

Introduction to Quality Improvement

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Welcome and introduction



- Head of Operational Excellence and Improvement Advisor at the Institute for Healthcare Improvement
- 15 years working in quality improvement
- External (current): Teach Improvement Coach program, Improvement Advisor on maternal mortality project (equity track and Better Maternal Outcomes Network) and value improvement at the front-lines
- Internal (current): Support IHI in transforming our systems leveraging improvement science, teach IHI staff improvement
- Past work (external): Improvement Advisor and Improvement Coach on projects focused on population health, healing in hospitals, birth outcomes, homelessness
- Annoy my husband and 1.5 year-old by applying improvement science to our life

Why Quality Improvement?



The Messiness of Life

“Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.”

--Laurence J. Peter

A good reference on this topic is “Wicked Problems and Social Complexity”
by Jeff Conklin, Ph.D., Chapter 1 in *Dialogue Mapping: Defragmenting Projects through Shared Understanding*.
For more information see the CogNexus Institute website at <http://cognexus.org>, 2004.



Is life this simple?

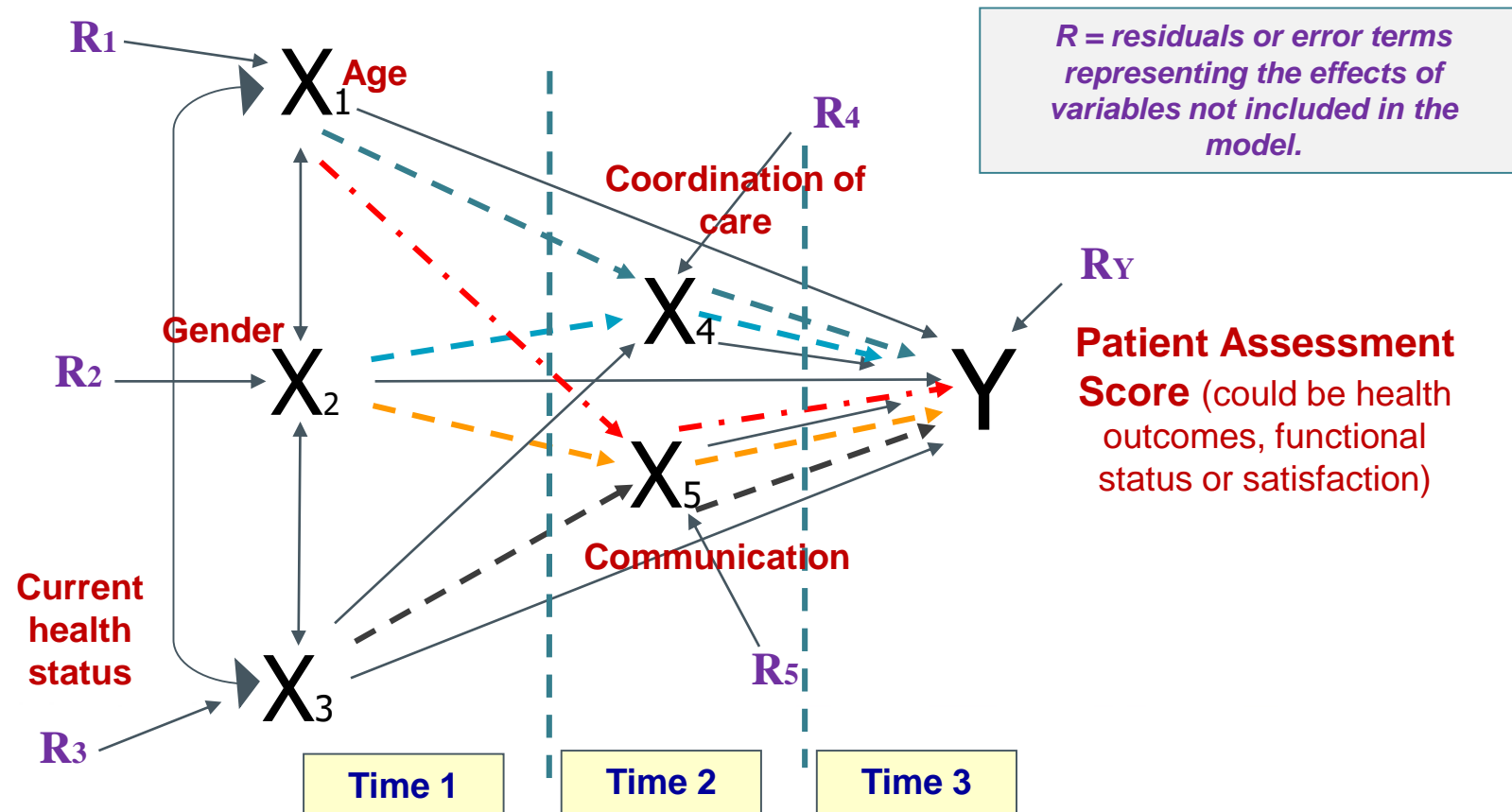


(If it was only this simple we would not need QI Teams!)



