

Quality Improvement in Perinatal Care

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Disclosure

- Neither I nor any member of my immediate family has a financial relationship or interest with any proprietary entity producing health care goods or services related to the content of this CME activity.
- I do not intend to discuss an unapproved or investigative use of commercial products or devices.

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Definitions, Concepts

Domains of Quality Health Care Should Be:

- Safe
- Timely
- Effective
- Efficient
- Equitable
- Patient centered

- Institute of Medicine 2001.
Crossing the quality chasm.

Dimensions of Quality

- Structure
- Process
- Outcomes

- Donabedian 1980. Explorations in Quality Assessment and Monitoring

- Pattern (culture)

Quality Problems

- Overuse
- Underuse
- Misuse

- Institute of Medicine

Quality Problems in Healthcare

- Percentage of time appropriate recommended care is received
 - Adults: 54% (McGlynn)
 - Children: 46% (Mangione-Smith)
- ‘Crossing the Quality Chasm’ -
Institute of Medicine 2001

McGlynn et al. NEJM 2003; 348: 2635-45

Mangione-Smith et al. NEJM 2007; 357: 1515-23

Value

Quality

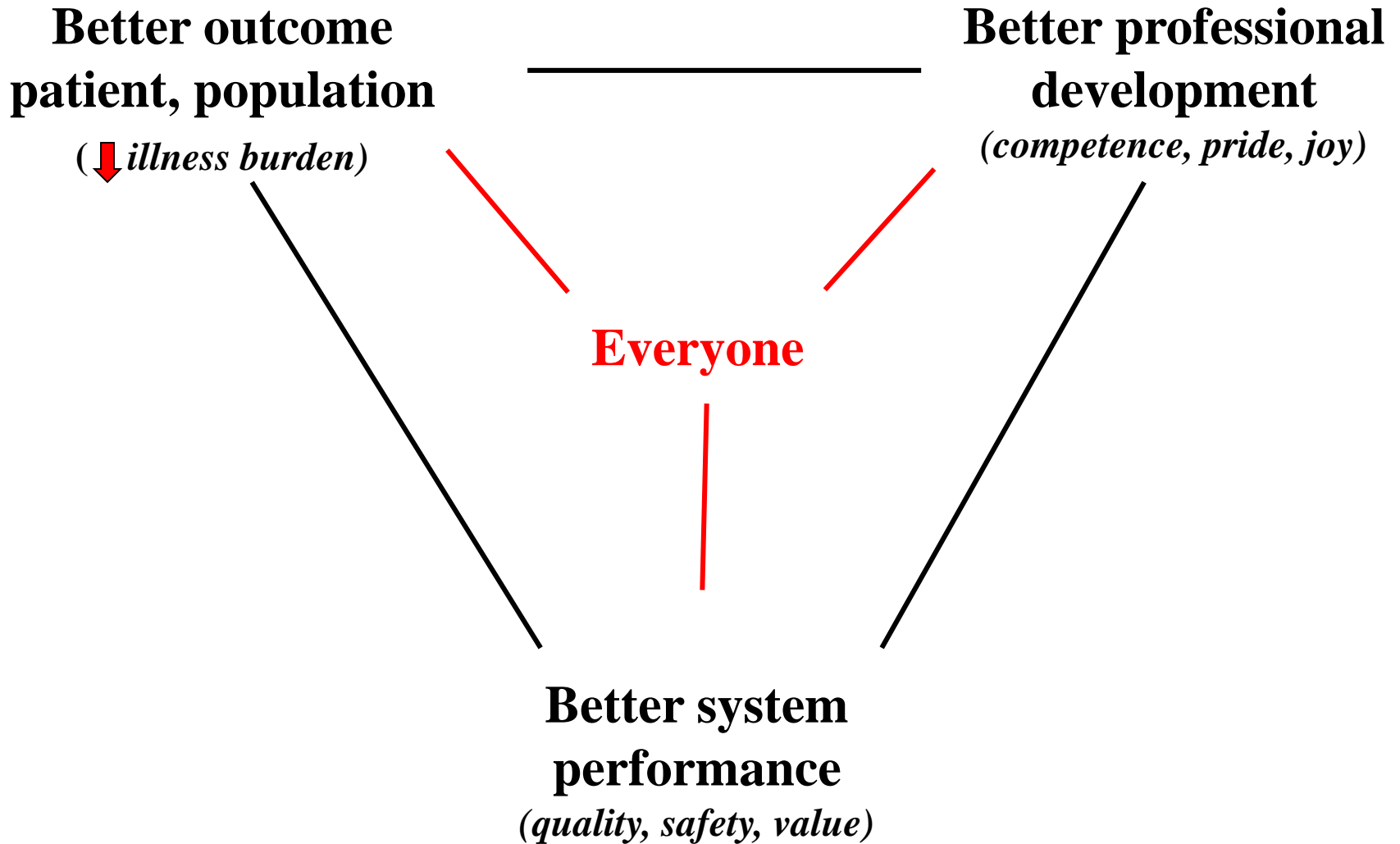
Cost

Choosing Wisely

Avoid routine:

1. **Antireflux medications** for treatment of symptomatic GERD or treatment of apnea and desaturation in preterm infants
2. **Antibiotics > 48 hours** for initially asymptomatic infants without evidence of bacterial infection
3. **Pneumograms** for predischARGE assessment of ongoing and/or prolonged apnea of prematurity
4. **Daily chest radiographs** without an indication for intubated infants
5. **Screening brain MRIs** at term equivalent or discharge in preterm infants

Sustainable efforts in real settings require inextricable linkages...

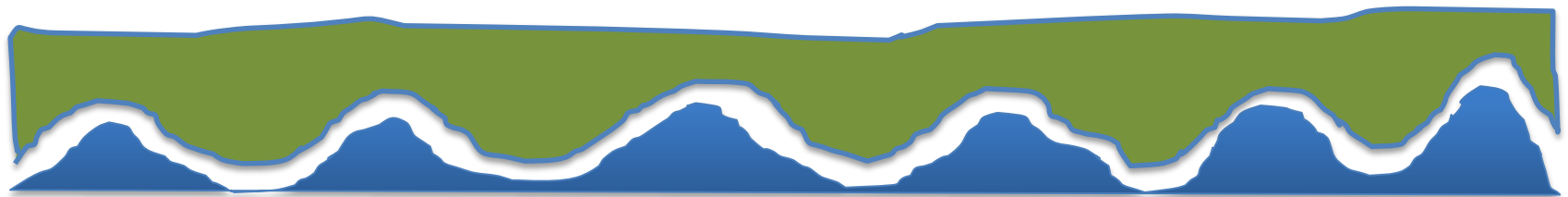
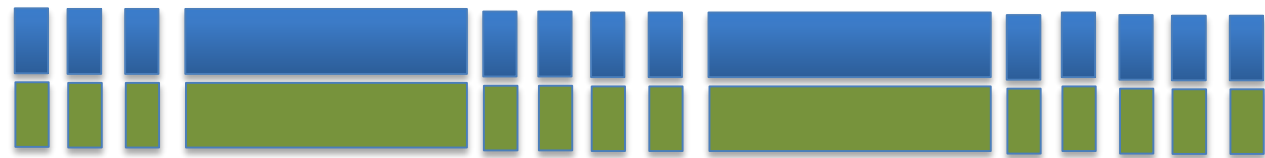


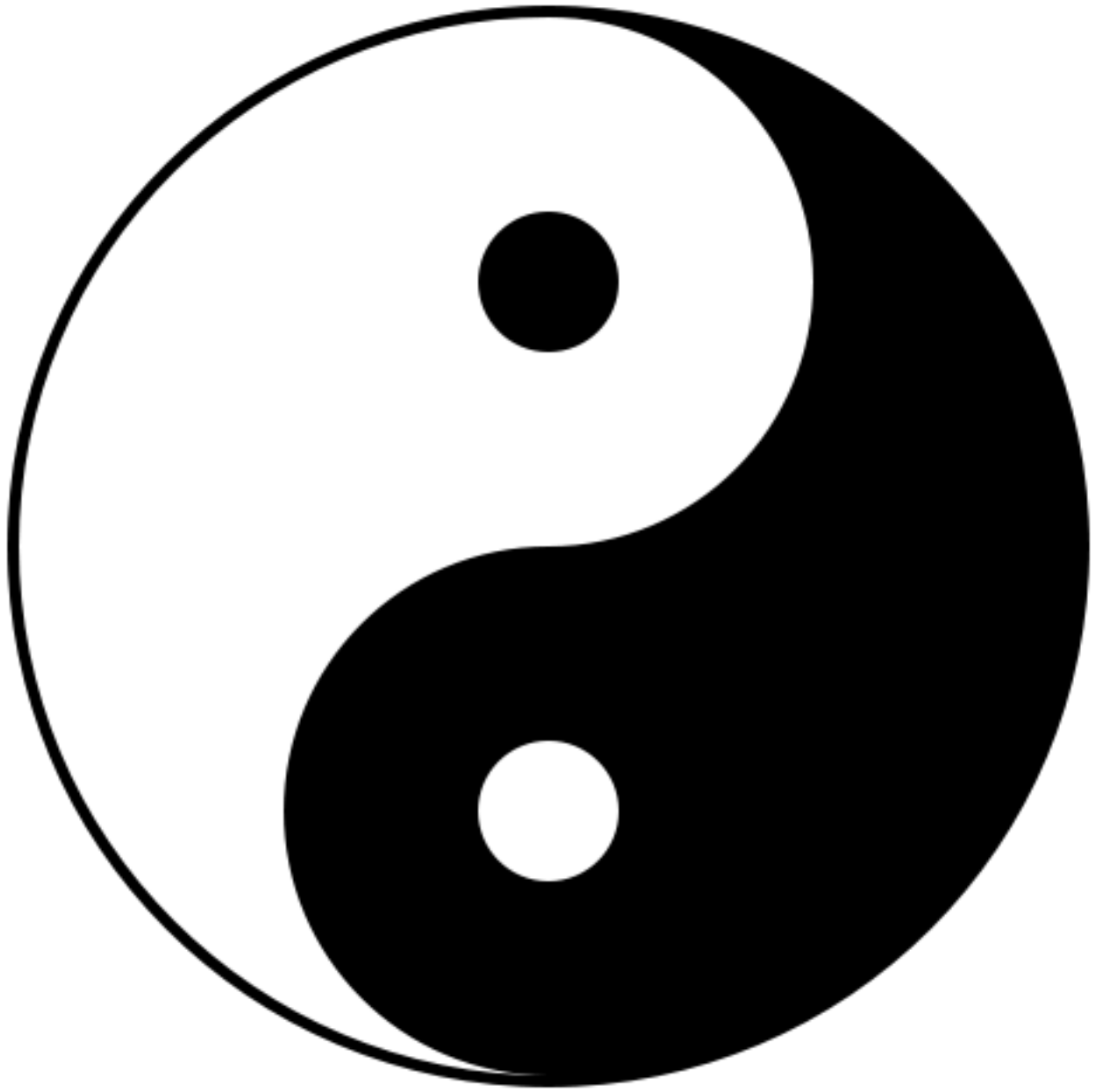
Triple → Quadruple Aim

1. Improve population health
2. Enhance patient experience
3. Decrease healthcare costs
- 4. Improve work life of health professionals**

Bodenheimer and Stinsky. *Ann Fam Med* 2014;12:573-576.

