

Every System Is Perfectly Designed
To Get The Results It Gets

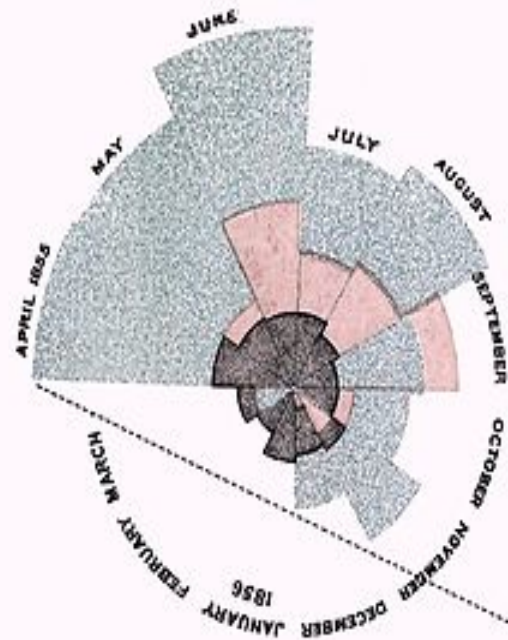
David Vaughan

I stand at the altar of the murdered men, and, while I live, I fight their cause.
Florence Nightingale, 1856

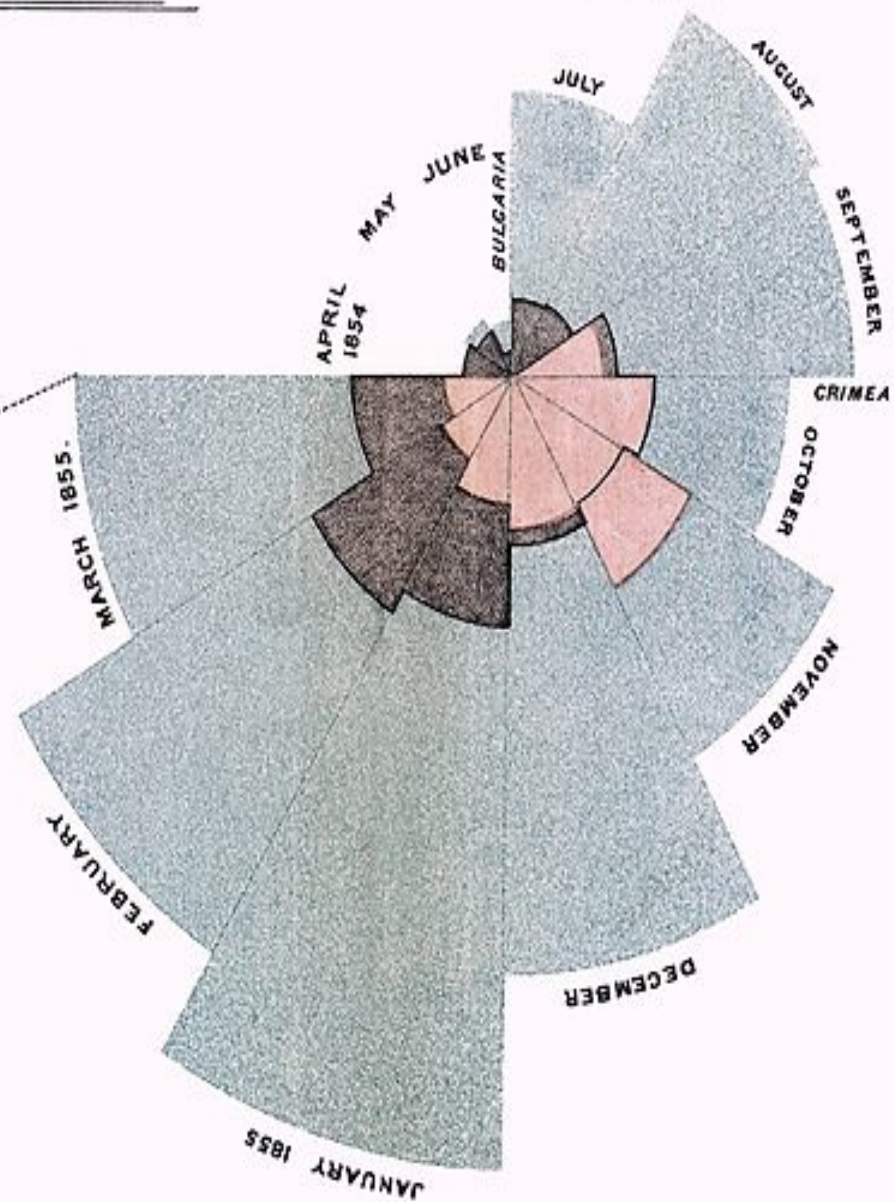
DIAGRAM OF THE CAUSES OF MORTALITY

IN THE ARMY IN THE EAST.