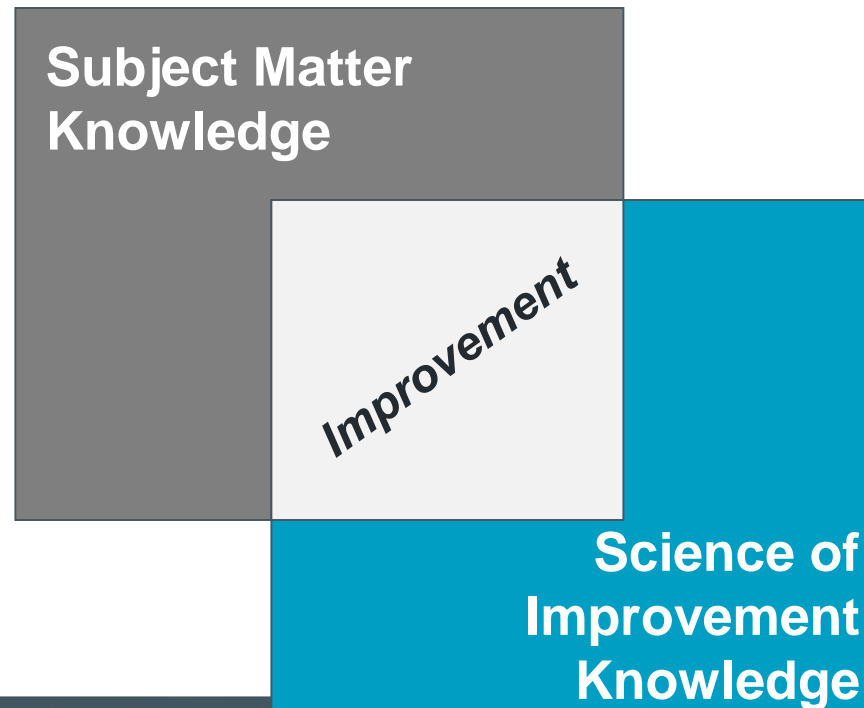
Actually, it looks like this...

In this case, there are numerous **direct** and **indirect effects** between the independent variables and the dependent variable. For example, X_1 and X_4 both have direct effects on Y plus there is an indirect effect due to the **interaction** of X_1 and X_4 conjointly on Y .



Knowledge for Improvement

Improvement: Learn to combine subject matter knowledge and SOI knowledge in creative ways to develop effective changes for improvement.



Intro to QI: A few guiding principles



A few principles to guide improvement work

Learning requires intentionality and we learn more from trying things in the real world (safely) than iterating in conference rooms



