“A Nuts and Bolts Approach to Quality Improvement/Patient Safety Projects.”

Bill Corser, PhD, Jon Rohrer, PhD, DMin
MSU Statewide Campus System

Statewide Campus System
College of Osteopathic Medicine
MICHIGAN STATE UNIVERSITY

MICHIGAN STATE UNIVERSITY

Learner Objectives

By the end of this presentations, each learner will be able to:

- Analyze at least three similarities and three differences between typical “Quality Improvement/Patient Safety” (QIPS) and “research” projects;
- Evaluate at least three of the common frameworks or tools used to develop QIPS projects; and
- Evaluate at least six general criteria suggested for development of a feasible QIPS project.

“Quality Improvement” Terms

- Also includes all of the following:
  - ~~“Quality Assurance” (QA)~~
  - “Program Improvement”
  - “Quality Control”
  - “Continuous Quality Improvement” (CQI)
  - “Total Quality Management” (TQM)
  - “Six Sigma”
  - “LEAN”

(We shall stick with “QIPS”).

Key Questions for QIPS Projects

- “How do we know that we’re providing the best possible healthcare services in our setting?”
- “How can we identify the stronger and weaker parts of our care delivery processes?” and
- “How can we develop a feasible QIPS project to better understand our healthcare processes?”

QIPS Principles

- Generally oriented to healthcare processes.
- Often multidisciplinary in nature.
- Generally considered a continual effort.
- Ideally, an evidence-based series of activities.

QIPS vs. Research

•QIPS incorporates acquired knowledge (to improve **internal** organizational processes); and

•Research generates new knowledge that benefits the **broader** scientific community.

(Shirey, et al., 2011)

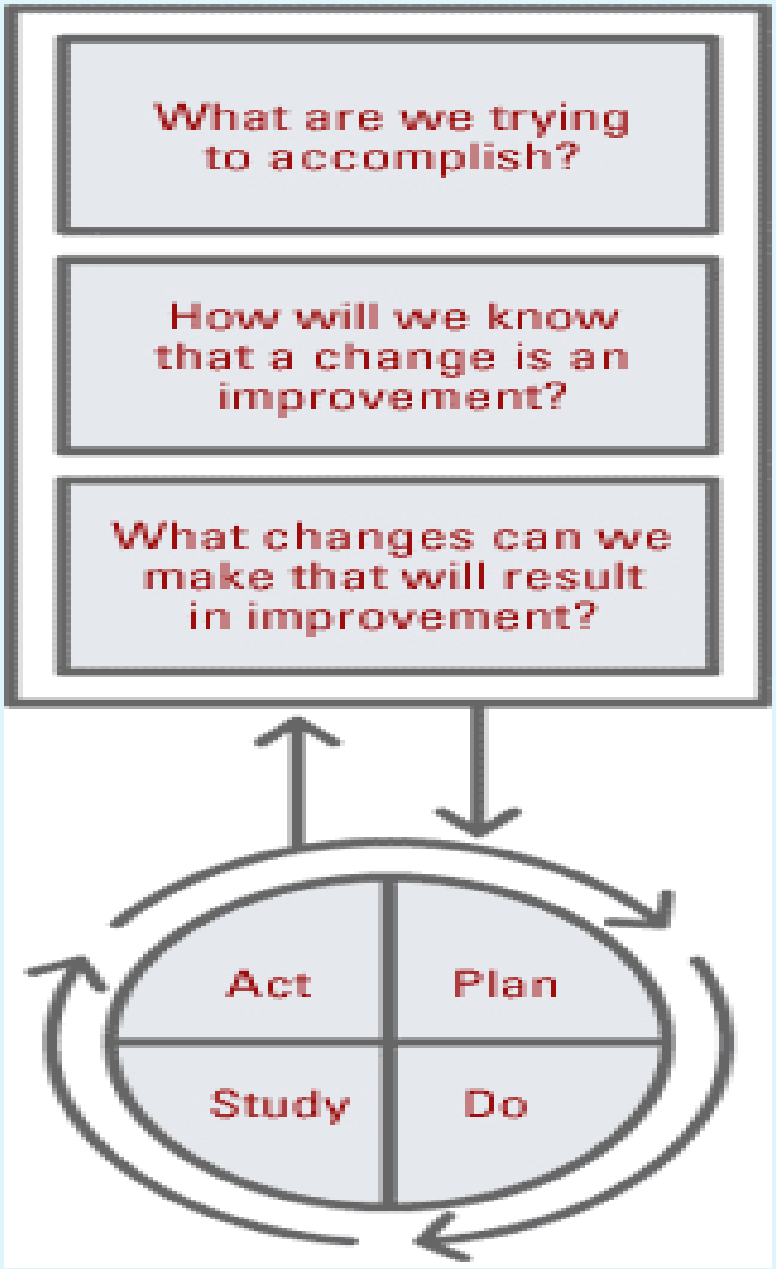
• "Evidence-based Medicine" translates the knowledge to guide **specific clinical practices**.

