Institute *for* Healthcare Improvement

London – Full day course M5

April 21, 2015

The Journey to Improve Patient Safety across the Continuum

International Forum on Quality and Safety in Healthcare

Carol Haraden, Anthony Staines

BMJ Group

Agenda

- Introduction & introductions
- Harm across the continuum : fighting Patient Safety stagnation
- Diagnosing Patient Safety problems

- BREAK

- Understanding and using your data
- Prioritizing –strategy and action plan

- LUNCH

- Leadership : Board and CEO
- Leadership : Middle managers

- BREAK

- What great teams do well
- Patient safety culture

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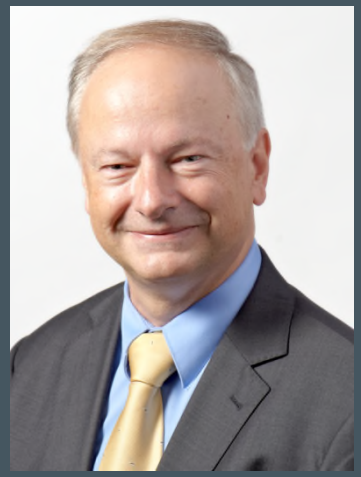

Carol Haraden, PhD,
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International Forum on QUALITY & SAFETY in HEALTHCARE

The presenters have nothing to disclose.

International Forum on Quality and Safety in Healthcare

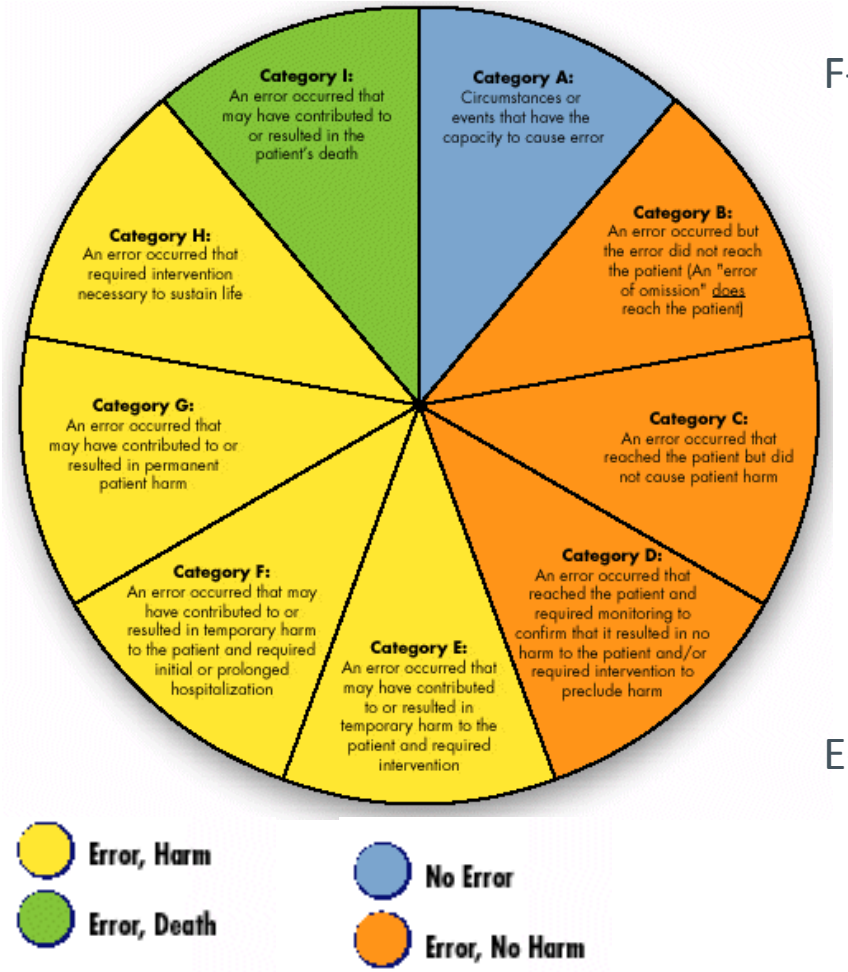
Institute *for* Healthcare Improvement

Harm across the continuum : fighting Patient Safety stagnation

Anthony Staines, Ph.D.
Patient Safety Program Director, Fédération des hôpitaux vaudois, Switzerland
Professeur associé, IFROSS, University of Lyon 3, France

London,
April 21, 2015

Adverse Event - definition



F-I =>

"An unintended injury caused by medical management rather than by the disease process. The injury is sufficiently serious to lead to prolongation of hospitalisation or temporary or permanent impairment or disability in the patient."

Harvard Medical Practice Study (1990)10

E-I =>

An incident which resulted in harm to a patient

WHO – International Classification for Patient Safety

NCC MERP Index Value

Studies of Harm in Hospitals

Study	Year of review	Number of reviewed stays	% of stays including AE	Deaths (% of AE)
Harvard Med Practice Study (US)	1984	30121	3.7	13.6
Utah-Colorado	1992	14700	2.9	6.6
Australia	1992	14179	16.6	4.8
UK	1999	1014	10.8	8.2
Denmark	1998	1097	9.0	4.9
New Zealand	1998	6579	11.2	4.5
Canada	2000	3745	7.5	15.9
Sweden	2004	1967	12.3	4.1
Netherlands	2004	7926	5.7	7.6
Spain	2005	5908	9.3	4.4

ERRORS & ADVERSE EVENTS

By David C. Classen, Roger Resar, Frances Griffin, Frank Federico, Terri Frankel, Nancy Kimmel, John C. Whittington, Allan Frankel, Andrew Seger, and Brent C. James

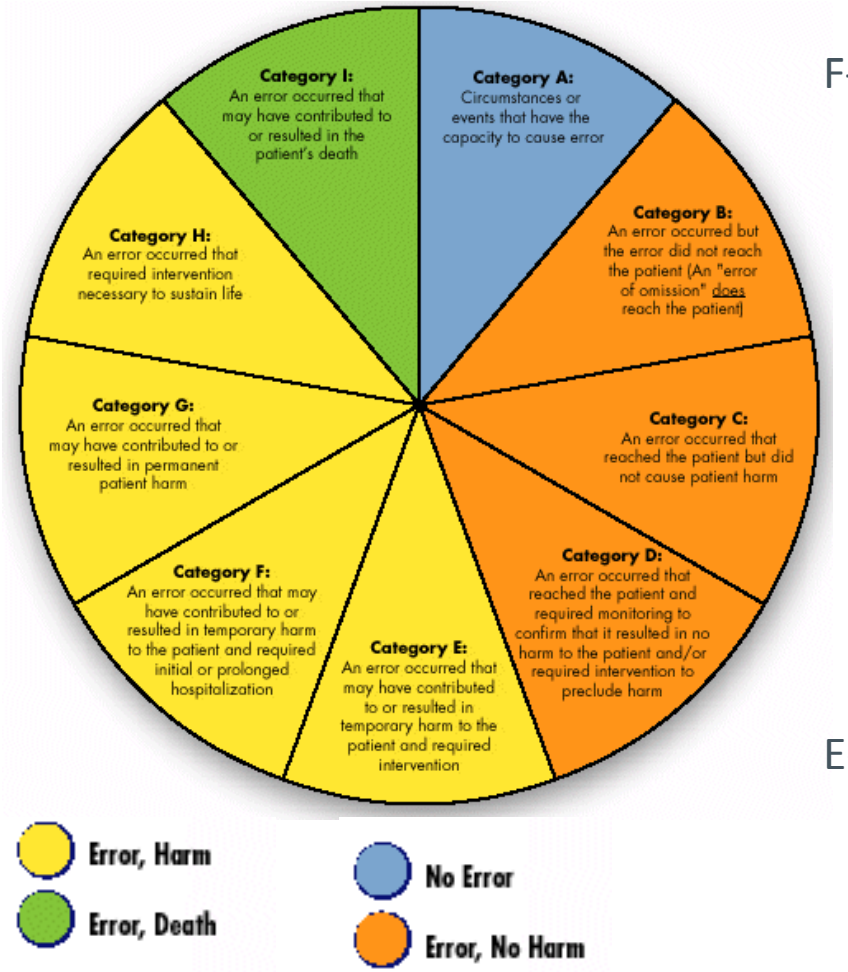
HealthAffairs
DOI: 10.1377/hlthaff.2011.0190
HEALTH AFFAIRS 30,
NO. 4 (2011): 581–589

'Global Trigger Tool' Shows That Adverse Events In Hospitals May Be Ten Times Greater Than Previously Measured

Nonetheless, despite more than a decade of focus on improving patient safety in the United States, the current rates of adverse events among inpatients at three leading hospitals are still quite high for **33.2 percent of hospital admissions** for adults.

Classen, D. C., Resar, R., Griffin et al. (2011). 'Global trigger tool' shows that adverse events in hospitals may be ten times greater than previously measured. *Health Aff (Millwood), 30*(4), 581-589.