Theory: If we schedule post-partum visits, women will show-up

Prediction: 90% of women scheduled for post-partum visits will show-up

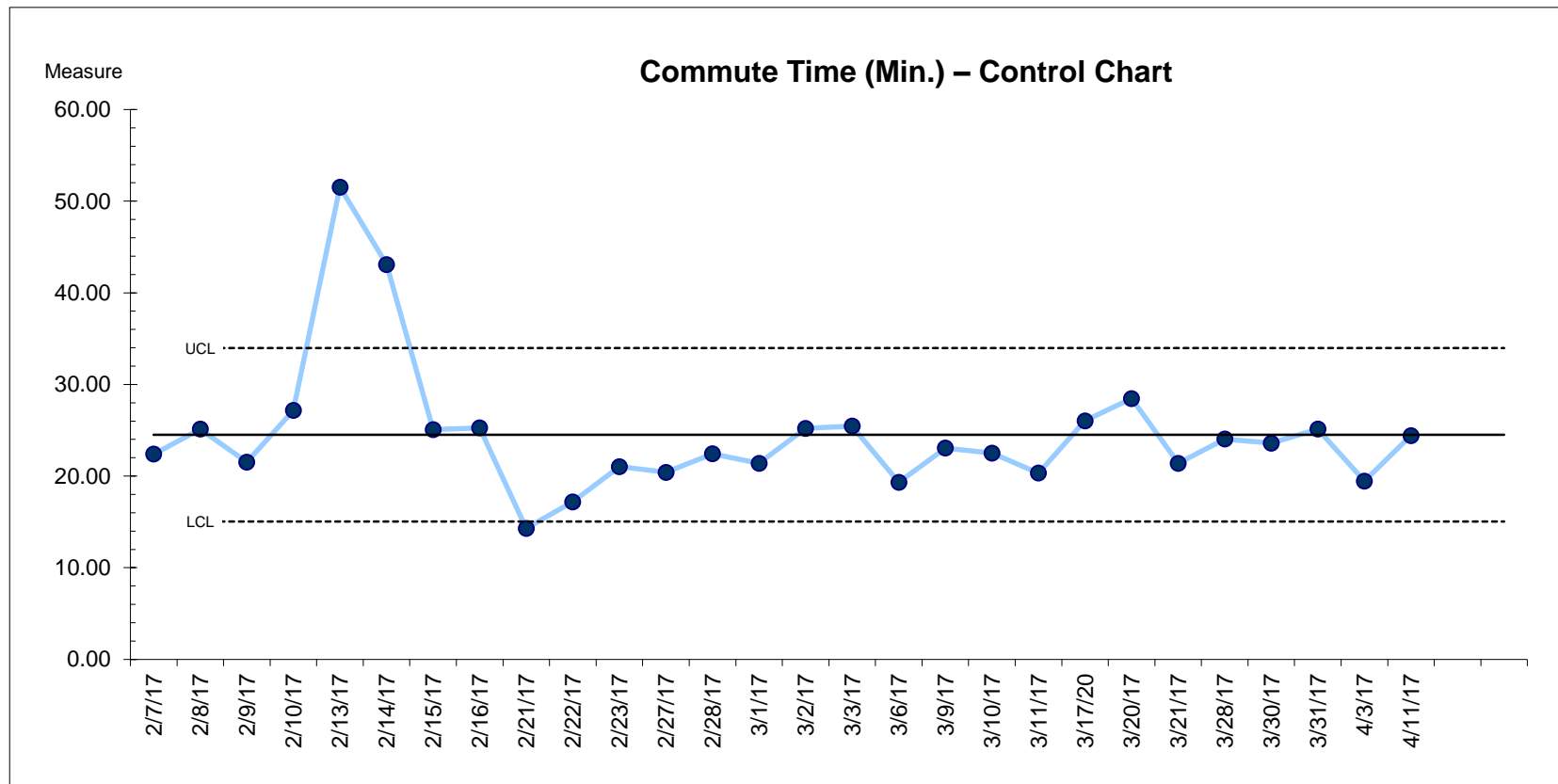
Study: 20% show-up for post partum visits

Why?



A few principles to guide improvement work

Applied sciences works in a messy world; we must distinguish between variation inherent in the system and improvement



A few principles to guide improvement work

Change is not just a technical process; we must tap into people's innate desire to do good in the world and manage natural resistance to change

“Think how hard physics would be
if particles could think.”

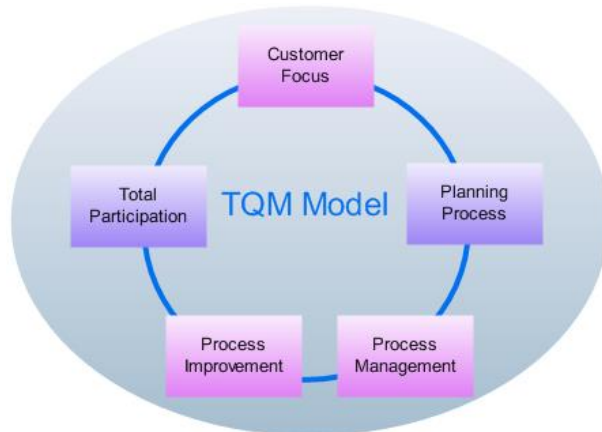
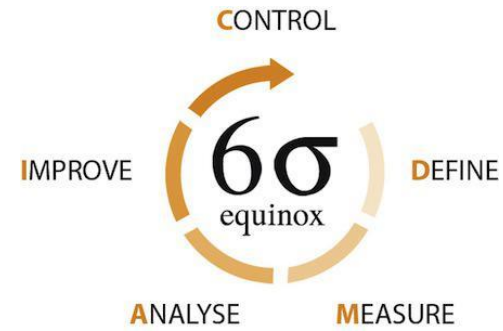
Nobel Laureate Murray Gell-Mann