	QIPS Project	Research Project
Primary Orientation	**System/Program** process (or outcome) improvement	Generation of **generalizable** knowledge to other settings
Role of Context	Of **KEY** interest!	Attempts made to **eliminate** effects of context
Period Required to Incorporate Results into Practice	SHORTER	MUCH LONGER
Analyses	Usually more descriptive, with smaller-scale, shorter measurement "window"	More (inferential) statistically oriented
1. Degree of "intervention"	Generally LESS	Generally MORE
2. Amount of "interface" with Human Subjects (recruiting, consenting, interviewing, etc.)	LESS	MORE
3. Amount of "Protected Health Information" required.	LESS	MORE

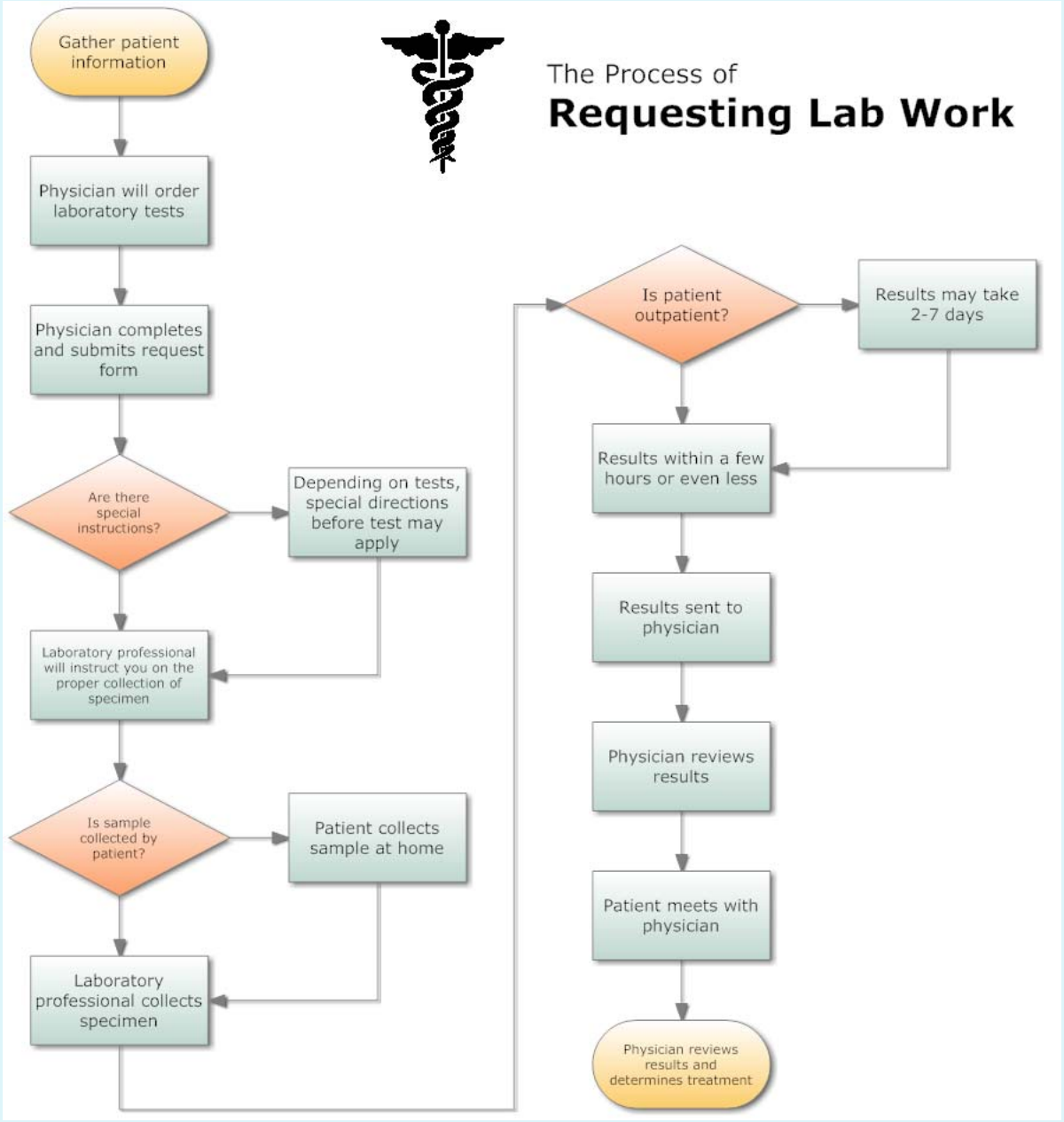
“FOCUS-PDSA” Process

- **F**ind a process to improve.
- **O**rganize a team that understands the process.
- **C**larify current knowledge of process.
- **U**nderstand the main causes of **process variation**.
- **S**elect the process improvement.

- THEN do some “Plan-Do-Study-Act” (PDSA) project planning.