Adverse Event - definition



F-I =>

"An unintended injury caused by medical management rather than by the disease process. The injury is sufficiently serious to lead to prolongation of hospitalisation or temporary or permanent impairment or disability in the patient."

1 patient in 10

E-I =>

An incident which resulted in harm to a patient

1 patient in 3

Frequency of and Harm Associated With Primary Care Safety Incidents

Katrin Gehring, PhD; David L.B. Schwappach, PhD, MPH; Markus Battaglia, MD, MPH; Roman Buff, MD; Felix Huber, MD; Peter Sauter, MBA; and Markus Wieser, MD

VOL. 18, NO. 9 ■ THE AMERICAN JOURNAL OF MANAGED CARE ■ e323

Results:

- A total of 630 individuals (50.2% physicians, 49.8% nurses) participated. Among them, 30% of physicians (95% confidence interval [CI] 25%-35%) and 16.6% of nurses (95% CI 12%-21%) reported that at least 1 of the incidents occurred daily or weekly in their offices (c2 16.1, *P* <.001).
- On average, each responder reported a total of 92 incidents during the preceding 12 months.

Levels of harm

The most robust studies suggest that 1–2% of consultations are associated with an adverse event in primary care. In out-of-hours care, the rate is about 2%.

Sources of harm

There is more agreement about the sources of harm in primary care. Factors thought to contribute to adverse events include:

- human factors such as teamwork, communication, stress and burnout
- structural factors such as reporting systems, processes and the environment
- clinical factors such as medication.

International Journal for Quality in Health Care 2013; Volume 25, Number 1: pp. 16–28
Advance Access Publication: 2 January 2013
10.1093/intqhc/mzs075

The incidence of adverse events among home care patients

NANCY SEARS[1], G. ROSS BAKER[2], JAN BARNSLEY[2] AND SAM SHORTT[3]

- The AE rate was 13.2 per 100 home care cases [95% confidence interval (CI): 10.4–16.6%, standard error 1.6%].
- 32.7% (20 of 61 AEs) of the AEs were rated as having >50% probability of preventability;
- 6 deaths (10.9% of patients with an AE; 1.4% of all patients)

Table 5 AEs by type

AE category	Number	%
Falls with injury	15	24.6
Medication error	10 (2 deaths)	16.4
Pressure ulcer/skin breakdown	7 (1 death)	11.5
General decline	7	11.5
Delayed healing	6 (1 death)	9.8
Infection	5	8.2
CHF	4 (1 death)	6.6
Catheter injury	3	4.9
Bowel impaction/obstruction	2	3.3
Bleed	1 (1 death)	1.6
Dehydration	1	1.6
Total	61	100.0

Stagnation in Patient Safety

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Temporal Trends in Rates of Patient Harm Resulting from Medical Care

Christopher P. Landrigan, M.D., M.P.H., Gareth J. Parry, Ph.D.,
Catherine B. Bones, M.S.W., Andrew D. Hackbarth, M.Phil.,
Donald A. Goldmann, M.D., and Paul J. Sharek, M.D., M.P.H.

BACKGROUND

In the 10 years since publication of the Institute of Medicine's report *To Err Is Human*, extensive efforts have been undertaken to improve patient safety. The success of these efforts remains unclear.

METHODS

We conducted a retrospective study of a stratified random sample of 10 hospitals in North Carolina. A total of 100 admissions per quarter from January 2002 through December 2007 were reviewed in random order by teams of nurse reviewers both within the hospitals (internal reviewers) and outside the hospitals (external reviewers) with the use of the Institute for Healthcare Improvement's Global Trigger Tool for Measuring Adverse Events. Suspected harms that were identified on initial review were evaluated by two independent physician reviewers. We evaluated changes in the rates of harm, using a random-effects Poisson regression model with adjustment for hospital-level clustering, demographic characteristics of patients, hospital service, and high-risk conditions.

RESULTS

Among 2341 admissions, internal reviewers identified 588 harms (25.1 harms per 100 admissions; 95% confidence interval [CI], 23.1 to 27.2). Multivariate analyses of harms identified by internal reviewers showed no significant changes in the overall rate of harms per 1000 patient-days (reduction factor, 0.99 per year; 95% CI, 0.94 to 1.04; P=0.61) or the rate of preventable harms. There was a reduction in preventable harms identified by external reviewers that did not reach statistical significance (reduction factor, 0.92; 95% CI, 0.85 to 1.00; P=0.06), with no significant change in the overall rate of harms (reduction factor, 0.98; 95% CI, 0.93 to 1.04; P=0.47).

CONCLUSIONS

In a study of 10 North Carolina hospitals, we found that harms remain common, with little evidence of widespread improvement. Further efforts are needed to translate effective safety interventions into routine practice and to monitor health care safety over time. (Funded by the Rx Foundation.)

DOSSIERS solidarité et santé

Les événements indésirables graves associés aux soins observés dans les établissements de santé

Résultats des enquêtes nationales menées en 2009 et 2004

N° 17
2010

La DREES a réédité en 2009 l'Enquête nationale sur les événements indésirables graves associés aux soins (ENEIS). L'objectif principal était d'estimer la fréquence et la part d'évitabilité des événements indésirables graves (EIG) dans les établissements de santé et d'observer les évolutions par rapport à l'enquête de 2004. En 2009, 374 EIG ont été identifiés au cours de l'enquête, dont 214 sont survenus au cours de l'hospitalisation et 160 sont à l'origine d'une hospitalisation.

Parmi les EIG survenus en cours d'hospitalisation, dont le nombre est évalué en moyenne à 6,2 pour 1000 journées d'hospitalisation, 87 ont été identifiés comme « évitables », soit 2,6 pour 1 000 journées. Par ailleurs, ont été observés en moyenne pour 1000 jours d'hospitalisation, 1,7EIG évitable ayant entraîné une prolongation d'hospitalisation et 1,7 EIG évitable ayant pour origine des actes invasifs ou des interventions chirurgicales. Enfin, la fragilité du patient est le premier facteur contributif à la survenue d'un EIG.

Concernant les EIG à l'origine d'hospitalisations, 4,5% des séjours ont été causés par un EIG et 2,6 % l'ont été par un

Philippe MICHEL [1], Christelle MINODIER [2], Monique LATHEUZE [1], Céline MOTY-MONNEREAU [2], Sandrine DOMECQ [1], Mylène CHALEIX [2], Marion IZOTTE-KRET [1], Régine BRU-SONNET [1], Jean-Luc QUENON [1], Lucile OLIER [2].

1 - Comité de coordination de l'évaluation clinique et de la qualité en Aquitaine (CCECQA)
2 - DREES

France : Study of Patient Harm 2004 vs 2009

Adverse Events (2004)				Adverse Events (2009)				OR [a]	CI at 95 %
Patient days (PD)	AE	AE/ 1000 PD (‰)	CI at 95 %	Patient days	AE	AE/ 1000 PD (‰)	CI at 95 %		
35234	255	7.2	[5,7-8,6]	31663	214	6.2	[5,1-7,3]	0,93 [c]	[0,68-1,27]

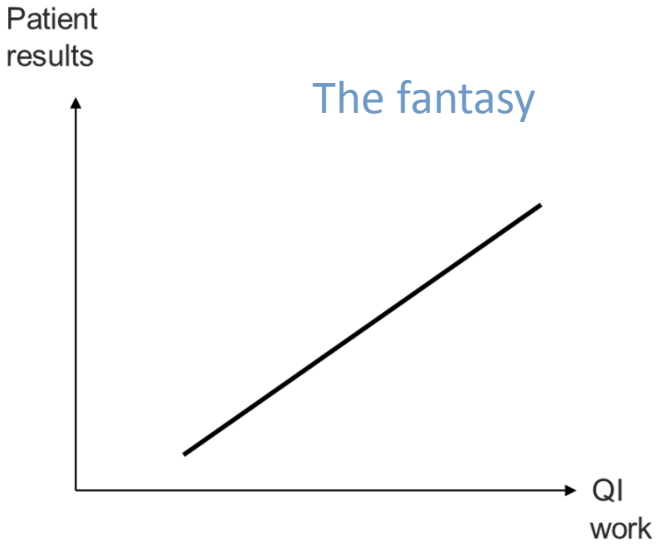
Questions for discussion

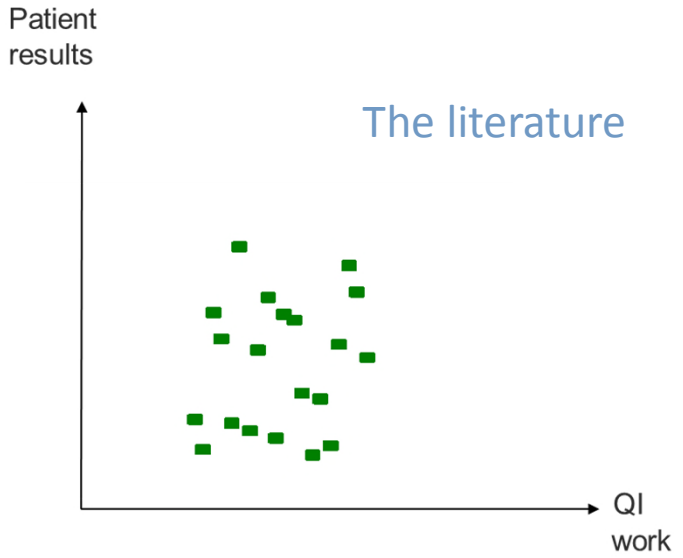
- Why, despite increased awareness, numerous national and regional programs, new research, is Patient Safety stagnating ?
- What could be actions to improve or accelerate Patient Safety improvement in your organization ?