Co-production of Health





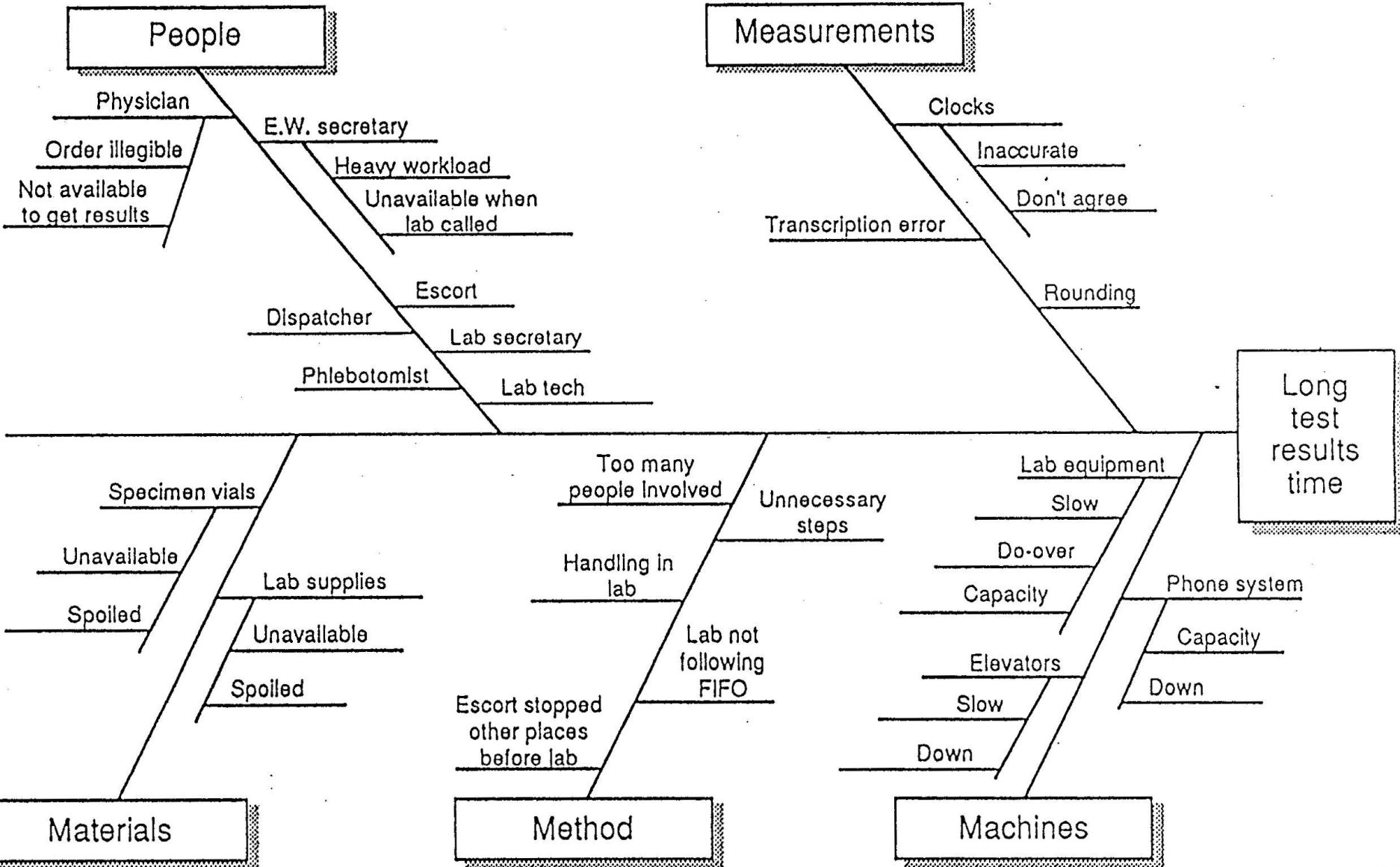
Tips for Success with QI

Ensuring Success with QI: Tip 1

- Resist temptation to jump to a solution
- Resist ‘off-the-shelf’ solutions
- ‘Formulate the mess’ first

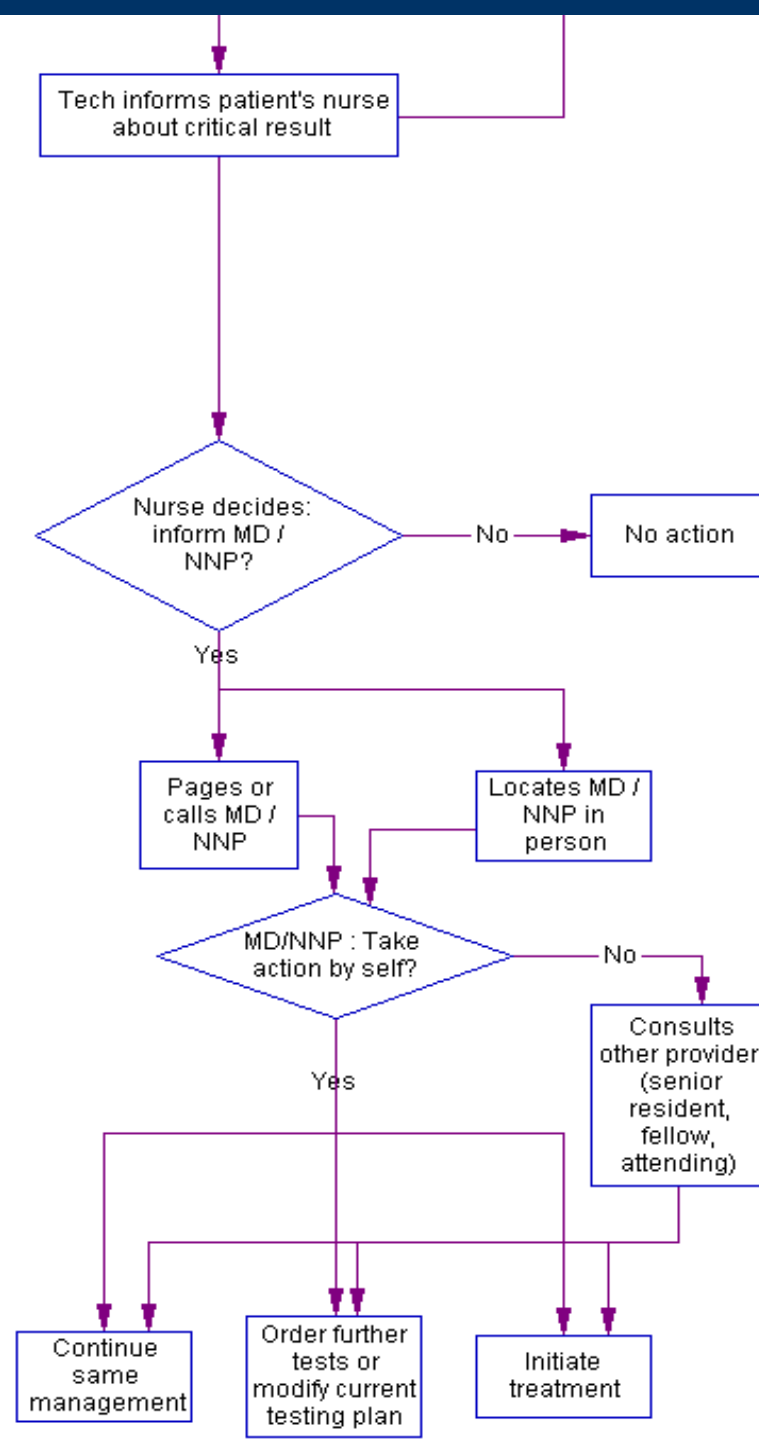
“If I had an hour to save the world I would spend 59 minutes defining the problem and one minute finding solutions” – Albert Einstein

Fishbone-Type Cause-Effect Diagram



Process Flow Chart

7. Clinician response



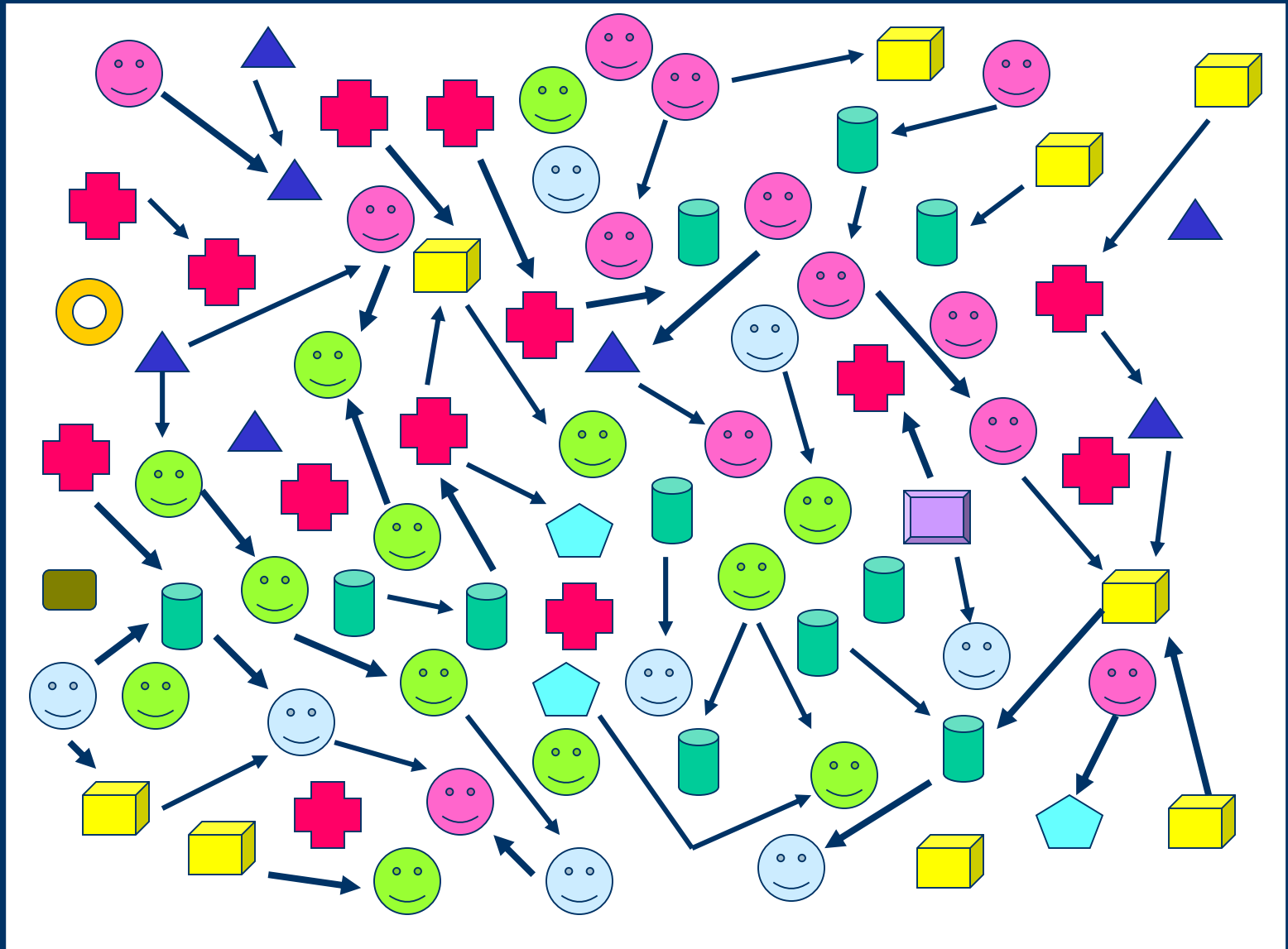
“To do things differently, we must see things differently. When we see things we haven’t noticed before, we can ask questions we didn’t know to ask before.”