2.
APRIL 1855 to MARCH 1856.



1.
APRIL 1854 to MARCH 1855.



The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.

The blue wedges measured from the centre of the circle represent area for area the deaths from Preventable or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes.

The black line across the red triangle in Nov^r 1854 marks the boundary of the deaths from all other causes during the month.

In October 1854, & April 1855, the black area coincides with the red, in January & February 1855, the blue coincides with the black.

The entire areas may be compared by following the blue, the red & the black lines enclosing them.

What is the IHI

- A non profit organisation, staff 110, dedicated to improving health
- Began as an informal gathering of like minded individuals in airports
 - Birthday Club meeting
 - Inspired by improvement science in manufacturing, engineering and statistical basis

- We must accept human error as inevitable — and design around that fact
- Systems thinking is hard
- If our system is failing to deliver the results we require, we must change the system

What is a system?

- A system is a set of interdependent elements interacting to achieve a common aim — a set of things that work together to get to a goal

How Do We Create Quality?

- Quality is created not by heroic individuals working alone, but by individuals working within well designed systems
- Quality does not occur by accident; it has to be managed into the system
- Connect everyone's work to the ultimate aim
- “You cannot inspect quality into the product”
– W. Edward Deming

How Do We Create Quality?

- Recognize that we do not have a system
- Empower at a local level
- Provide training that fits with the strategic agenda
- Engage the senior leadership; quality must be the number one priority

The IHI Way; Gloria Steinem

- Get people together
- Notice and nurture the coalitions; don't force
- Name the problem
- Use the media
- Use policy

What is a mistake?

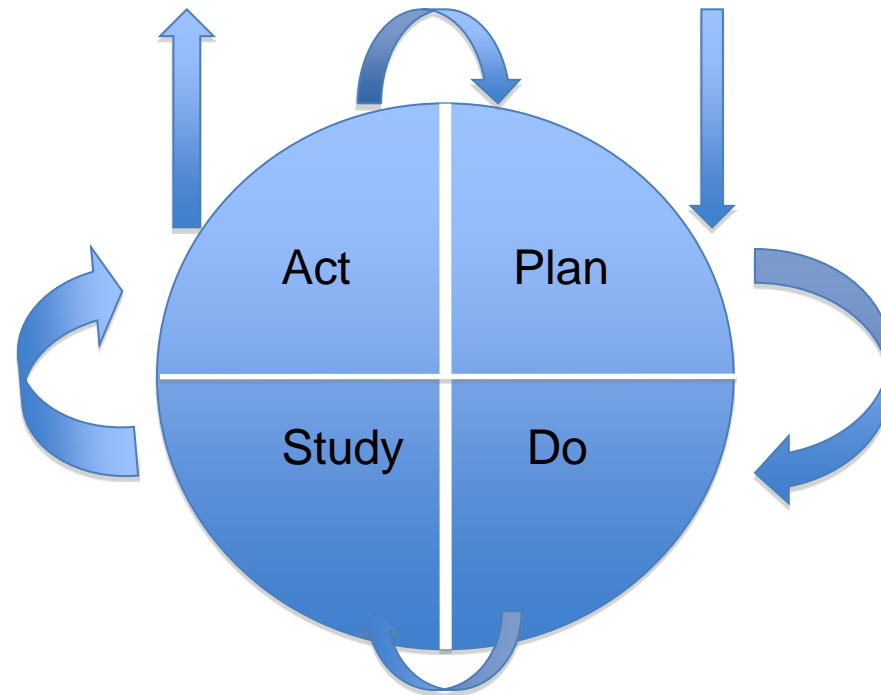
- Is it a “complication”?
- Is it unavoidable and integral to the delivery of healthcare?
- Near miss vs. Good catch

Philosophy; Model for Improvement

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 an improvement?



IHI Goals

- Better Health
- Cheaper Health
- Improved experience of care

IHI Goals/ Aims

- Triple Aim
- Scottish Patient Safety Initiative
- “How will we do that?”
- Developing Countries
- STAAR initiative
- Safer Patients Network
- TCAB
- Reducing Avoidable ED admissions

IHI Training

- Patient Safety Officer
- Improvement advisor
- Leadership
- Hospital Flow

What's in it for me?

