients that have the severity of their bleeding disorder highlighted on their problem list.
- * Number of patients with their bleeding disorder listed as number 1 on their problem list.
- * Number of patients who have their bleeding disorder listed as number 1- 6 months after the start of our project

PDSA Cycle





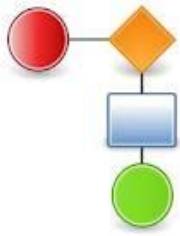
Outcome Measures: Disorder on problem list and highlighted

- * This patient has **Hemophilia A** and is at HIGH RISK of bleeding. Please call hematology for significant injuries, prolonged bleeding and prior to any invasive procedures.
- * Factor VIII level 14% on 04/08/2014. Call the Hematologist on consults @ 614-722-2000 for treatment guidelines.
 - * Medications: Responds to Stimate (DDAVP) for minor bleeds
 - * Major bleed correction infuse Factor VIII 50 units/kg
 - * Minor bleed correction unresponsive to Stimate, Factor VIII 25 units per kilogram



Outcome Measures

- * Diagnosis on problem list-75%
- * Hemophilia highlighted-75%
- * #1 on problem list-next task
- * 6 month review-to be done at the end of the year



Process Measure

- ❖ Process Measure
 - ❖ Electronic data warehouse query
 - ❖ Surprises-somehow pulling lots of patients without hemophilia????
 - ❖ Hand query not practical



Balancing Measure

- ❖ No negative feedback from other services about our diagnosis priority
- ❖ Advanced Practice Nurse did not quit 😊

Future Actions

- ❖ Work with team to form a process to update problem list routinely
- ❖ Work with EDW on problem list query
- ❖ Work with EDW to develop a report of any time a patient with a severe bleeding disorder “hits” our system
- ❖ Review each “hit” individually to assess if appropriate care is given

Regional QI Projects Possibilities

- ❖ Problem list
- ❖ Time to factor in the Emergency Department
- ❖ BCMH EPIC templates
- ❖ Unified yearly comprehensive clinic screening laboratories
- ❖ Patient satisfaction with 340B pharmacy services