Intro to QI: One model for learning & change



Different related approaches

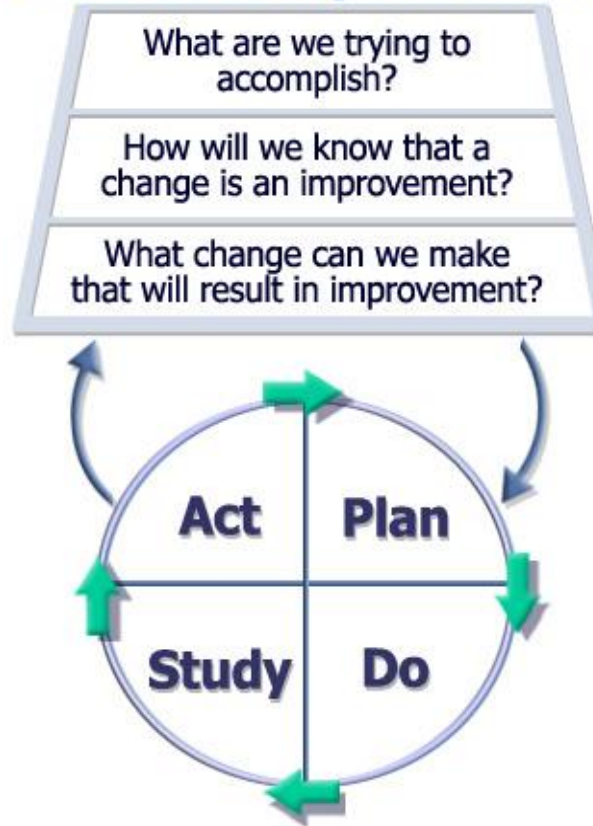


Bar-be-que?