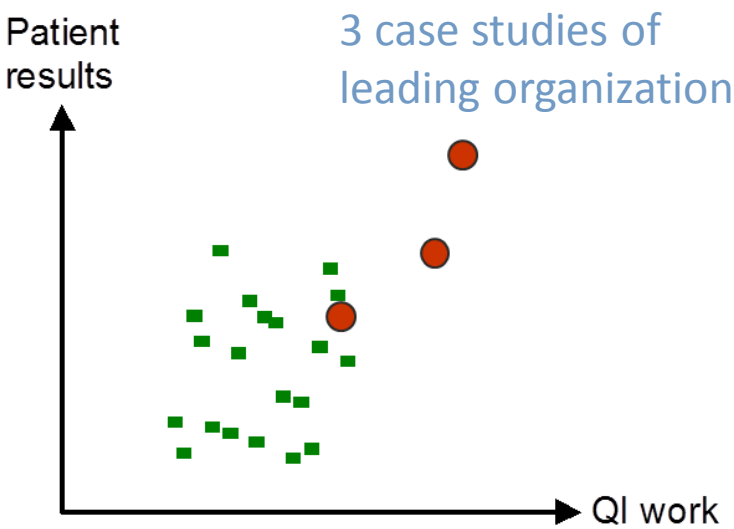
Institute for Healthcare Improvement

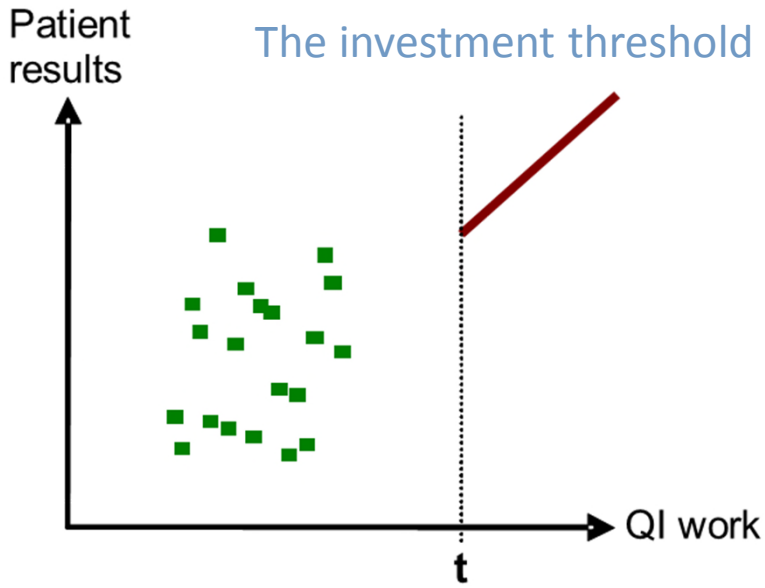
Discussion

The improvement threshold phenomenon



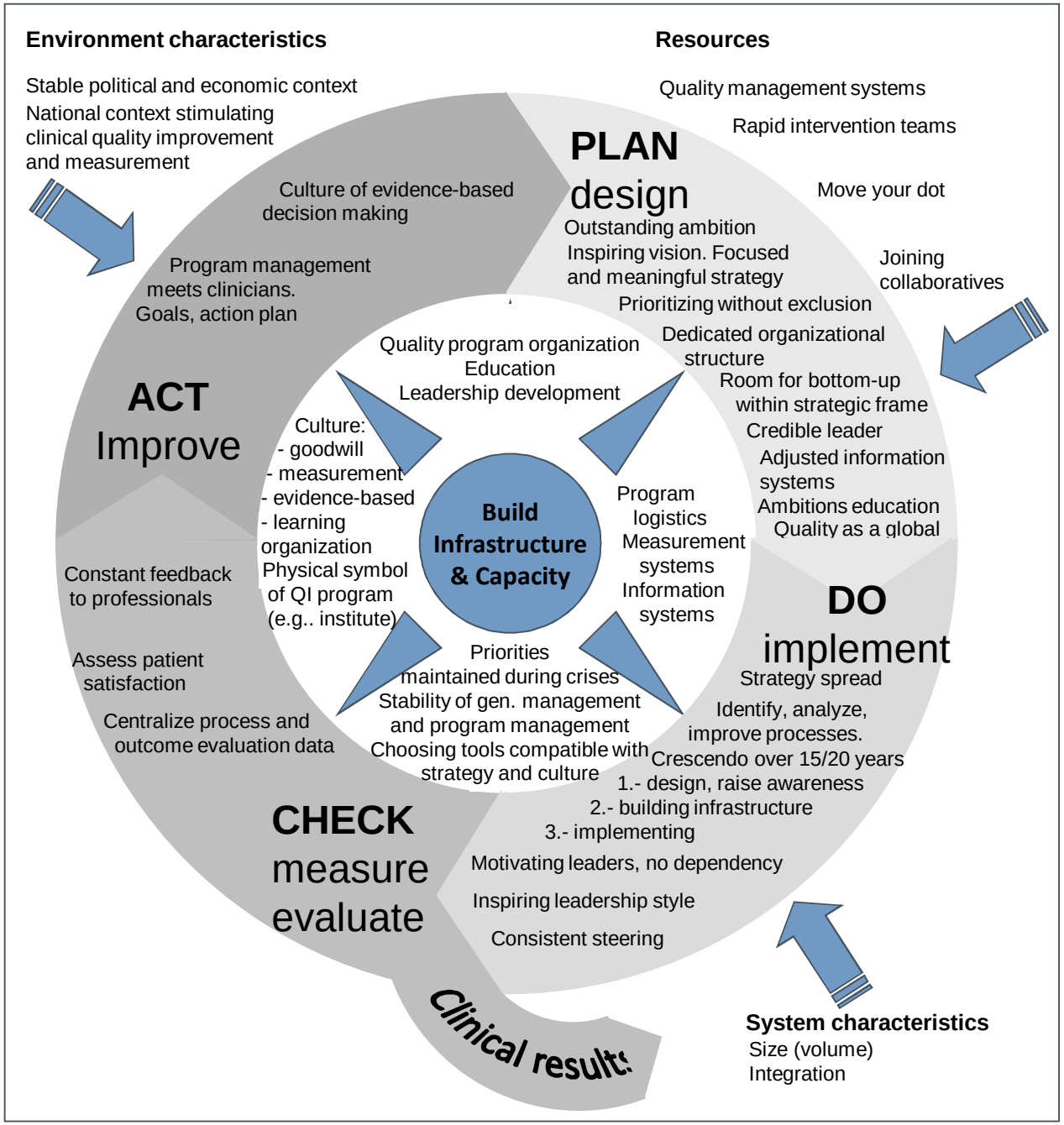






Findings

Factors used by leading QI programs to come to improved patient results



Staines, A. (2007). *The relation between quality improvement progams and results for patients).* Doctoral dissertation, University of Lyon 3, Lyon.