John Kelsch, Xerox

Systems Thinking

“A system is a set of interdependent elements interacting to achieve a common aim. The elements may be human and non-human.”

THE NICU AS A COMPLEX ADAPTIVE SYSTEM

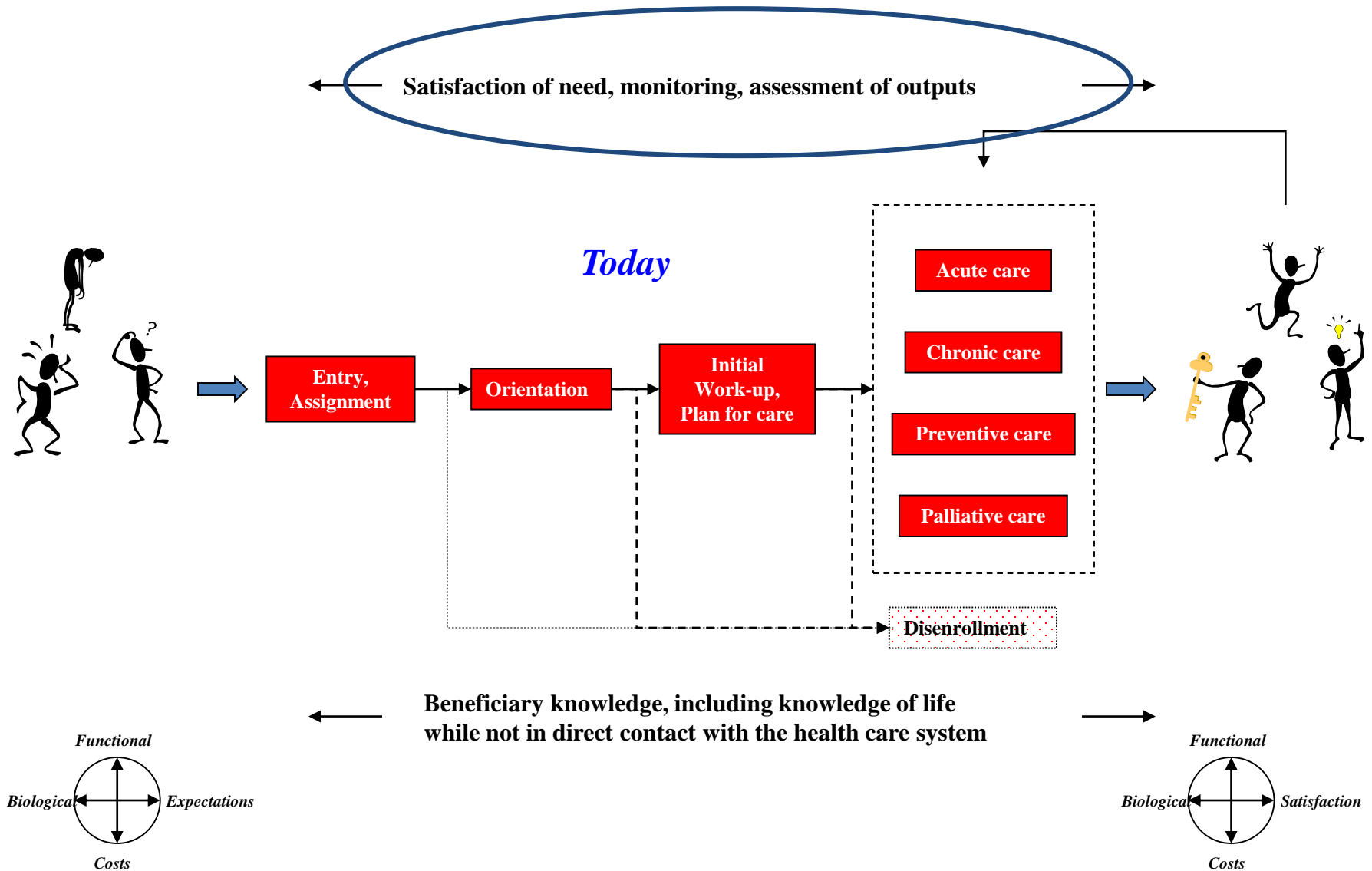


Suggested reading: Plsek P. The challenge of complexity in health care BMJ 2001

Microsystems

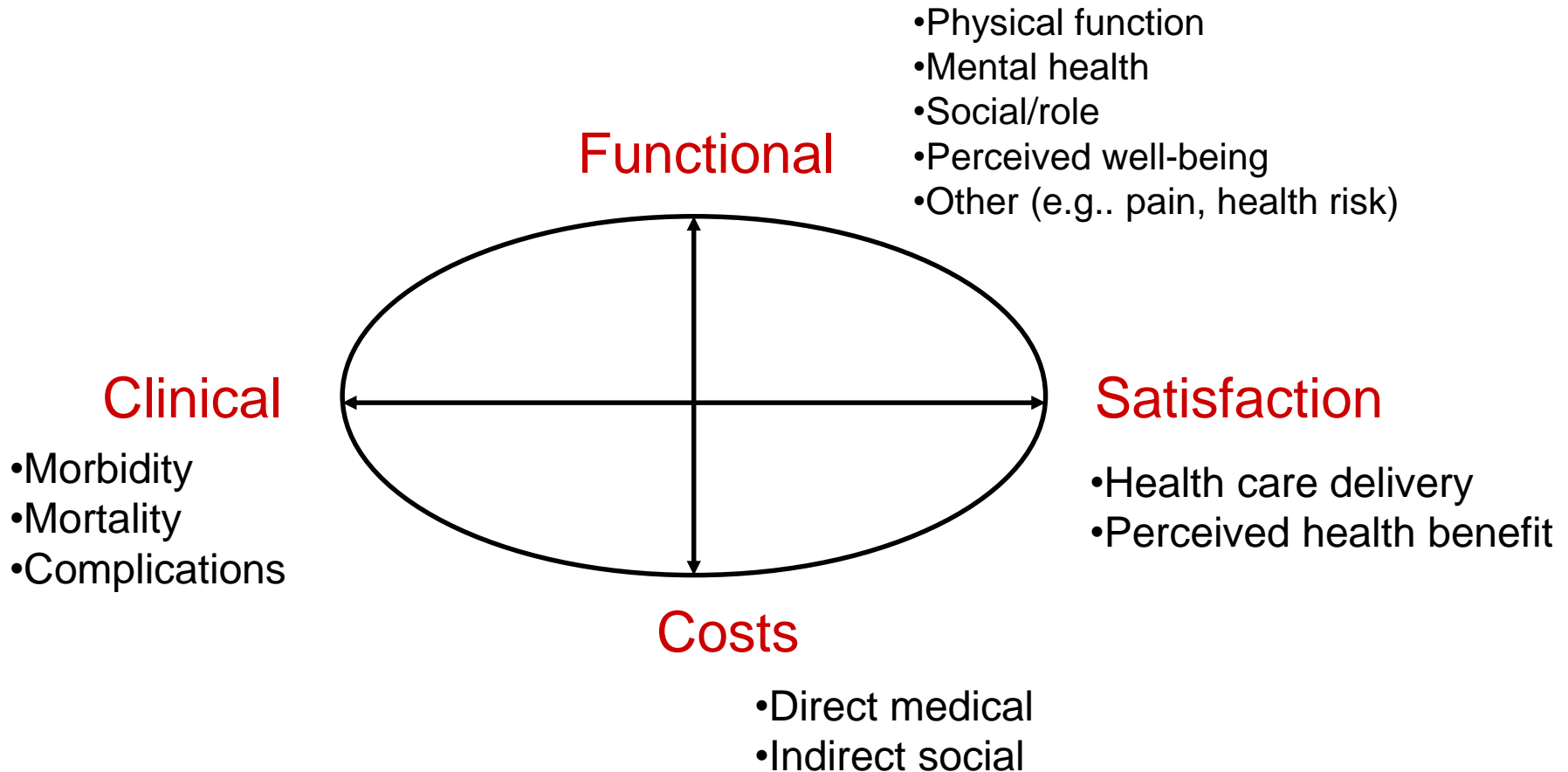
- www.clinicalmicrosystems.org
- A *small group* of people who work together on a regular basis to provide care to discrete subpopulations of *patients*. It has clinical and business *aims*, linked *processes*, shared *information* environment and produces performance *outcomes*. They evolve over time and are (often) *embedded* in larger organizations.

A "Generic" Clinical Microsystem model



Clinical Value Compass

Balanced measures for clinical improvement



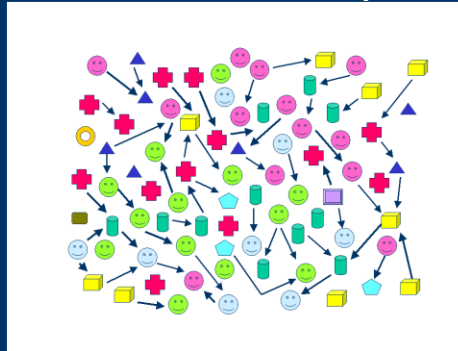
National / International Systems

Society / Culture / Legal / Regulatory

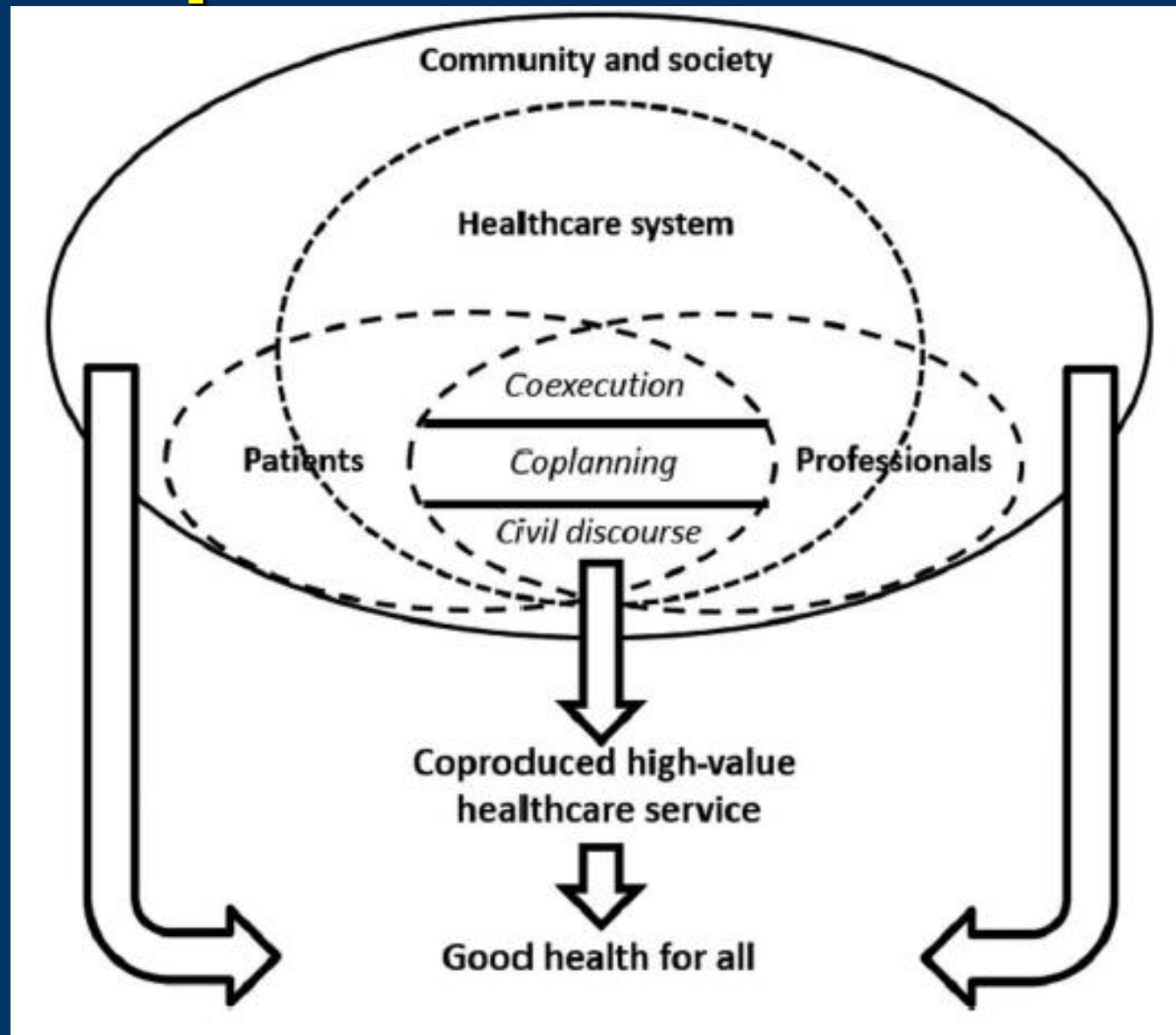
Organization / Health System

Department / Division

Team and Discipline



Co-production of Health



“Every system is perfectly designed to get the results it gets” – *Paul Batalden*