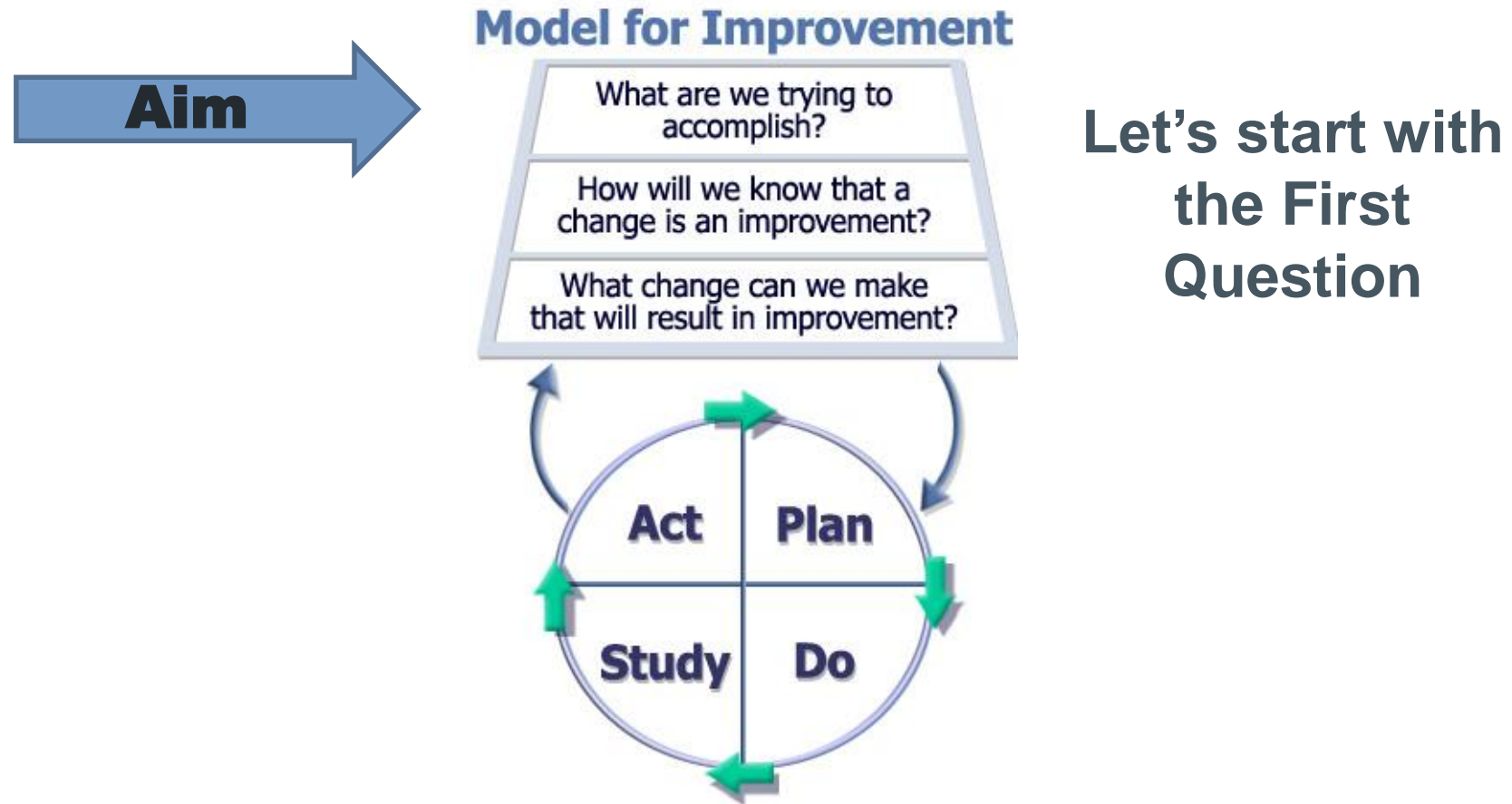


MFI: A Model for Learning and Change ¹⁷

Model for Improvement



MFI: A Model for Learning and Change



Aim Statement: Overview

- **What?** State the focus of your improvement effort.
- **How good?** Declare a numerical goal for outcomes. It should be ambitious but achievable.
- **By when?** Specify the timeframe.
- **For whom?** Name the customers or population of focus. Primary persons to receive benefit?
- **Where?** Define the process or system you want to improve. What is the scope? Boundaries? Starts/Stops?



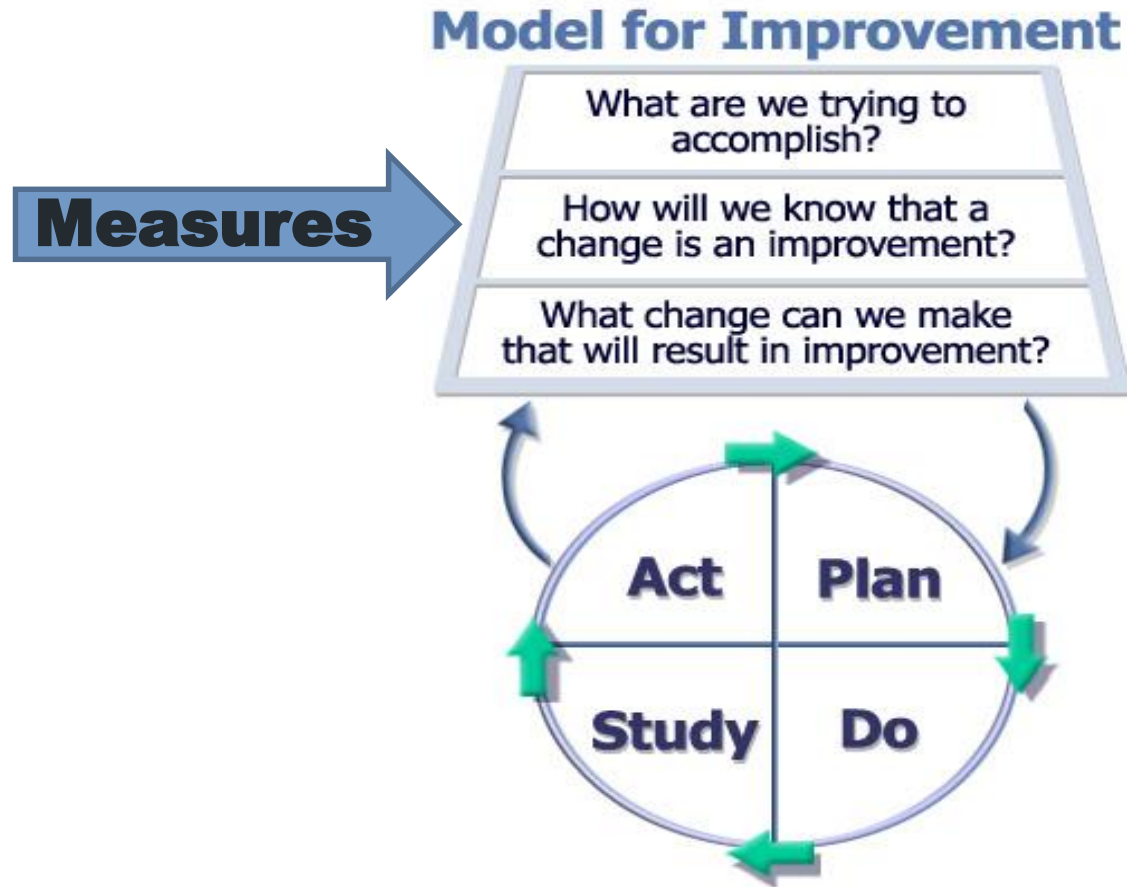
Aim Statement: Example

In our to support the health of our mothers, our team aims to improve our reliability with the hemorrhage bundle from 40% to 90% for all women delivering in our facility by December 2020.