Findings

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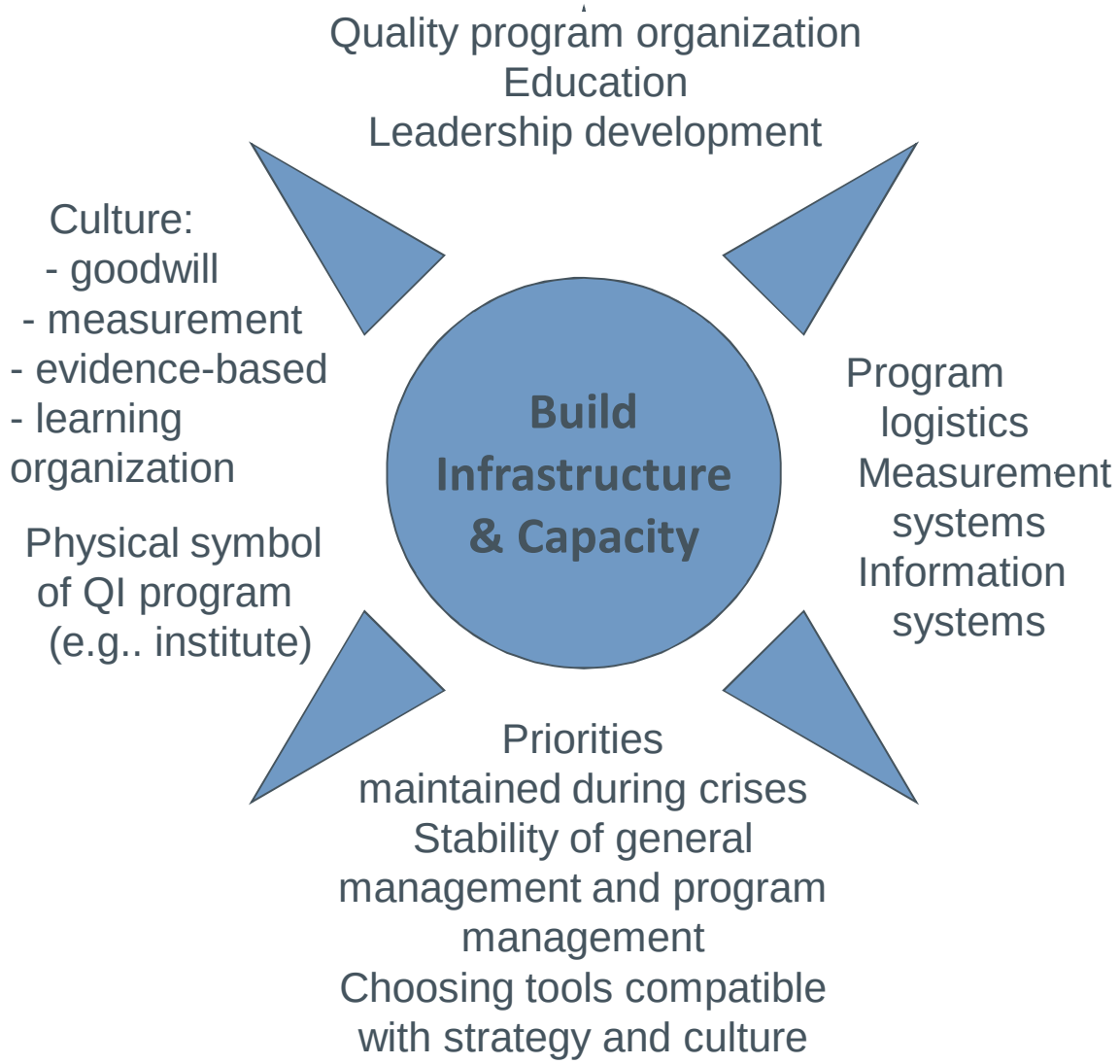
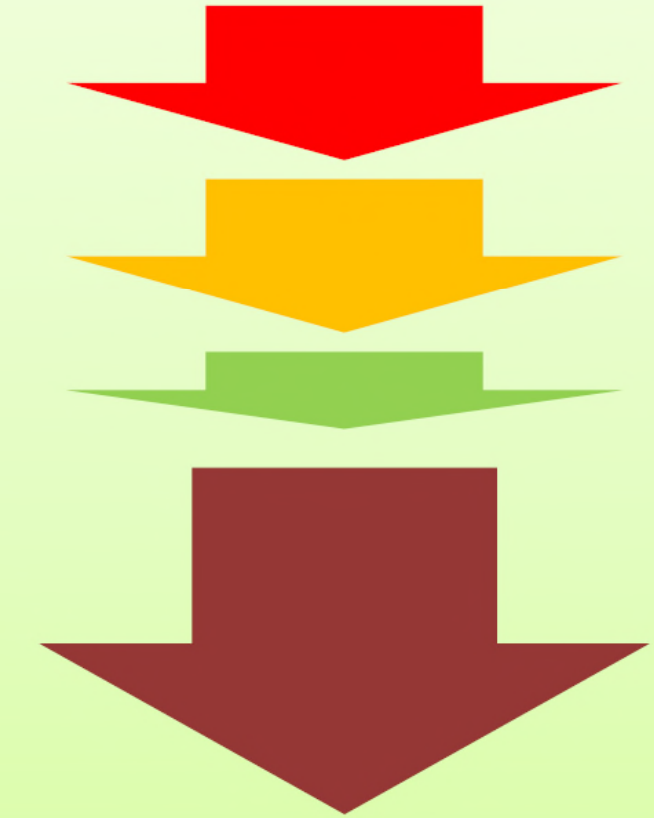


Staines, A. (2007). *The relation between quality improvement progams and results for patients).* Doctoral dissertation, University of Lyon 3, Lyon.

Average cycle of Quality interventions in complex systems

Amalberti, R. Translating concepts into field reality, BMJ-IHI International Forum, April 2014



2 Years to see the problem

2 Years to see local solutions

1 more Year to see solution endorsed by medical Agencies

5 years for spreading out solution within all the professional community

10 Yrs minimum

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Variation in Hospital Mortality Associated with Inpatient Surgery

Amir A. Ghaferi, M.D., John D. Birkmeyer, M.D., and Justin B. Dimick, M.D., M.P.H.

BACKGROUND

Hospital mortality that is associated with inpatient surgery varies widely. Reducing rates of postoperative complications, the current focus of payers and regulators, may be one approach to reducing mortality. However, effective management of complications once they have occurred may be equally important.

METHODS

We studied 84,730 patients who had undergone inpatient general and vascular surgery from 2005 through 2007, using data from the American College of Surgeons National Surgical Quality Improvement Program. We first ranked hospitals according to their risk-adjusted overall rate of death and divided them into five groups. For hospitals in each overall mortality quintile, we then assessed the incidence of overall and major complications and the rate of death among patients with major complications.

RESULTS

Rates of death varied widely across hospital quintiles, from 3.5% in very-low-mortality hospitals to 6.9% in very-high-mortality hospitals. Hospitals with either very high mortality or very low mortality had similar rates of overall complications (24.6% and 26.9%, respectively) and of major complications (18.2% and 16.2%, respectively). Rates of individual complications did not vary significantly across hospital mortality quintiles. In contrast, mortality in patients with major complications was almost twice as high in hospitals with very high overall mortality as in those with very low overall mortality (21.4% vs. 12.5%, $P<0.001$). Differences in rates of death among patients with major complications were also the primary determinant of variation in overall mortality with individual operations.

CONCLUSIONS

In addition to efforts aimed at avoiding complications in the first place, reducing mortality associated with inpatient surgery will require greater attention to the timely recognition and management of complications once they occur.

The NEW ENGLAND JOURNAL of MEDI

SPECIAL ARTICLE

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Amir A. Ghaferi, M.D., John D. Birkmeyer, and Justin B. Dimick, M.D., M.P.H.

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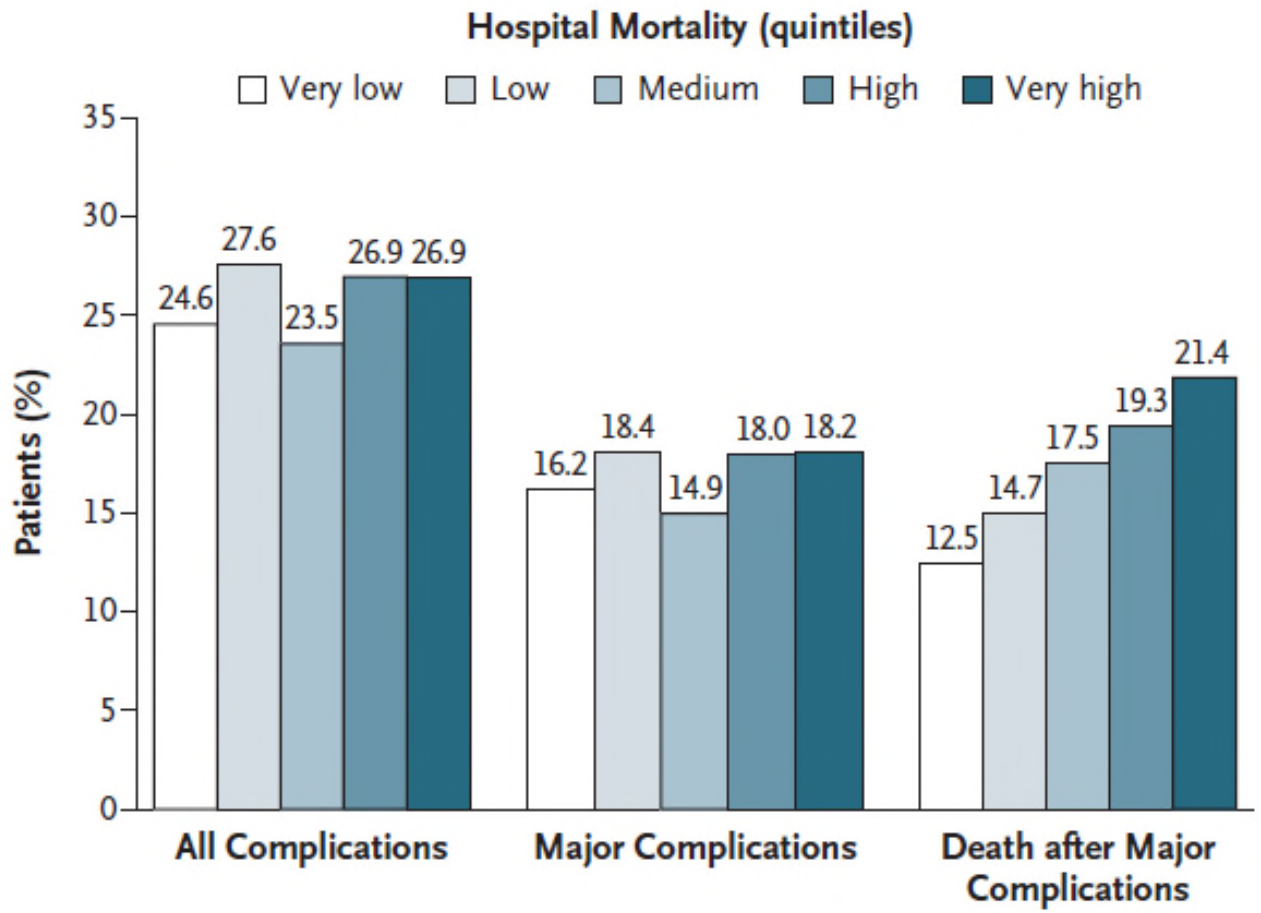
Figure 1. Rates of All Complications, Major Complications, and Death after Major Complications, According to Hospital Quintile of Mortality.