Ensuring success with QI: Tip 2

- Don't use a research mentality, especially with measures
 - Seek usefulness, not perfection
 - Data for monitoring real-time, not evaluation
 - Disaggregated data
 - Time on X axis (run chart or control chart)

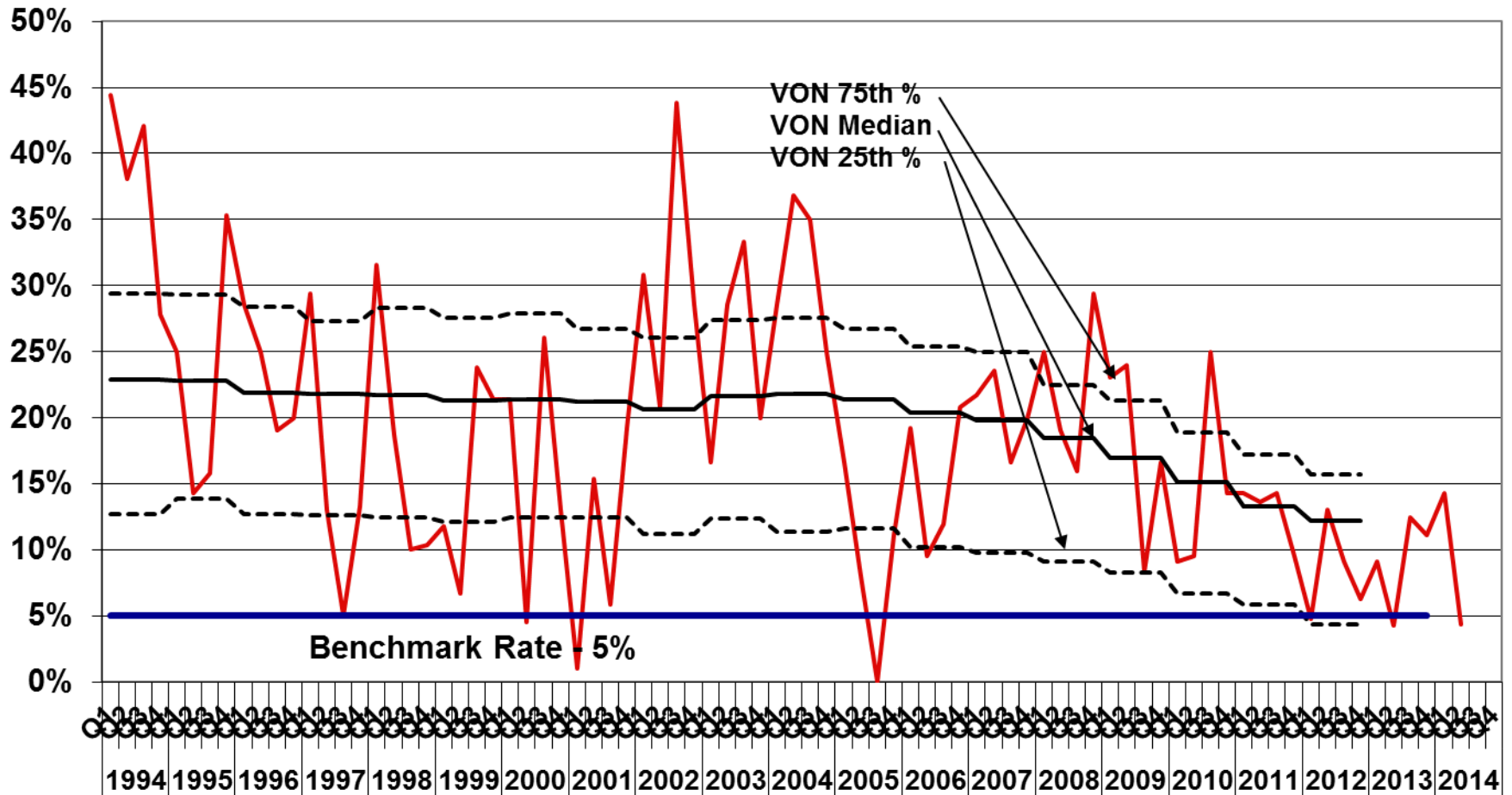
Ensuring success with QI: Tip 3

- Focus on sustainability from the beginning
- Leaders should focus on:
 1. 'Putting out fires'
 2. Organizational imperatives
 3. Strategic priorities for NICU
 4. Capacity building

Recidivism with QI Projects

1. Organizational Attention Deficit Disorder
2. The Hero phenomenon
3. The low-hanging fruit phenomenon
4. Complacency followed by denial
5. Changing processes without changing Culture
6. The 'wash-out' Phenomenon

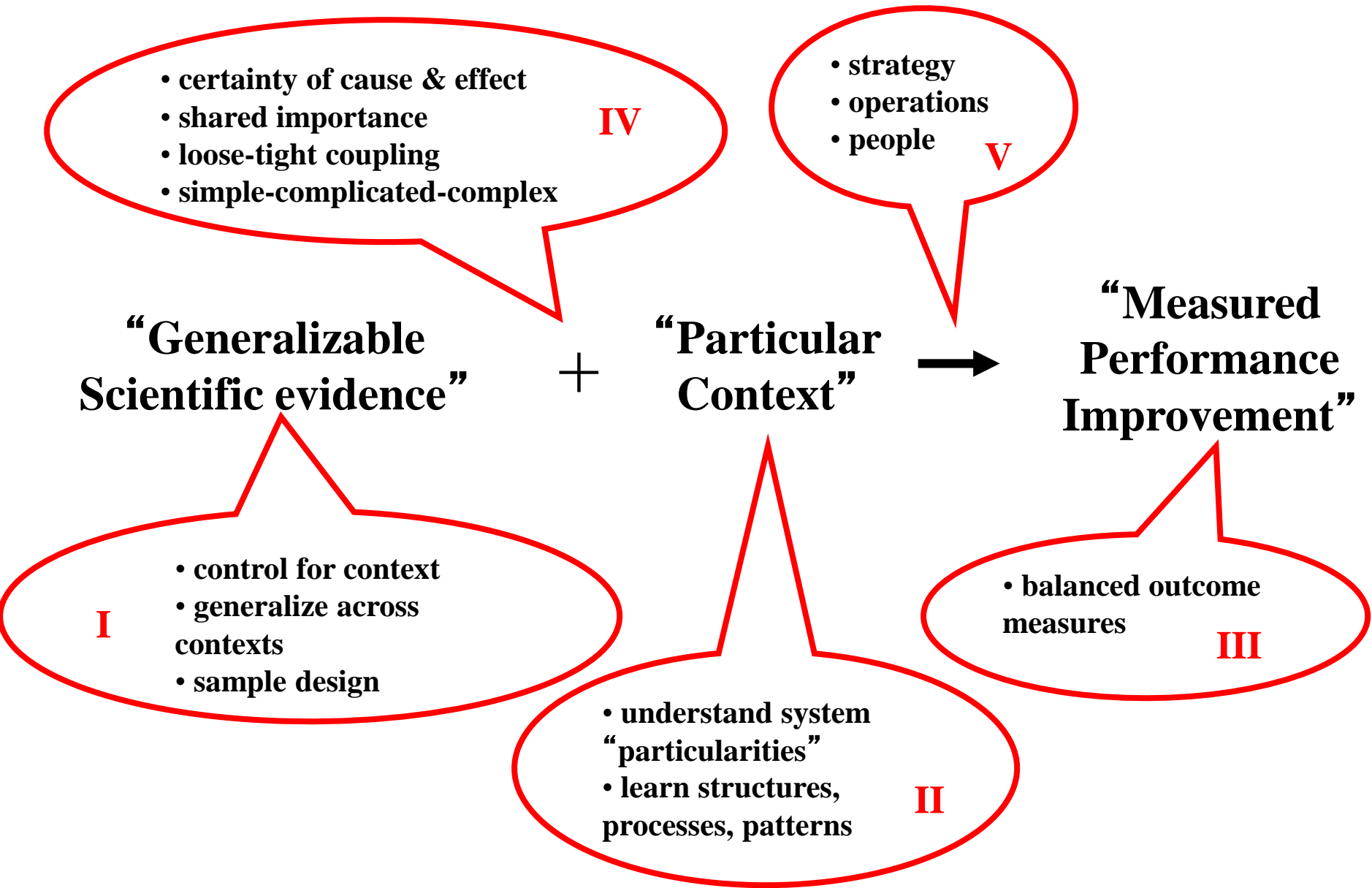
Nosocomial Sepsis Birth Weight 401-1500 grams



Ensuring success with QI: Tip 4

- Develop an approach to decision-making when evidence is uncertain
- ‘Consistent arbitrariness’
- Tension between needing to improve care and knowing how to do it
 - Auerbach et al. NEJM 2007; 357;6
 - Ting et al. Circulation. 2009;119:1962-1974