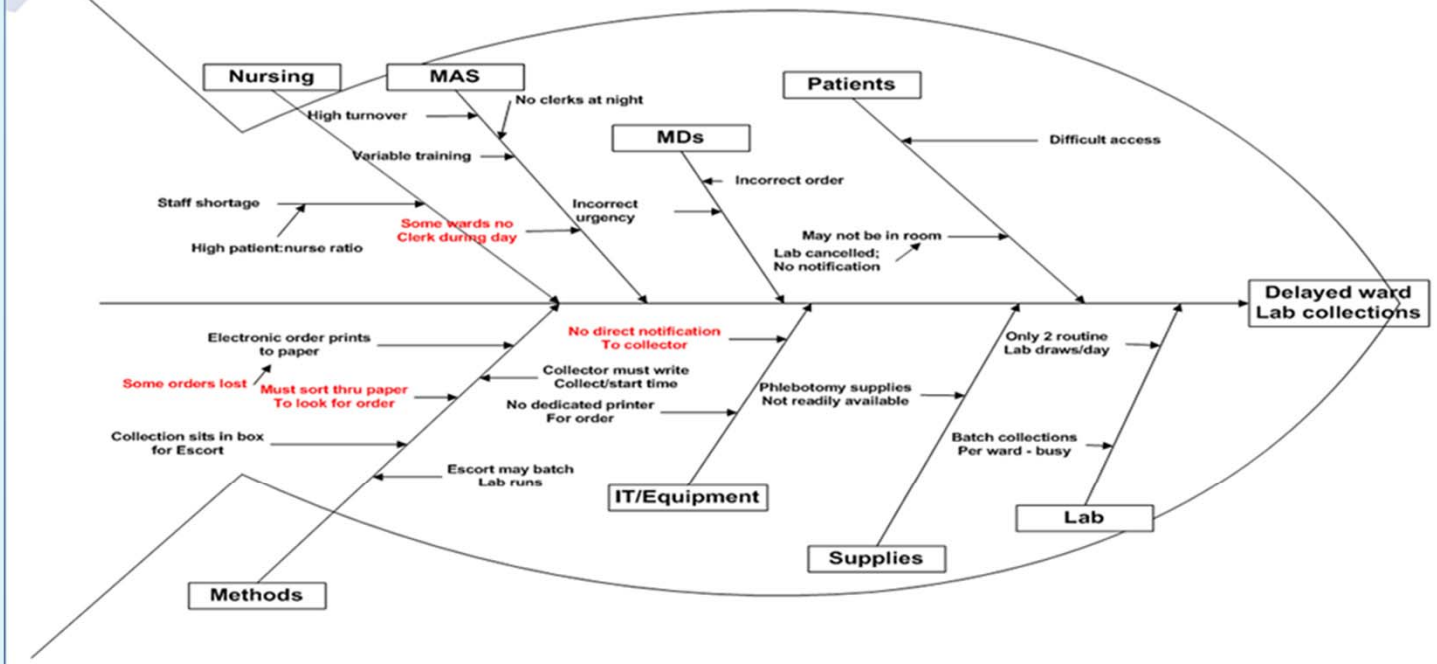

What are we trying to accomplish?
How will we know that a change is an improvement?
What changes can we make that will result in improvement?
Act
Plan
Study
Do

The Six Sigma Model


Gather patient information
Physician will order laboratory tests
Physician completes and submits request form
Are there special instructions?
Depending on tests, special directions before test may apply
Laboratory professional will instruct you on the proper collection of specimen
Is sample collected by patient?
Patient collects sample at home
Laboratory professional collects specimen
The Process of
Requesting Lab Work
Is patient outpatient?
Results may take 2-7 days
Results within a few hours or even less
Results sent to physician
Physician reviews results
Patient meets with physician
Physician reviews results and determines treatment