Although rates of all complications and major complications did not vary significantly across hospital mortality quintiles, the rate of death in patients with major complications was almost twice as high in hospitals with very high overall mortality as in those with very low overall mortality (21.4% vs. 12.5%, P<0.001).



Five Years After *To Err Is Human*
What Have We Learned?

Lucian L. Leape, MD
Donald M. Berwick, MD

Five years ago, the Institute of Medicine (IOM) called for a national effort to make health care safe. Although progress since then has been slow, the IOM report truly "changed the conversation" to a focus on changing systems, stimulated a broad array of stakeholders to engage in patient safety, and motivated hospitals to adopt new safe practices. The pace of change is likely to accelerate, particularly in implementation of electronic health rec

FIVE YEARS AFTER THE INSTITUTE of Medicine (IOM) reported that as many as 98 000 people die annually as the result of medi-

- Challenges :
  - Culture of medicine – high standard of autonomous individual performance.
  - Complex system – number of subspecialties
  - Fear of loss of autonomy and of malpractice liability
  - Lack of leadership
  - Paucity of measures

VIEWPOINT

JAMA, August 22/29, 2012—Vol 308, No. 8

JAMA® The Journal of the American Medical Association

Peter J. Pronovost, MD, PhD

George W. Bo-Linn, MD, MHA

Preventing Patient Harms Through Systems of Care

- CMS recently launched Partnership for Patients, an ambitious national effort designed to substantially reduce 9 types of preventable harm and hospital readmissions.
- These harms include adverse drug events, catheter-associated urinary tract infections, central line– associated bloodstream infections, fall injuries, pressure ulcers, surgical site infections, venous thromboembolisms, ventilator-associated pneumonia, and obstetrical adverse events.
- Thousands of hospitals have agreed to participate and chose to focus on several harms because it was beyond their capacity to simultaneously address all 9 types of harm.

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Preventing Patient Harms Through Systems of Care

- The dilemma is that most patients are at risk of most of the 9 harms and other harms, including loss of dignity and a sense of respect for their values. Yet patients can expect physicians to focus harm-reduction efforts on just a few of these harms. Health care is addressing these harms as if each type occurs in isolation.
- This reaction has occurred because it is too burdensome to attempt to reduce multiple harms at the same time. The “siloing” of preventing patient harm is inefficient. Health care needs a different approach to reducing patient harm.

VIEWPOINT

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Preventing Patient Harms Through Systems of Care

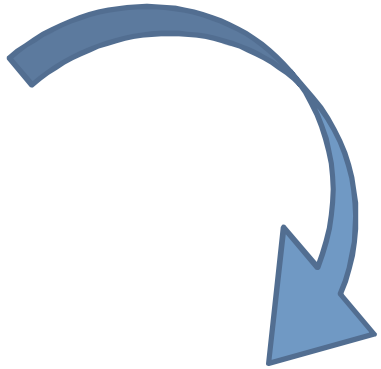
- For instance, patients receiving mechanical ventilation in the ICU are at risk of 8 of the 9 harms on the CMS list, such as central line–associated bloodstream infections, ventilator-associated pneumonia, and venous thromboembolism.
- Mechanically ventilated patients are also susceptible to harms not included on the CMS list, such as delirium, diagnostic errors, and air embolism.
- It is time for the science of health care delivery to mature and embrace systems engineering. It is time for health care to embrace the compelling goal of reducing preventable patient harm. By systematically addressing all the known harms patients may experience, clinicians may realize this goal (…).

Resilience engineering

- **Resilience** is the intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions.
- A practice of **Resilience Engineering** / **Proactive Safety Management** requires that all levels of the organization are able to:
  - **Learn** from past events, understand correctly what happened and why
  - **Respond** to regular and irregular conditions in an effective, flexible manner,
  - **Monitor** short-term developments and threats; revise risk models
  - **Anticipate** long-term threats and opportunities

Two views of safety management
Moving to Patient Safety 2

Classical safety management uses trivial (structural) models. The aim is to reduce the number of adverse events (the visible). Efforts focus on avoiding that something happens again ("fixing weaknesses," prevention, protection).



Resilience management uses non-trivial (functional) models. The aim is to improve the ability to succeed under varying conditions. Efforts focus on enhancing the organisation's ability to respond, monitor, anticipate, and learn (the visible and invisible).

Institute *for* Healthcare Improvement

This presenter has nothing to disclose

Diagnostics for Patient Safety and Quality of Care

Carol Haraden, PhD

Vulnerable System Syndrome

- Three core pathologies
  - Blame
  - Denial
  - And the pursuit of (the wrong kind of) excellence

What data do you have about how people are harmed and why they die? Let’s look at the case…

CASE STUDY: Jim Taylor

While at work, Jim Taylor, age 56, fell on the stairs and broke his femur. Upon arrival at the local hospital, he was in stable condition and immediately scheduled for surgery to repair the femur. Jim was under treatment for long standing atrial fibrillation but had no other medical conditions. The hospital notified his family members who lived out of state. Jim was admitted to the post-surgical unit from the recovery room around 10 PM. He had become belligerent as he came out of anesthesia and this escalated on the unit. He cursed and thrashed his arms and unaffected leg when the nurses attempted to turn him or provide other care. He seemed somewhat sleepy and dozed restlessly when undisturbed. When awake, he loudly complained of pain though he was not able to answer questions about the location, quality, or other features of the pain. His vital signs were BP = 110/60, HR = 85, and RR = 16.

The nurses on the evening and night shift became increasingly frustrated with Jim. His physician was contacted around 1 AM for an order to increase Jim's pain medication. Later as he became more belligerent, the night supervisor was called to talk with Jim. She told Jim that cursing was not acceptable. She also suggested that the nurse caring for him call the physician again to obtain an order for a medication such as diazepam or haloperidol. The nurse contacted the physician around 3 AM reporting that Jim was angry and obnoxious. The physician gave an order for haloperidol IV, which the nurse administered around 4 AM with minimal effect.

At 5:30 AM Jim became increasingly agitated. His respiratory rate was in the high 20s, HR = 130 and BP = 90/50. At 5:45 AM he suffered a respiratory arrest. A code was called but staff where unable to resuscitate him. An autopsy revealed a large pulmonary embolism. His co-workers and family reported that Jim was a gentle man who rarely raised his voice.

Root Cause Analysis

- What data will you want to know to understand what happened?

How do we know if what happened to Mr. Taylor is special cause or common cause (happening throughout the organization)?

What data would we like to have?

- INRs within range (outpatient and inpatient)
- Deaths from VTE
- Compliance with VTE assessment and prophylaxis
- Surgical prophylaxis
- Readmission data for anticoagulation issues

Were the processes unreliable? For Mr. Taylor? Throughout the organization?

What processes concern you with Mr. Taylor’s care?

- Communication between outpatient and inpatient
- Critical lab value follow up
- Pre-op identification and dosing
- Identification of deterioration and rescue
- Medication reconciliation
- Use of structured communication especially in problem situations

How can we learn about our system performance?

Failure Modes and Effects Analysis

- Systematic, proactive method of evaluating a process
  - Identify where and how it might fail
  - Assess the relative impact of different failures
  - Identify the parts of the process most in need of change

- FMEA includes analysis of:
  - Steps in the process
  - Failure modes (*What could go wrong?)*
  - Failure causes (*Why would the failure happen?)*
  - Failure effects (*What would be the consequences of each failure?*)

Creating your own FMEA

- Select a process to evaluate with FMEA
- Recruit a multidisciplinary team
- Meet together to list all the steps in the process
- List failure modes and causes
- For each failure mode, assign a numeric value for
  - Likelihood of occurrence (1–10)
  - Likelihood of detection (1–10)
  - Severity (1–10)
- Evaluate the results
  - Multiply numbers to get a Risk Priority Number (RPN)
  - Total RPN is the sum of all step and failure mode RPNs

Sample FMEA Spreadsheet

Steps in the Process	Failure Mode	Failure Causes	Failure Effects	Likelihood Occurrence (1–10)	Likelihood Detection (1–10)	Severity (1–10)	Risk Priority Number	Actions to Reduce Occurrence
1								
2								
							Total RPN (sum RPNs):	

Failure Mode: What could go wrong?