Linking Evidence to Improvement

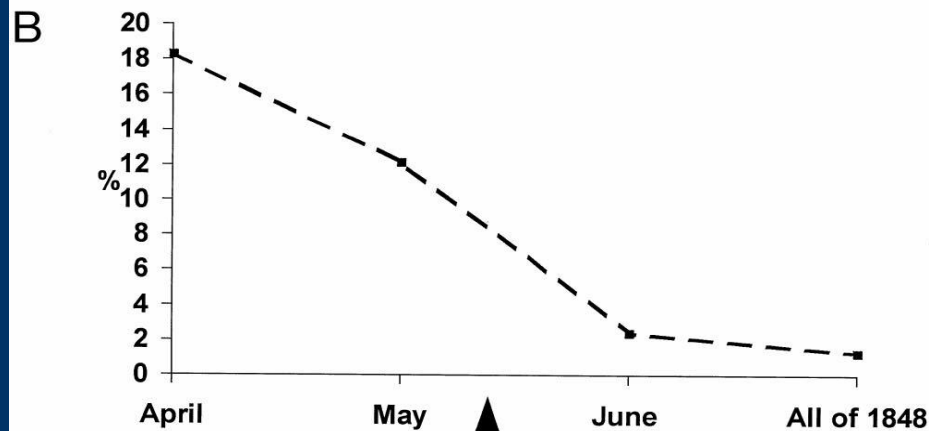
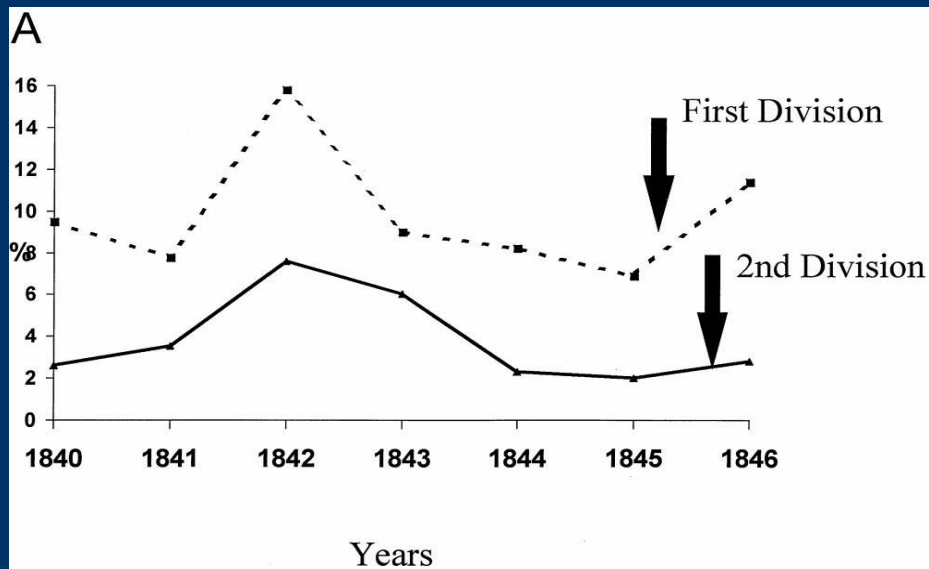
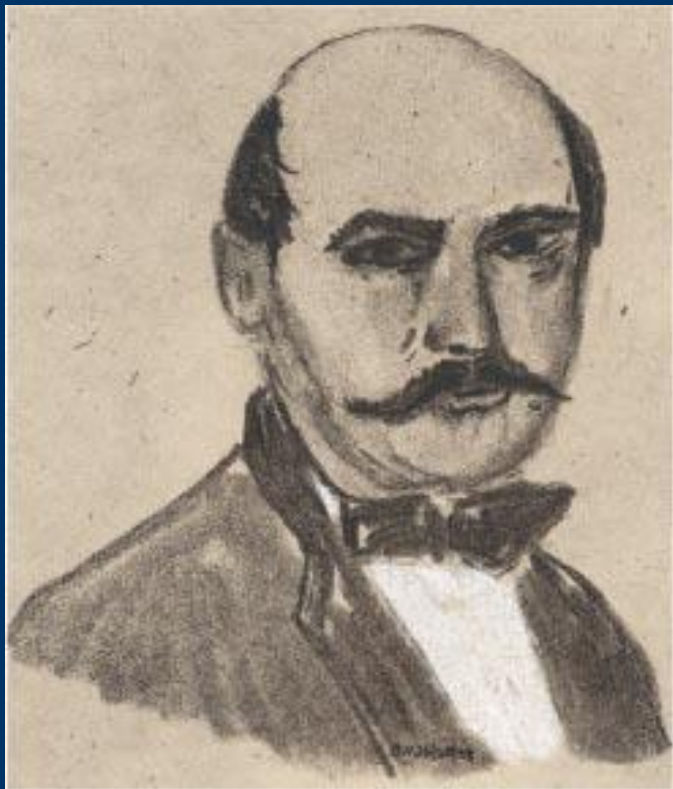


Ensuring success with QI: Tip 5

- Change management methods
- Technical and adaptive work

Suggested readings:

- Kotter and Schlesinger. Harvard Business Review 2008 July-August
- Varkey and Antonio. American Journal of Medical Quality 2010 25: 268
- Heifitz et al. Adaptive leadership



In May 1847 hand washing was made compulsory for all doctors attending deliveries.



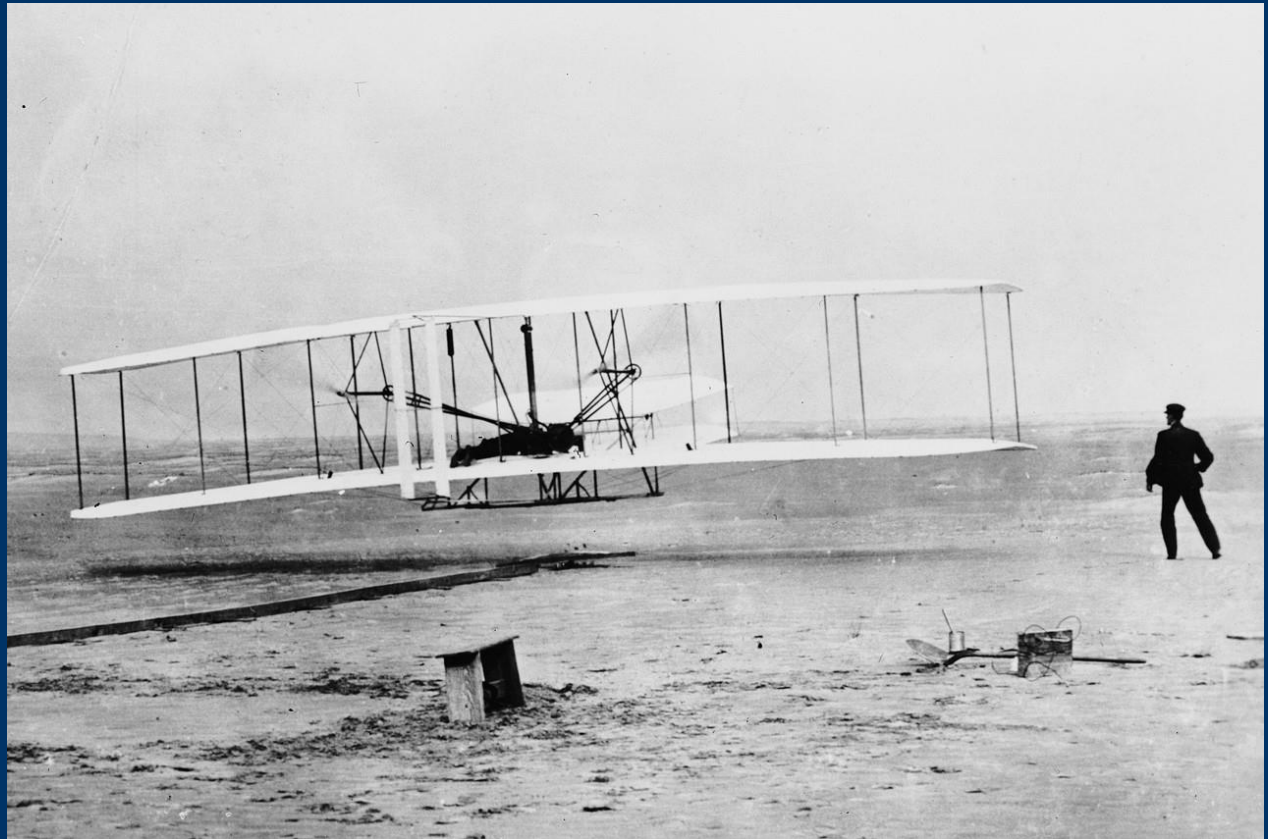


Change Management

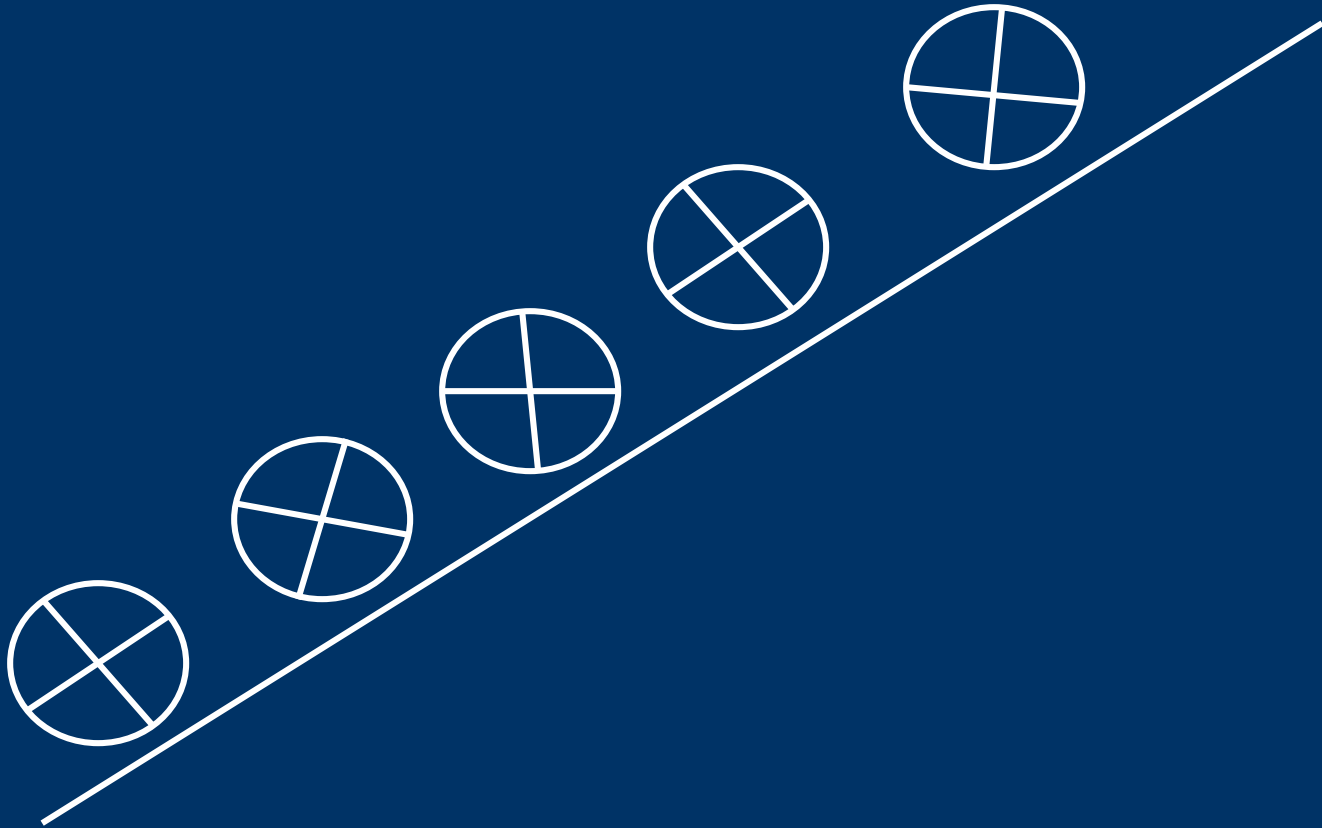
- Expect resistance
- Use psychology
- Information, education very important
- Communication x 10
- Get buy-in, ownership by all involved
- Publicize results, celebrate successes

Ensuring success with QI: Tip 6

- Learn from 'Failure'