- What?
 - Improve reliable execution of the hemorrhage bundle
- How good?
 - 90% reliability
- By when?
 - December 2020
- For whom?
 - Mothers
- Where?
 - All women delivering in our facility



MFI: A Model for Learning and Change

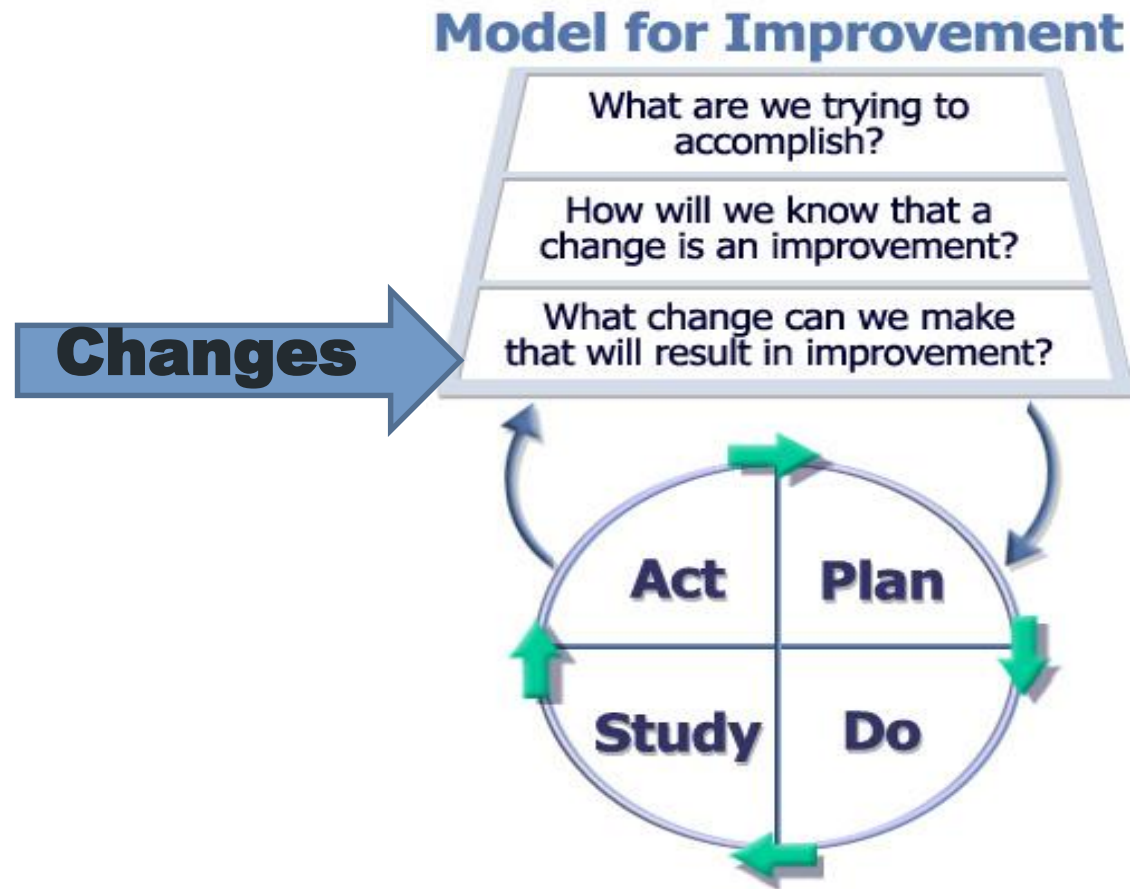


Measures: Example

- Outcome: Maternal mortality; severe maternal morbidity
- Process:
 - % reliability of hemorrhage bundle
- Balancing:
 - Staff workload