Failure Causes: Why would the failure happen?

Failure Effects: Consequences of failure?

Likelihood of the failure: 1=10 (10= very likely to occur)

Likelihood of detection: 1-10 (10= very unlikely to detect)

Severity: 1-10 (10= most severe)

Risk Profile Number (RPN): Likelihood of Occurrence × Likelihood of Detection × Severity

Targeting Areas for Improvement

- Prioritize improvement efforts based on RPN
  - Focus on failure modes with high RPNs
  - Failure modes with low RPNs have little effect
- Consider individual RPN components as well:
  - Reduce severity first – most important component
    - Pay special attention to 9 and 10, regardless of total RPN
    - Take preventive/corrective actions to avoid failure mode
  - Then occurrence – has greatest overall benefit
  - Then detection – be sure to test effectiveness
- Create multiple scenarios showing different changes
- Target half-life (50% reduction) for each pass

Diagnostic Journey

- People die unnecessarily every day under our care.
- We need a diagnostic tool that moves us out of a model for judgment and into a model for learning.

The Mortality Diagnostic – 2x2 Matrix

- Review most recent 50 consecutive deaths.
- Place them into a two by two matrix based on:
  - Was the patient *admitted* for palliative care?
  - Was the patient *admitted* to the ICU?
- Focus your work initially on boxes that have at least 20% of your mortality.
- **In which box would you place Mr. Taylor?**

Diagnostic – The 2 x 2 Matrix

		Admitted to the ICU?	
		Yes	No
Admitted for Palliative Care Only?	Yes	**Box #1**	**Box #2**
	No	**Box #3**	**Box #4**

Table 1: UK 3x2 Matrix

Admission for Terminal Care	Critical care admission		Ward admission
	Intensive care	High dependancy	
yes	**Box 1a** may suggest overuse of ICU beds.	**Box 1b** may identify issues around the use of intensive care beds.	**Box 2** may identify system issues in end of life care planning both in the hospital and community setting
no	**Box 3a** may identify system issues in intensive care where known improvement techniques can be applied	**Box 3b** may identify system issues in intensive care where known improvement techniques can be applied	**Box 4** may identify system issues around risk management in the admission process as well as quality and reliability of ward level care

US 2X2 Table Aggregate

64 Hospitals

	ICU Admission	No ICU Admission
Comfort Care	**86/3175 3% (0-14%)**	**402/3175 13% (0-40%)**
Non Comfort Care	**1161/3175 37% (10-72%)**	**1526/3175 48% (18-76%)**

The Mortality Diagnostic - Failure to Recognize, Plan, Communicate

- Analyze deaths in box 3 and 4 for evidence of failure to: recognize, communicate, plan.

- This will help you understand the local environment.

Reliability is failure free operation over time.

The journey….

- What are our problems as seen from the diagnostics?
- How would we prioritize these?
- How reliable are we? What are the issues?
- How do they relate to our strategic plan?
- How do we deploy the work in a way that we meet our most important aims?

Resources

- White papers (on IHI.org)
  - Mortality
  - Global Trigger Tool
  - Waste Tool

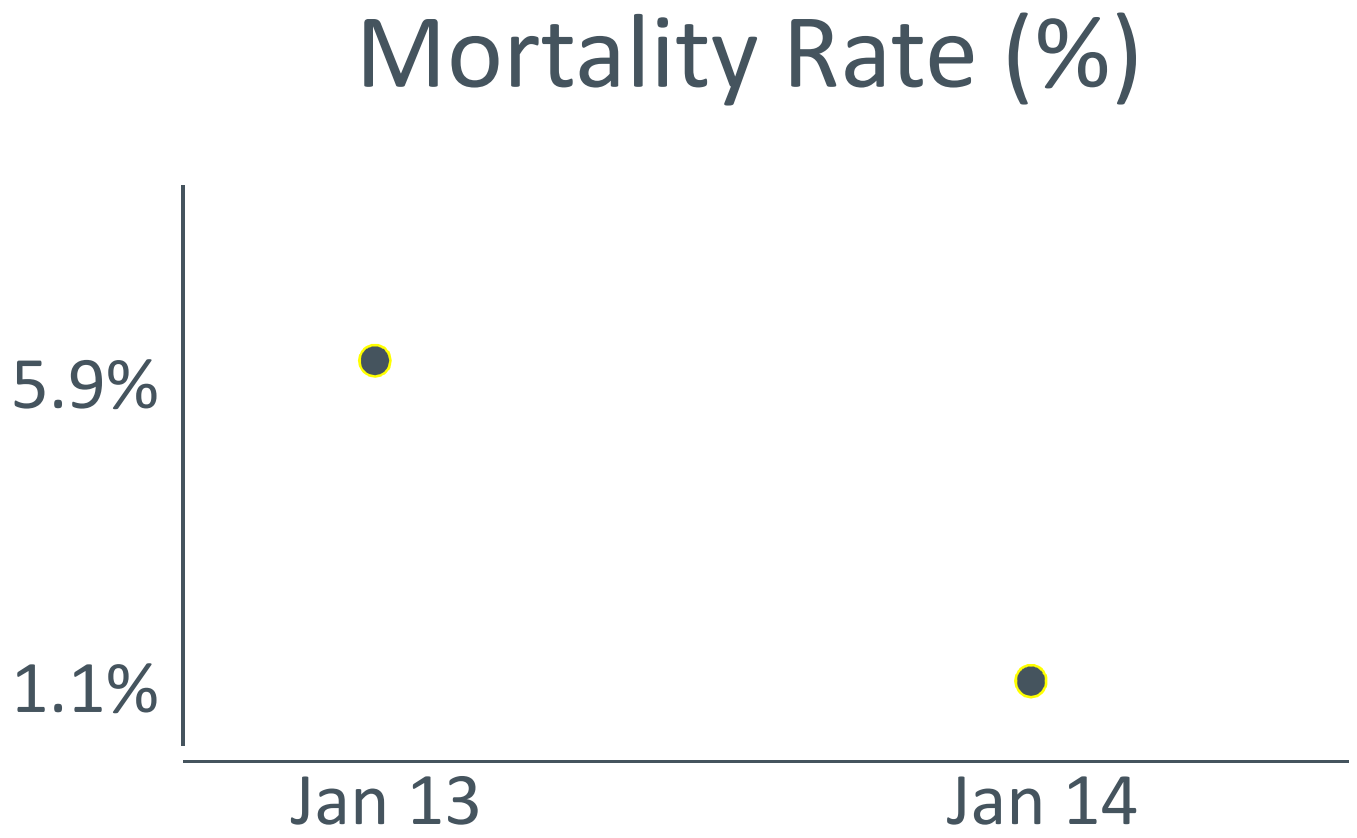
Institute *for* Healthcare Improvement

This presenter has nothing to disclose.

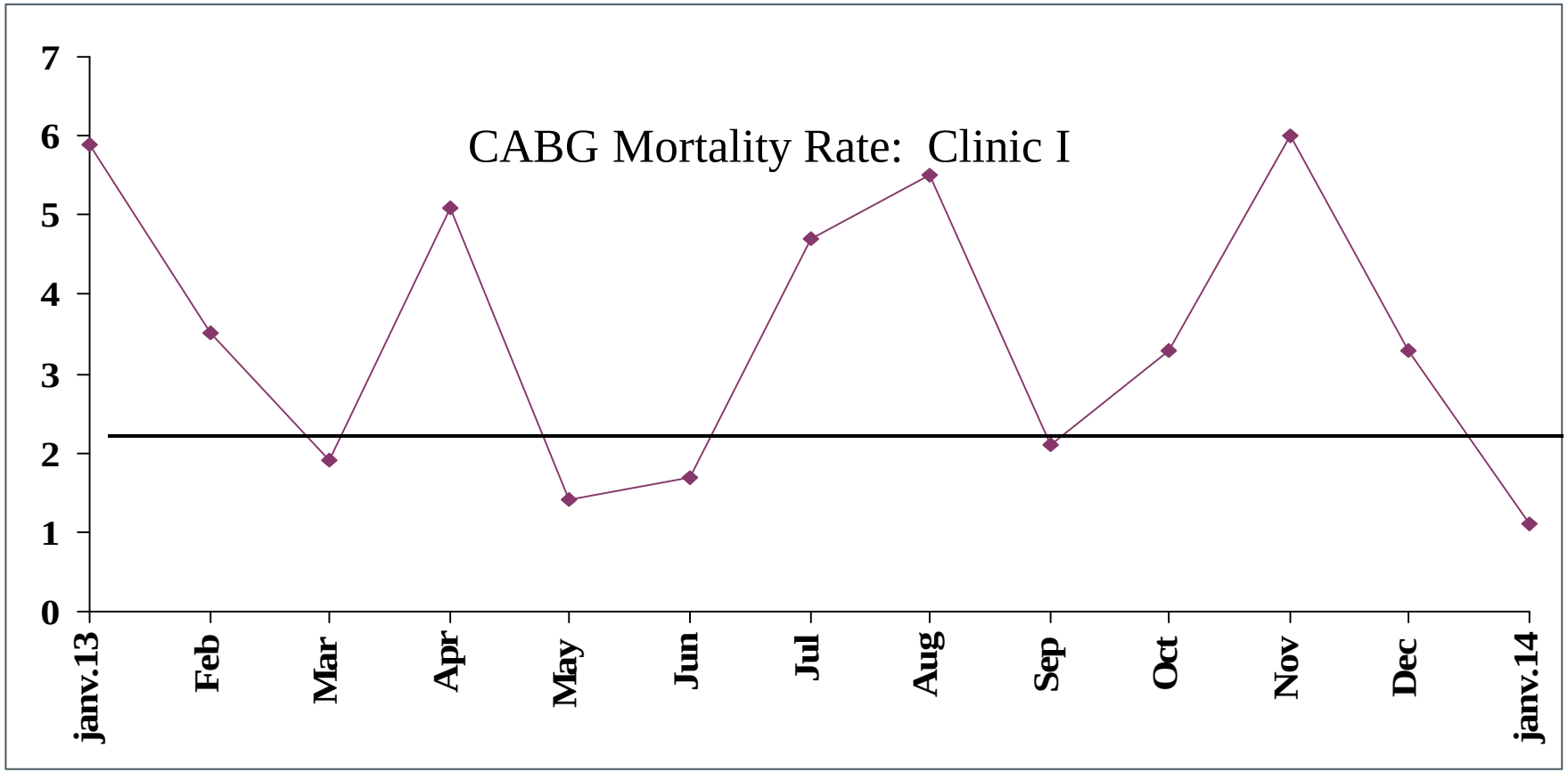
Key Measurement Concepts: Using Run Charts to Establish Special Cause Variation