- Professional obligation, Primum Non Nocere
- Engage all staff with safety message
- Make it personal
 - Patient Stories
 - Personal Experience
- Productivity will follow safety if sold correctly; they are two sides of the same coin

Rethinking Rapid Response Teams

Eugene Litvak, PhD

Peter J. Pronovost, MD, PhD

CURRENT DEBATE IN THE MEDICAL COMMUNITY centers on the benefits of rapid response teams (RRTs), hospital-based teams composed of clinicians with intensive care unit (ICU)-level clinical expertise. These teams rapidly respond when the condition of patients being cared for outside of the ICU suddenly deteriorates, and such patients often require transfer to ICUs.¹ Those on one side of the debate suggest that RRTs save lives; this assertion is supported by common sense, numerous anecdotal reports, and some observational studies.² Those on the other side of the debate suggest that preventing, recognizing, and treating deteriorating patients is common sense. How best to achieve this remains elusive based on systematic reviews,³ which have failed to show benefit of RRTs but note that RRT studies were often of poor quality and clinicians often failed to call an RRT when they should have, leading to uncertainty in the estimates of benefit. Proponents favor further research, encouraging hospitals to experiment with strategies such as RRTs, enhanced nurse staffing, or hospitalists who would respond to deteriorating patients, stressing prevention rather than recovery from deterioration. Those on both sides of the debate are united in their frustration that patients are needlessly experiencing morbidity and agree that preventing patients' health from deteriorating is the optimal solution.

The debate obscures a more fundamental question: why are RRTs needed in the first place? The answer seems to be simple. An RRT is needed when the condition of a patient who is receiving care in a medical/surgical unit deteriorates.

philosophy of RRTs is premised on the idea that current care is inadequate; therefore, introducing ICU-level care will benefit the patient. If current care is adequate, an RRT is not likely to make a difference.

Underlying inadequate care is that patients have been admitted to a unit that provides inadequate care. A triage error or inability to admit or transfer a patient to the preferred unit is the main driver⁴ of patient misplacement. Underlying the triage error is the way patient flow is managed or mismanaged. Every physician and nurse would prefer that patients are cared for in a unit that can provide the appropriate level of care, where sufficient physician, nurse, and monitoring resources are available. Physicians commonly request that their patients remain in the ICU or are admitted to a specific nursing unit, often with monitored beds, believing care is better in some units than others.

Intensive care units and monitored beds are scarce resources, demand for these resources periodically exceeds supply, and patients are often not admitted to these preferred units.⁵ This situation is especially problematic in hospitals without critical care physicians who use clearly defined protocols to coordinate the use of monitored beds. A common although often erroneous solution is to add more ICU and monitored beds. Even if the cost of adding a bed (about \$1 million capital for a regular inpatient bed⁶) is ignored, experience suggests that adding more beds does not solve this problem. Eventually, demand for these beds will again exceed capacity.⁵

Why, then, is there a seemingly insufficient number of ICU and monitored beds? Why don't hospitals define which patients should use ICU and monitored beds? One reason is that mismanaged patient flow in the form of artificial peaks does not allow compliance with any such definition. Despite average US hospital occupancy of 66% to 67%,⁶ hos-

What's in it for me, Part 2?