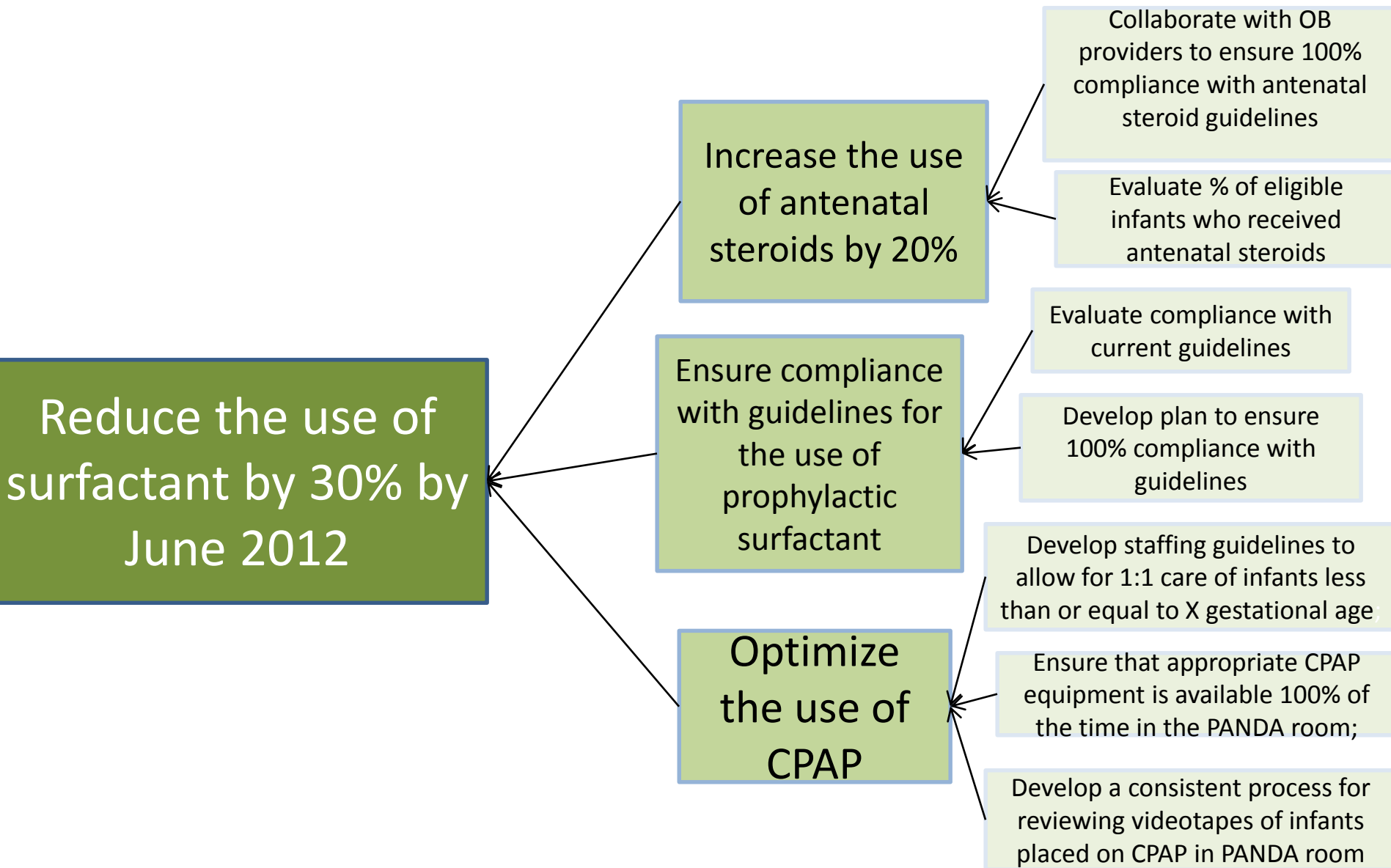
Sequential PDSA cycles build learning



Ensuring success with QI: Tip 7

- Use principles and methods of project management
 - Meeting skills
 - Minutes, documentation
 - Communication methods, formats
 - Dissemination methods, formats

KEY DRIVER DIAGRAM



Ensuring success with QI: Tip 8

- Go beyond the jargon
 - ‘Silo’
 - ‘Low-hanging fruit’
 - ‘Maintain the gains’
 - ‘Buy-in’
 - ‘Checklist’
 - ‘Forcing function’

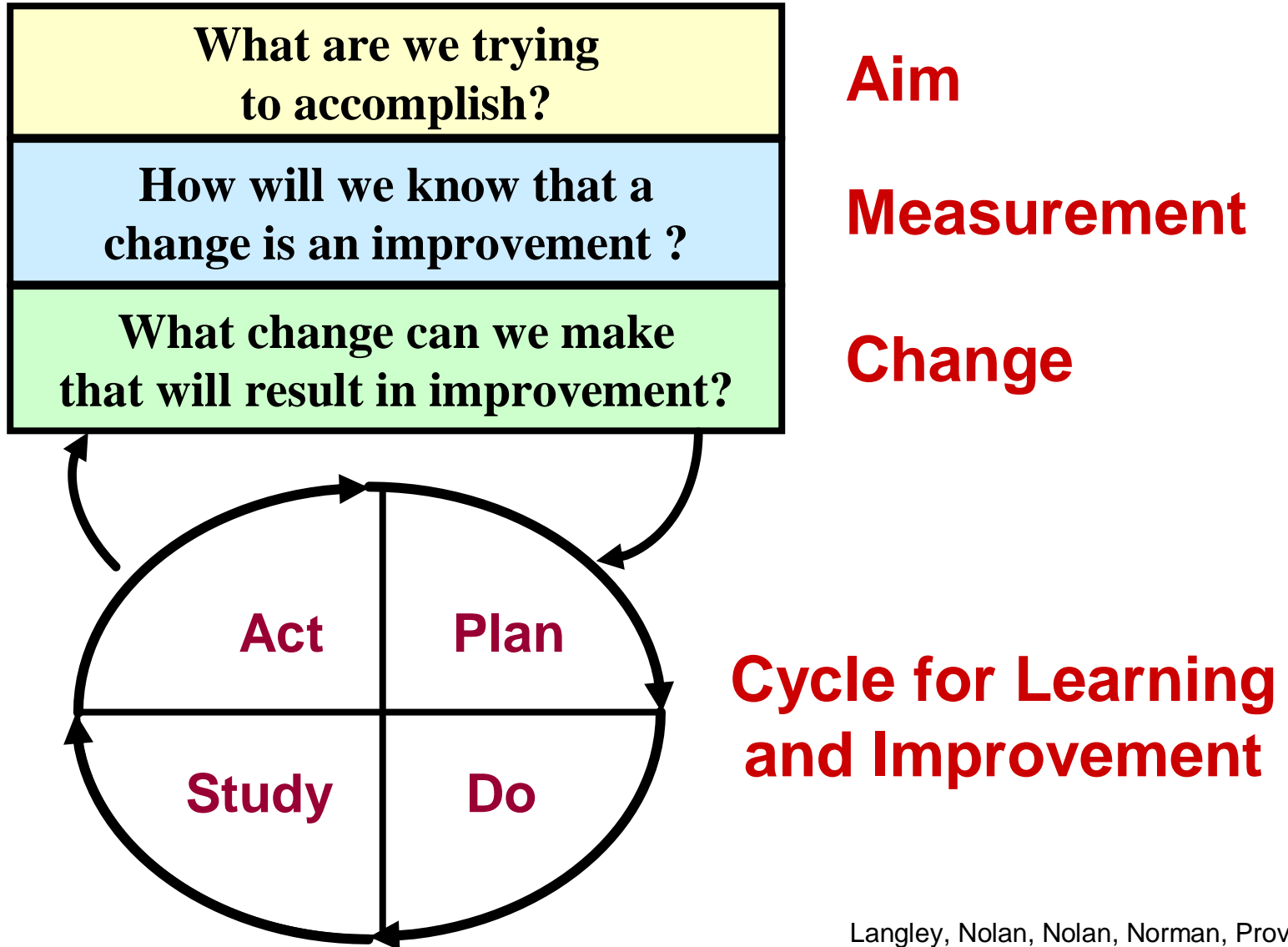
Ensuring success with QI: Tip 9

- Use a coach if possible
- Coaching requires training
- Dartmouth ‘coach-the-coach’ program (www.clinicalmicrosystems.org)

Ensuring success with QI: Tip 10

- Do not get 'hung up' on any one method for QI
 - IMPROVE
 - Model for improvement
 - Lean or Lean-Six-sigma (DMAIC) or TPS
 - Rapid cycle improvement
 - Four key habits (VON)
 - Intermountain Healthcare course
 - Microsystems approach

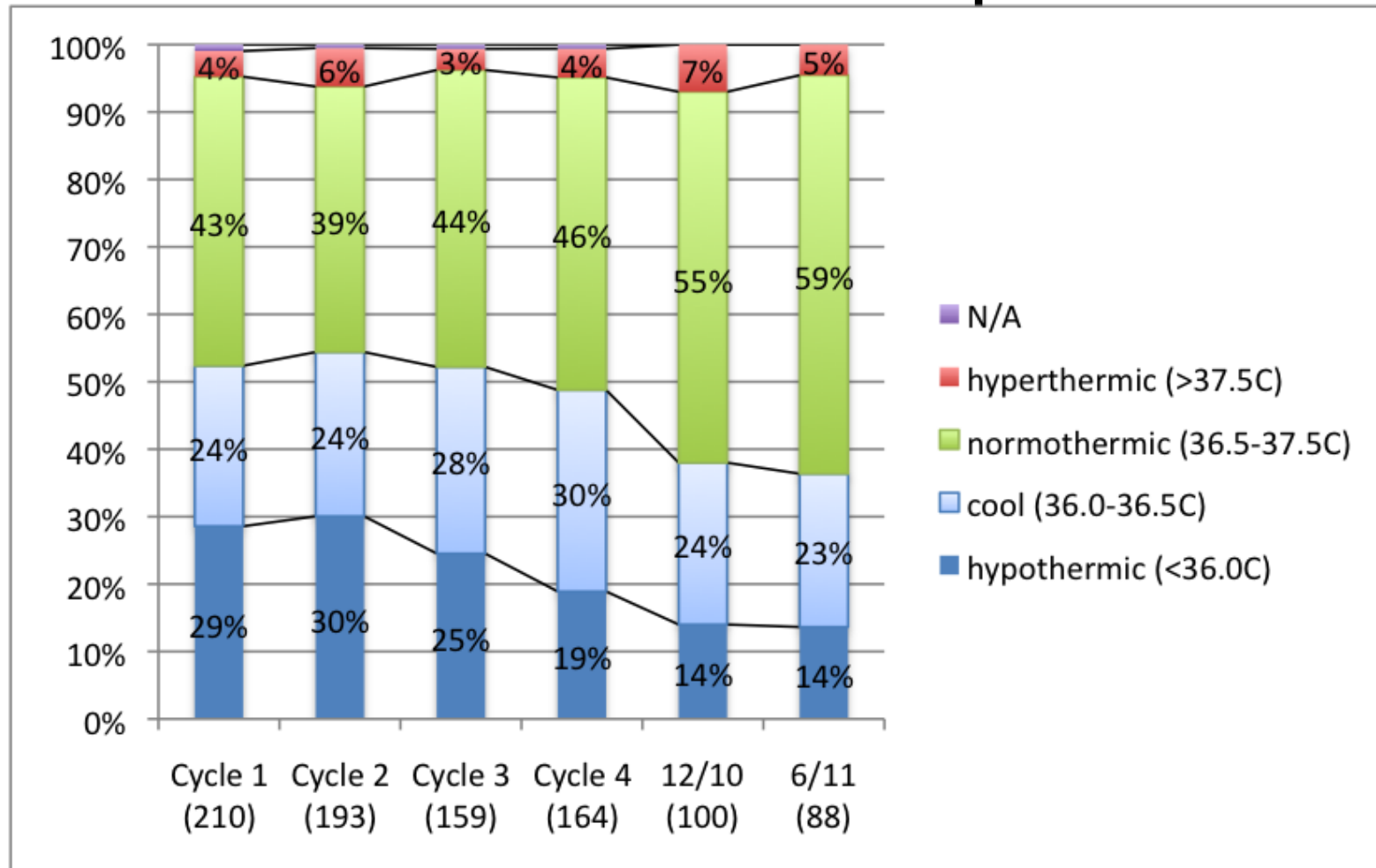
The Model for Improvement



QI Collaboratives

- Northern New England Cardiovascular Study Group
- IHI's Breakthrough Series Projects
- VHA Upper Midwest Coaching & Leadership Initiative
- Vermont-Oxford Network: NICQ
- State collaboratives of NICUs