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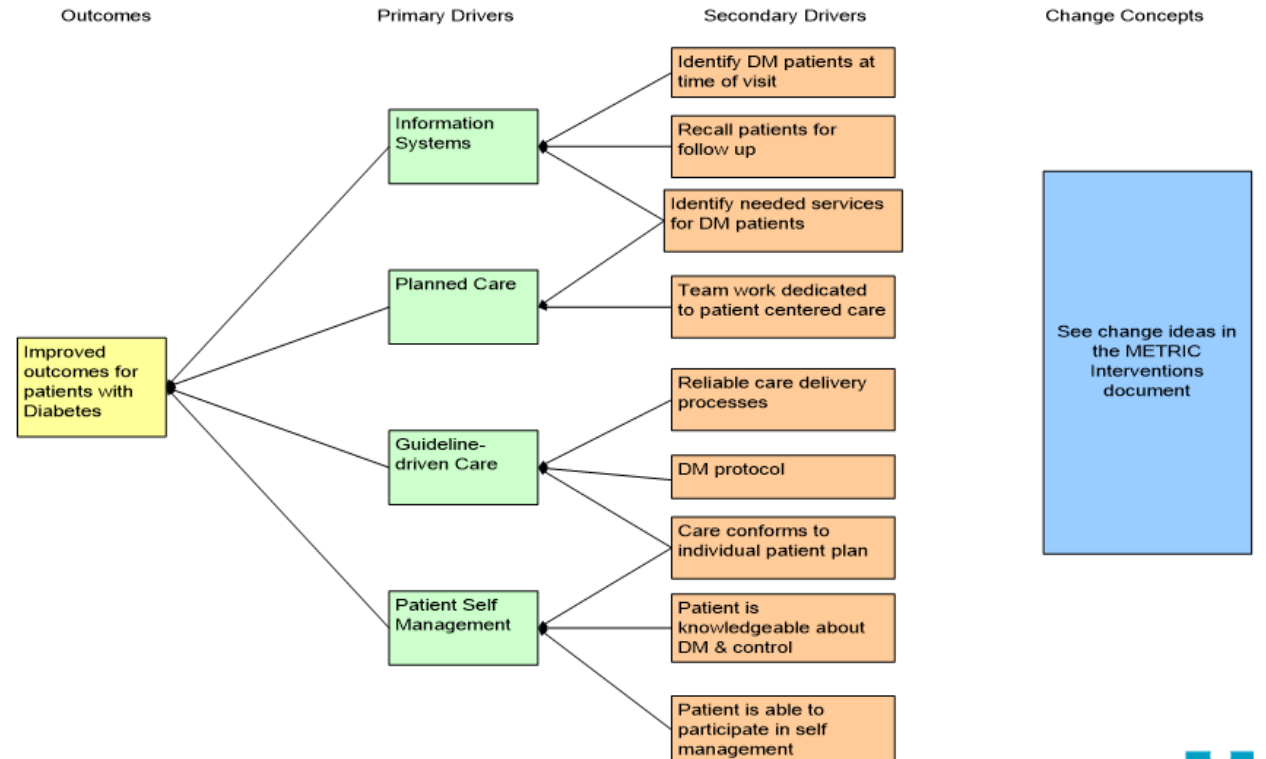
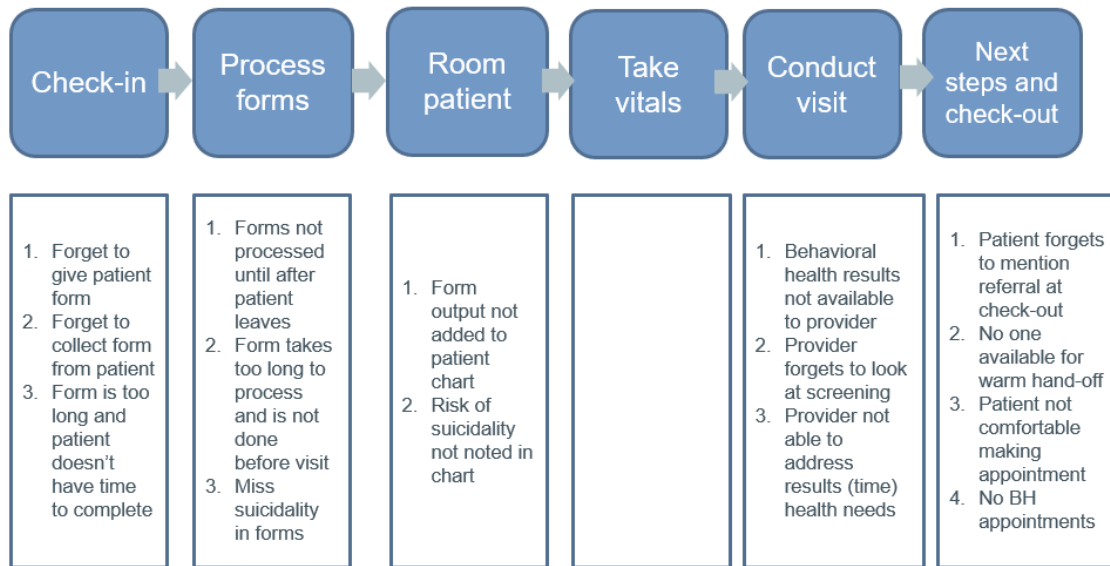