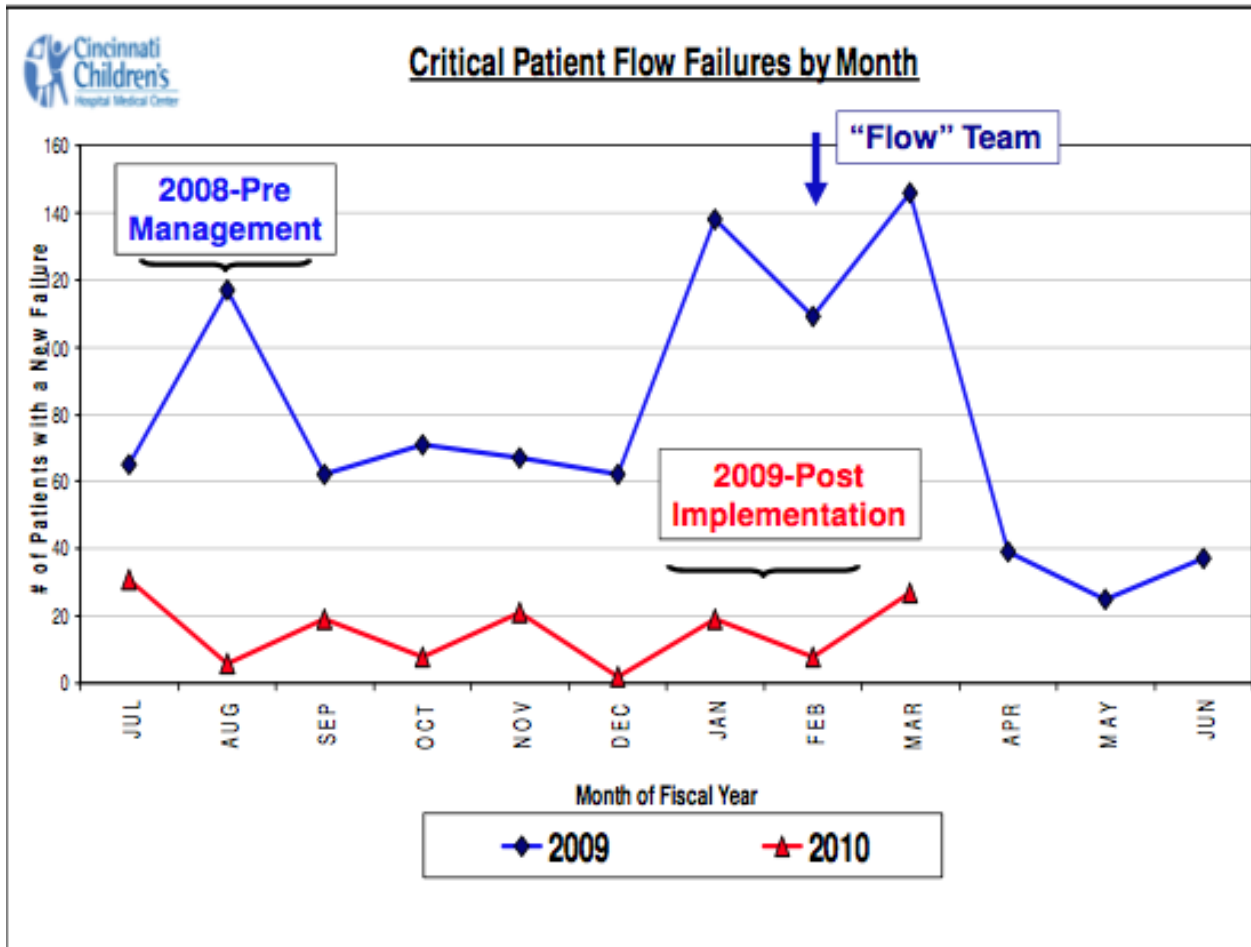
Financial & productivity gains

Litvak E, Pronovost P. JAMA 304(12):1375-1376

Hospital Flow

- Increase productivity 15-20%
- Improve safety
- Improve clinician satisfaction
- Reduce stress/ burnout
- Match supply to demand

Hospital Flow



Dr. Fred Ryckman, Reengineering Hospital Flow. Boston June 2010

Slow Uptake?

- Barriers
 - Cultural
 - Scientific
 - Money
 - Health is different
 - Measurement for Improvement vs. Measure for Judgment