Tennessee State Collaborative VLBW Admission Temperatures



www.tipqc.org

Slides courtesy P. Grubb, MD; B. Barker

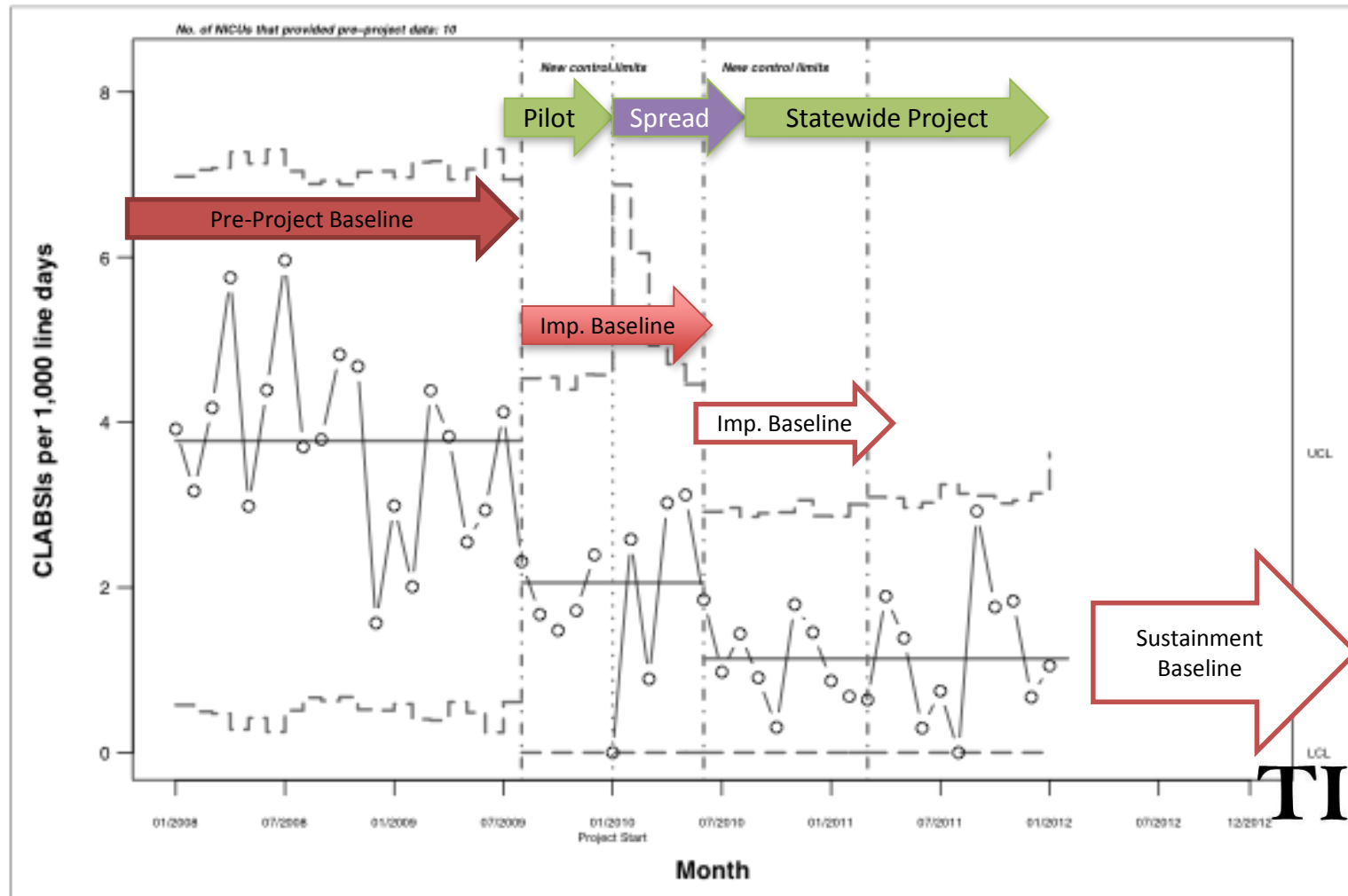


3 CLABSIs/1,000 Line Days/Month

The following (u-chart) figures illustrate the rate of confirmed CLABSIs per 1,000 line days per month (CDC/NHSN definition). For those central lines with a missing date of removal, the baby's date of discharge or 'today's' date were appropriately used instead.

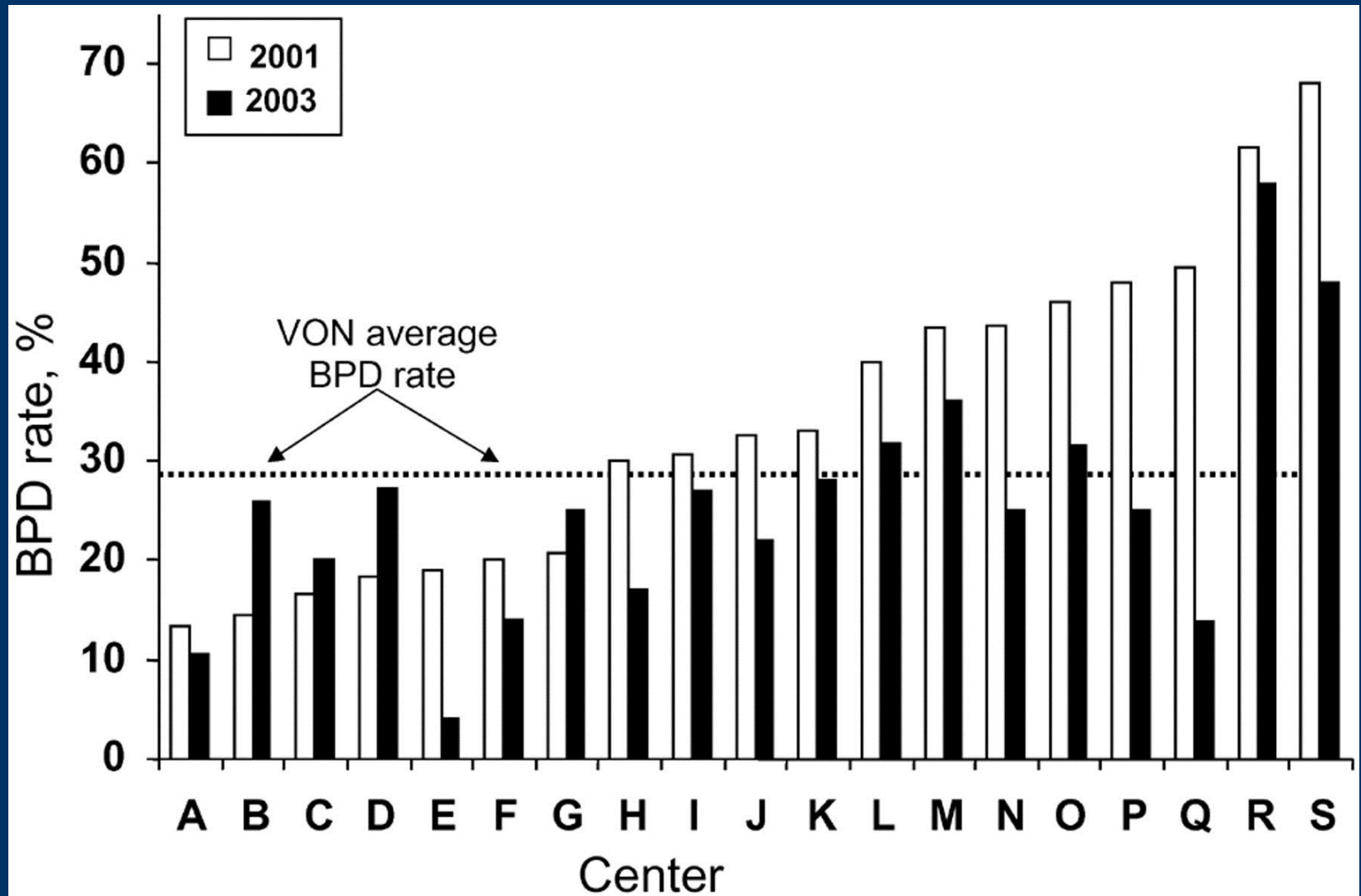
3.1 Overview, including pre-project data (Jan 1, 2008 - Dec 31, 2012)

The center line (CL) was recalculated after 10 consecutive months below the initial CL. The current CL is calculated based on pre-project and project data from Aug 2009 to May 2010.