Carol Haraden, PhD

Coronary Artery Bypass Graft



Coronary Artery Bypass Graft



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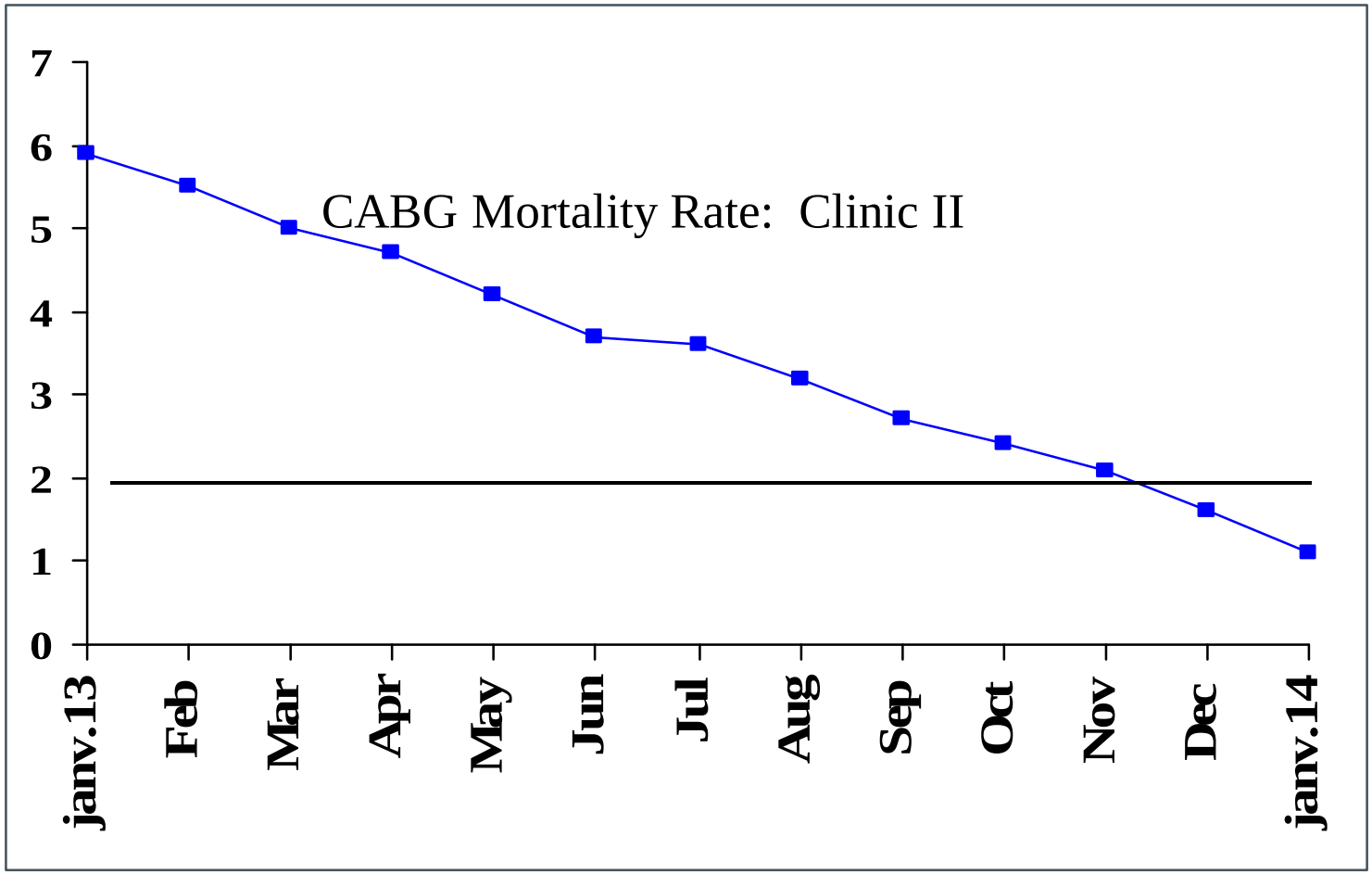

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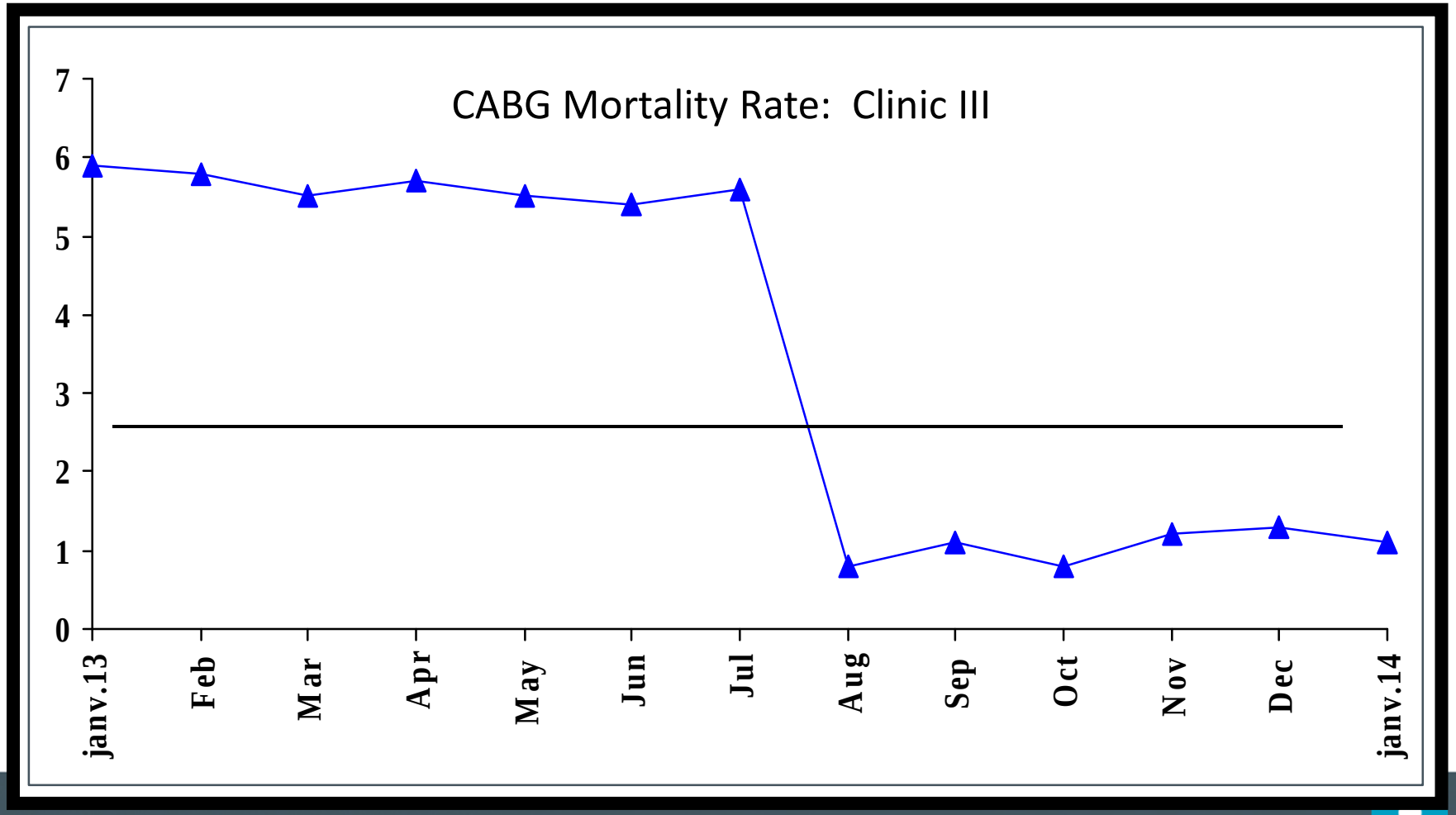