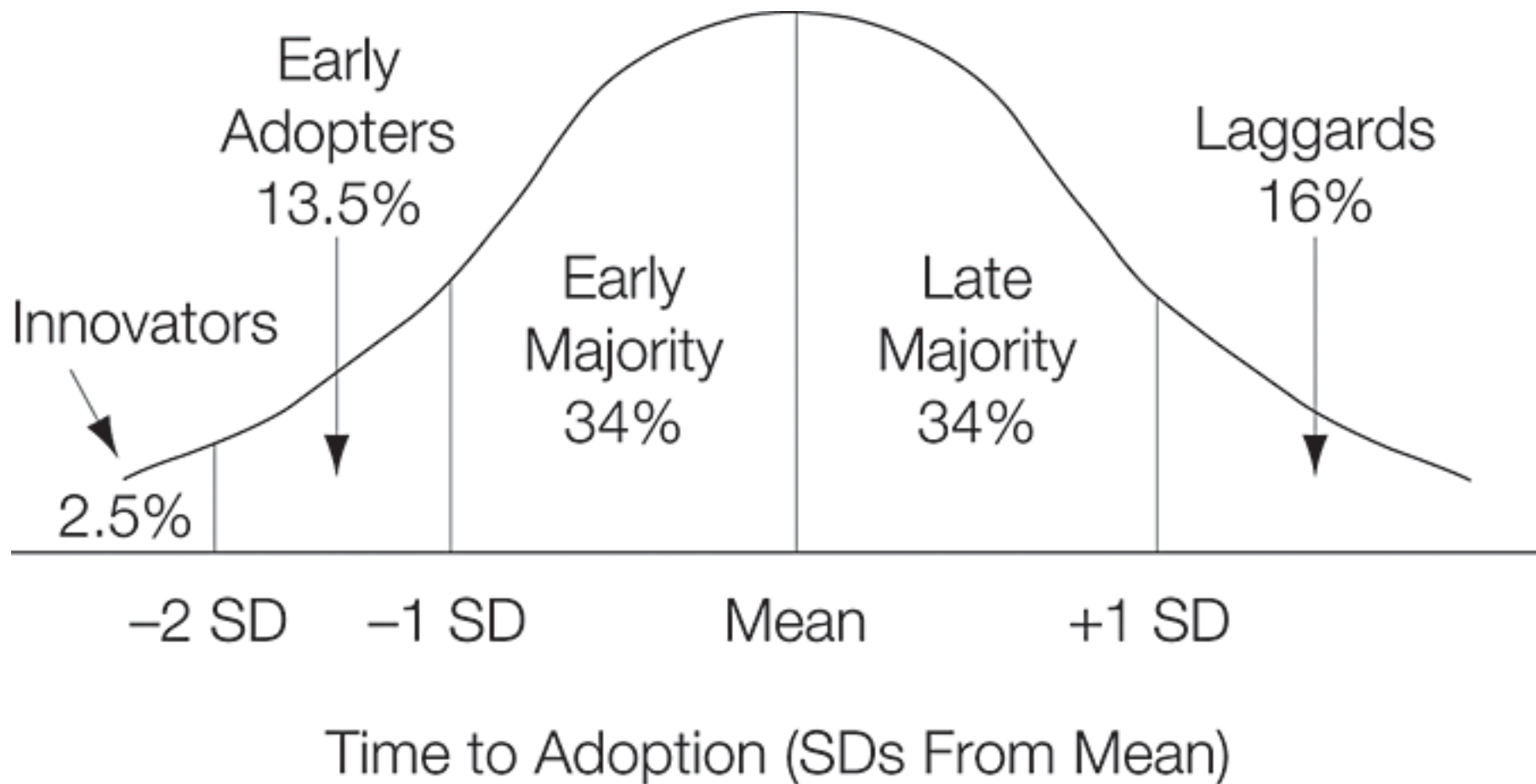
It is not necessary to change. Survival is not mandatory.
W. Edwards Deming

Is this realistic?

- Scotland aims for the following over 5 years:
 - 15% reduction in hospital mortality
 - 30% reduction in adverse events
- Main drivers:
 - Critical Care
 - Wards
 - Hi risk medication and reconciliation
 - Surgery
 - Leadership

Is there a role for IHI type approach in Ireland?

- Yes
 - Positive message
 - Optimism
 - Provides tools and strategy for changing our approach



“People can foresee the future only when it coincides with their own wishes,
and the most grossly obvious facts can be ignored when they are unwelcome.”

George Orwell. “London Letter,” Partisan Review, Winter 1945

Recommendations

- Small scale
 - Notice the groups & coalitions; encourage them and provide support
 - Consider a local improvement initiative; may require outside assistance
 - Leadership support critical

Recommendations

- Medium Scale
 - Hospital/ ISA/ Regional specialty
 - Define the problem
 - Deliver appropriate training, IHI, Intermountain , NHSIII
 - Leadership Support

Recommendations

- Large Scale
 - National Patient Safety Program

“It is not enough to do your best; you must know what to do, and then do your best.

W. Edwards Demming

Recommended Reading

- The Best Practice; Charles Kenney
- Anything by Gawande, esp. The Checklist Manifesto
- Safe Patients, Smart Hospitals: How One Doctor's Checklist Can Help Us Change Health Care from the Inside Out. Eric Vohr & Peter Pronovost
- www.ihl.org
- www.institute.nhs.uk
- www.ihoptimize.org
- www.intermountainhealthcare.org/qualityandresearch/institute/Pages/home.aspx
- <http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html>