Developing Changes: Three Approaches

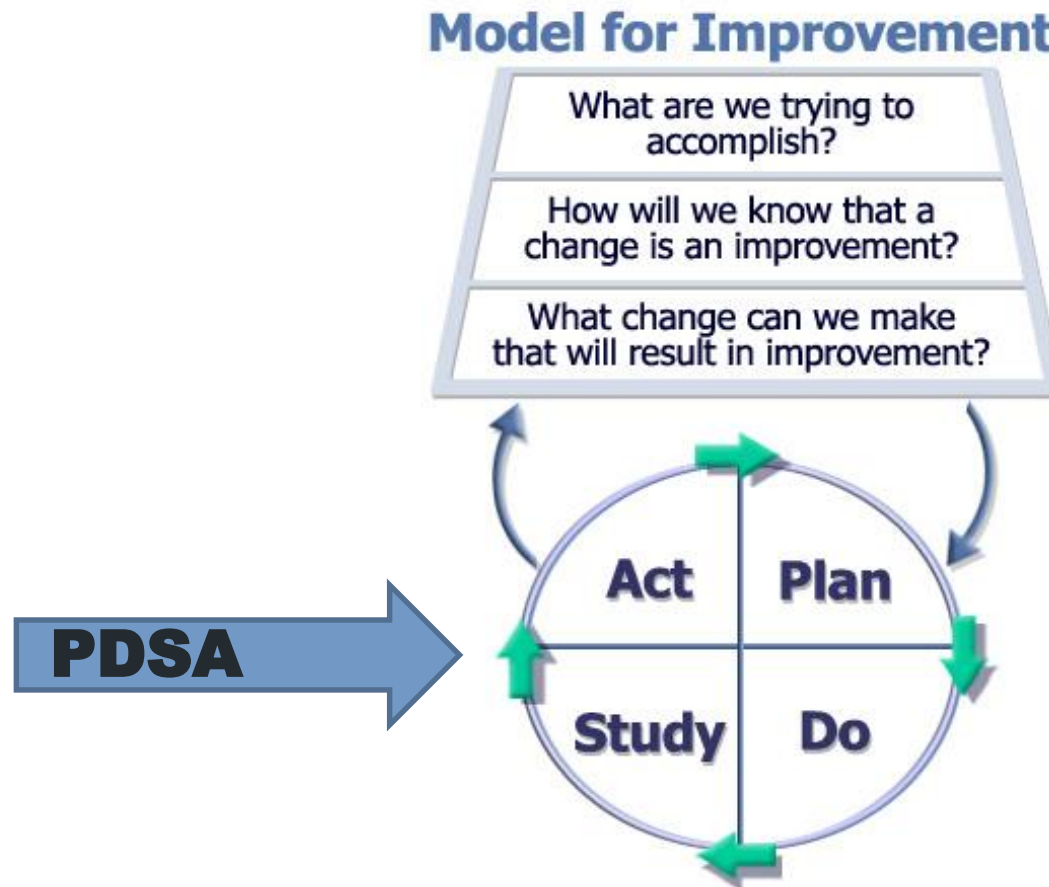
1. Understanding processes and systems of work
2. Creative thinking
3. Adapting known good ideas



Developing change: Understanding process and systems (examples)



MFI: A Model for Learning and Change ²⁹



PDSA: Example

PDSA (plan-do-study-act) worksheet

Objective: Does a huddle improve identification and management of hemorrhage patients?

Cycle: 1st Try

Plan

I plan to: Huddle with available staff twice daily to identify high-risk patients and proactively discuss potential management

Steps to execute:

- Identify times for huddles
- Invite everyone to huddles
- Develop huddle agenda

Do

What did you observe?

- Only two staff members showed up to the huddle; the time did not seem to be a good time

Study

What did you learn? Did you meet your measurement goal?

- We had predicted that six people would show up to the huddle and only two people were there. We predicted it would take 20 minutes. It only took 10 minutes, but we suspect it will be longer if there are more people.
- We had predicted that we would be able to identify a handful of patients that were high risk; we were able to identify quite a few high risk patients and discuss the management plan (although not everyone was there)

Act

What did you conclude from this cycle?

- The huddle seems to be an effective method of communication. We are going to try it again. We are going to hold the huddle at a different time to see if we can get more staff.



Learn more

- Visit www.IHI.org/QualitySkills
 - White Board Videos (scroll down page)
 - Model for Improvement
 - Aims
 - Measures
 - Changes
- IHI Open School 102:
<http://www.ihl.org/education/IHIOpenSchool/resources/Pages/QI-102-How-to-Improve-with-the-Model-for-Improvement.aspx>