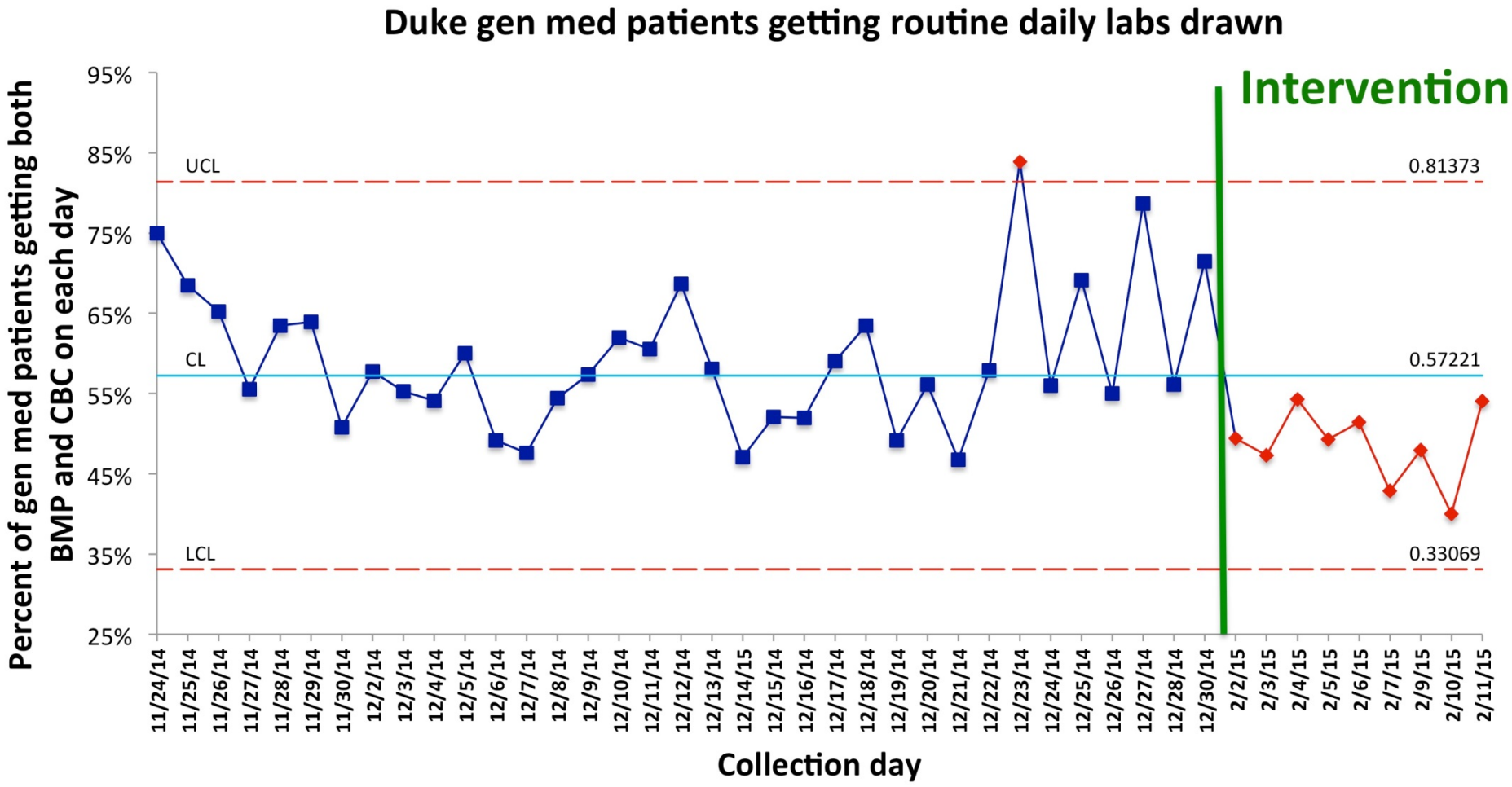
CAUSE & EFFECT DIAGRAM

Ordering Ward Collect Labs



CENTER FOR PATIENT SAFETY & HEALTH POLICY
UT HEALTH SCIENCE CENTER™
WE MAKE LIVES BETTER

Educating for Quality Improvement & Patient Safety


Duke gen med patients getting routine daily labs drawn
Intervention
Percent of gen med patients getting both BMP and CBC on each day
95%
85%
75%
65%
55%
45%
35%
25%
UCL
CL
LCL
0.81373
0.57221
0.33069
11/24/14
11/25/14
11/26/14
11/27/14
11/28/14
11/29/14
11/30/14
12/2/14
12/3/14
12/4/14
12/5/14
12/6/14
12/7/14
12/8/14
12/9/14
12/10/14
12/11/14
12/12/14
12/13/14
12/14/15
12/15/14
12/16/14
12/17/14
12/18/14
12/19/14
12/20/14
12/21/14
12/22/14
12/23/14
12/24/14
12/25/14
12/26/14
12/27/14
12/28/14
12/30/14
2/2/15
2/3/15
2/4/15
2/5/15
2/6/15
2/7/15
2/9/15
2/10/15
2/11/15
Collection day

Planning your QIPS Project

1. Identify an (interesting) problem/process in your healthcare setting. (A.K.A. "**The Idea**")
2. Discuss your project idea(s) with your faculty mentor/peers.
3. Thoughtfully consider the magnitude and complexity of your envisioned project design.
   - use some type of PDSA, etc. framework worksheet
4. Review the pertinent published literature!!!!!
5. TRIM DOWN YOUR IDEAL PROJECT DESIGN.
6. Write up your project proposal (early, several times and **long before** IRB application).
   - overall purpose, specific objectives, personnel, sampling plan, measure(s), data collection methods, data set creation, analysis plan, timeline, dissemination plan.
7. Remind yourself that there has never (ever) been a "perfect" QIPS project design.
8. Consider how your project might be influenced by your resources, organ. priorities, etc.
9. Obtain IRB review and approval as early as you can.
10. Conduct your ~~perfectly-designed~~ project. Take regular "field notes during project!!!
11. Remember that "midstream" adjustments are NOT forbidden during QIPS projects.
12. Maintain a "parking lot" of project contingencies to address unforeseen project issues.
13. Write up your project results with your thoughtful conclusions and "lessons learned."
14. Get your results disseminated (more than once)!!!
15. Ensure that your current results help "inform" your next (imperfect) project design.

F.I.N.E.R. Project Design Criteria

- Feasible

- Interesting

- Novel

- Ethical

- Relevant

(Dr. Stephen B. Hulley, MD, MPH at UCSF

Thank you.

Bill Corser, PhD, RN, NEA-BC
Statewide Campus System
College of Osteopathic Medicine
Michigan State University
965 Fee Road, A339D East Fee Hall
East Lansing, MI 48824
(Cell) (517) 918-3470 (highly preferable)
corser@msu.edu (preferable)