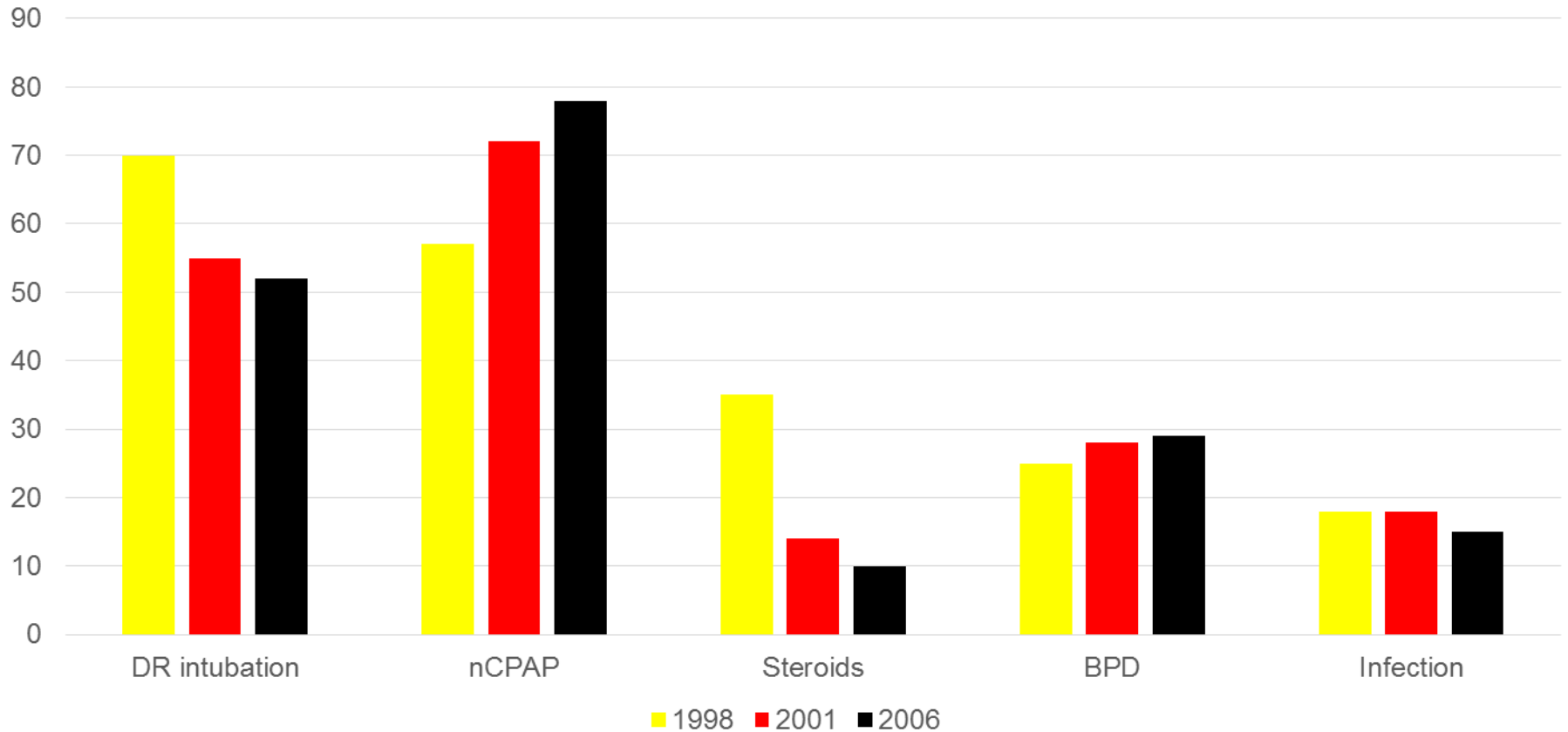


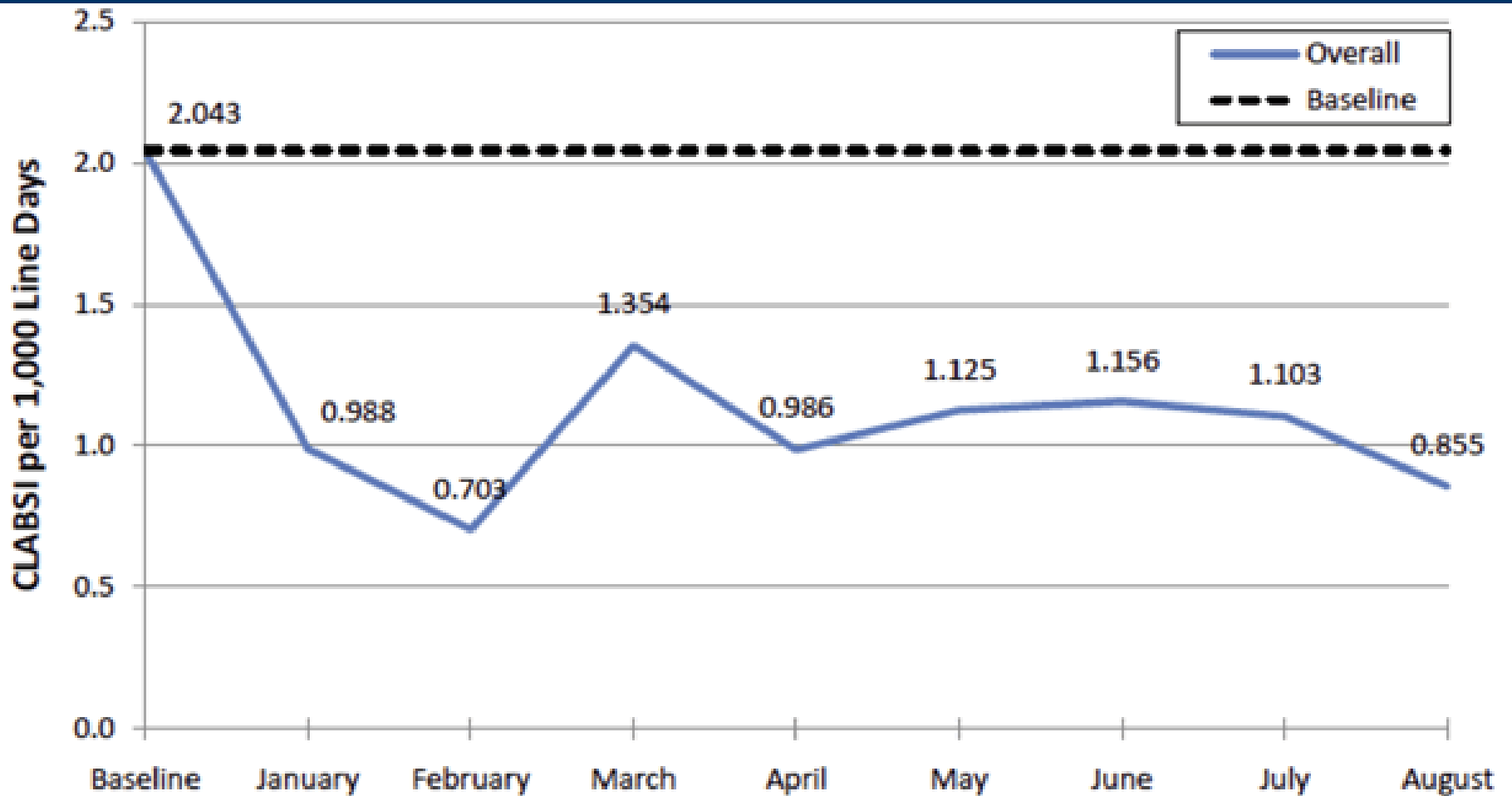
BPD at 19 NICUs

Before and After Implementing Breath Saver PBPs



VON QI Collaborative - ReLI





Online QI Programs

- EQIPP (AAP) www.eqipp.org
- PIMS (ABP) www.abp.org
- iNICQ (VON) www.vtoxford.org

Bundy et al. Acad Pediatr. 2014;14:517-25

External incentives for QI

- ACGME core competency
- Joint Commission
- Public reporting / US News World Report
- Financial incentives
- Maintenance of Certification
 - Effectiveness - ?
 - Has generated hostility, complaints
 - Expensive

Boarded to Death — Why Maintenance of Certification Is Bad for Doctors and Patients

Paul S. Teirstein, M.D.

In January 2014, the American Board of Internal Medicine (ABIM) changed its certification policies for physicians. Instead of being listed by the ABIM as “certified,” physicians are now

listed as “certified, meeting maintenance of certification (MOC) requirements” or “certified, not meeting MOC requirements.” MOC requirements include ongoing engagement in various medical

knowledge, practice-assessment, and patient-safety activities, on which physicians are assessed every 2 years, and passage of a secure exam in one’s specialty every 10 years.

Are Physicians..



KNIGHTS?



KNAVES?



PAWNS?

Why Improve Quality?

VICIOUS CYCLE OF QUALITY

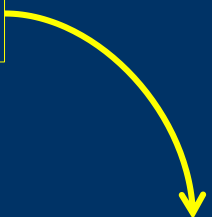
Lack of resources
Lack of training
Lack of QI programs

Poor quality of care

Preventable complications &
deaths not prevented

High morbidity & mortality
High acuity

Excess workload for resources
Sense of fatalism
Cynicism, burnout
Poor performance
Low expectations



VIRTUOUS CYCLE OF QUALITY

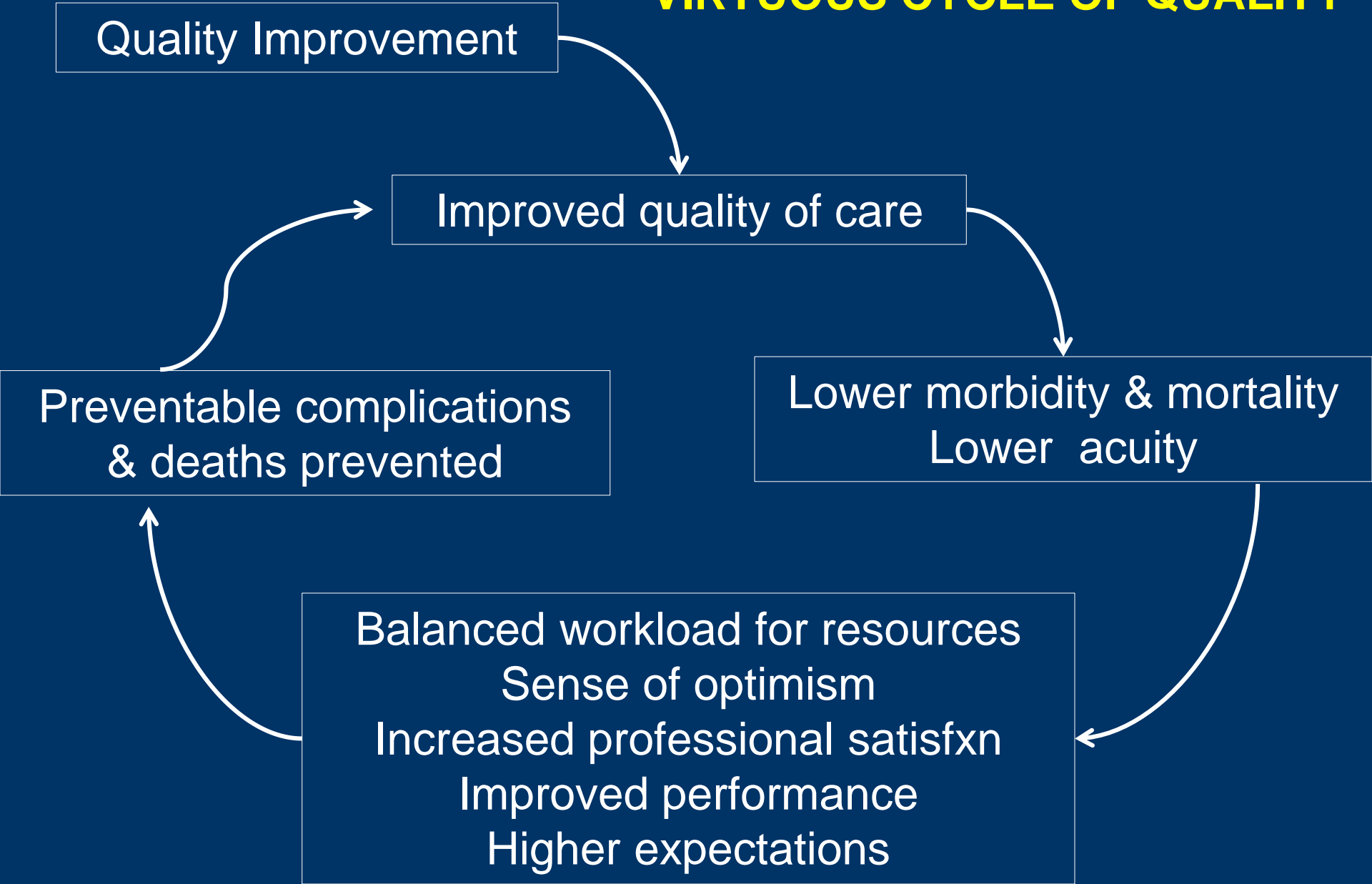
Quality Improvement

Improved quality of care

Preventable complications
& deaths prevented

Lower morbidity & mortality
Lower acuity

Balanced workload for resources
Sense of optimism
Increased professional satisfxn
Improved performance
Higher expectations



Two Jobs

“.....everyone in healthcare really has two jobs when they come to work every day: to do their work and to improve it.”

Batalden and Davidoff.

Qual Saf Health Care 2007;16:2–3

Based on Tucker, Edmondson, Spear 2001

www.neoknowledge.org

Thank You!
Questions