There are two ways to view data

STATIC VIEW

Descriptive Statistics

Mean, Median & Mode

Minimum/Maximum/Range

Standard Deviation

Bar graphs/Pie charts

DYNAMIC VIEW

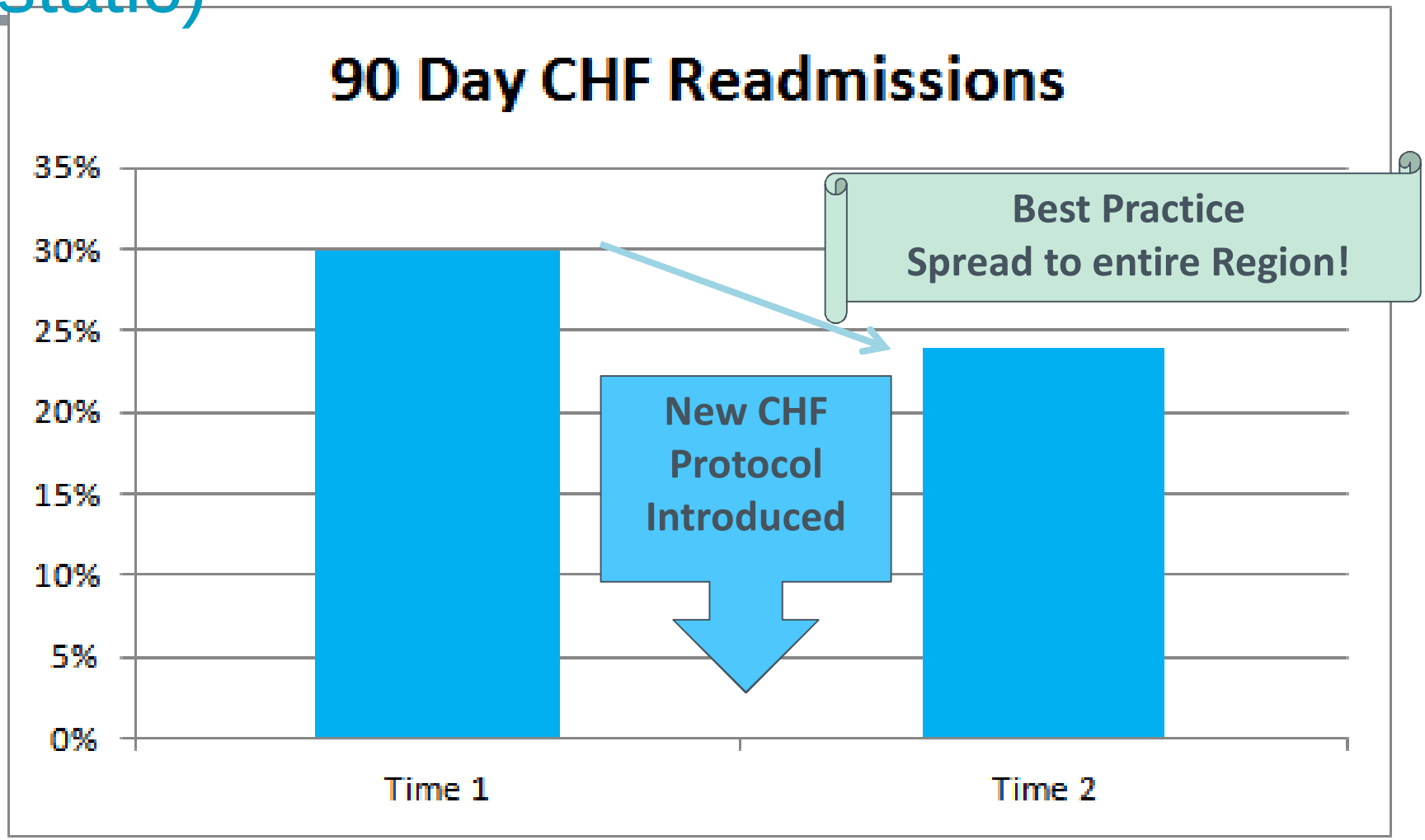
Line Chart

Run Chart

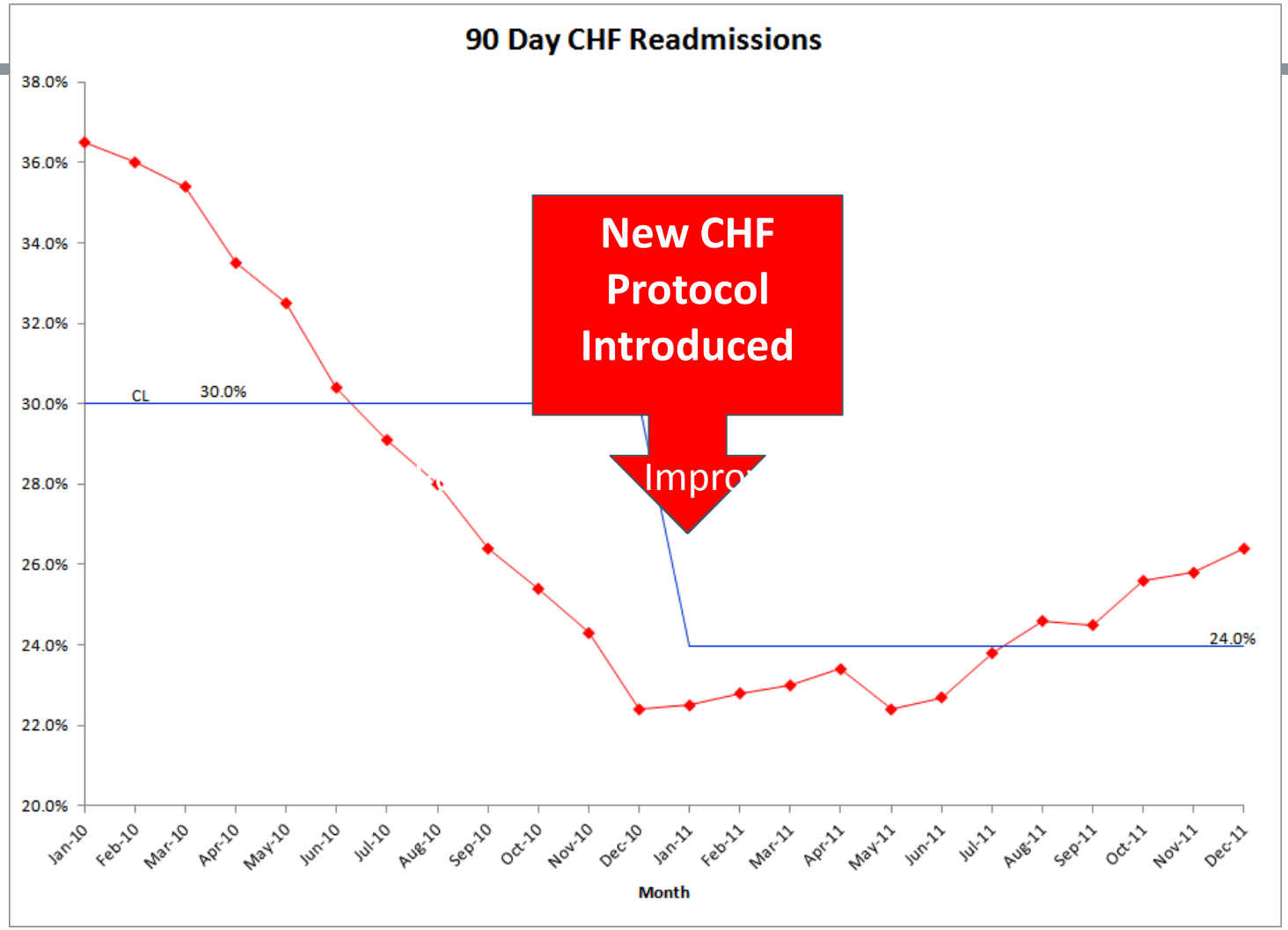
Control Chart

Statistical Process Control (SPC)

Example: Results of New CHF Protocol (static)



Same data … dynamic view



Variation and Improvement

- Variation is everywhere
- There may be danger in drawing conclusions from two data points
- Variation enables prediction and learning
- Correct interpretation minimizes economic and psychological damage

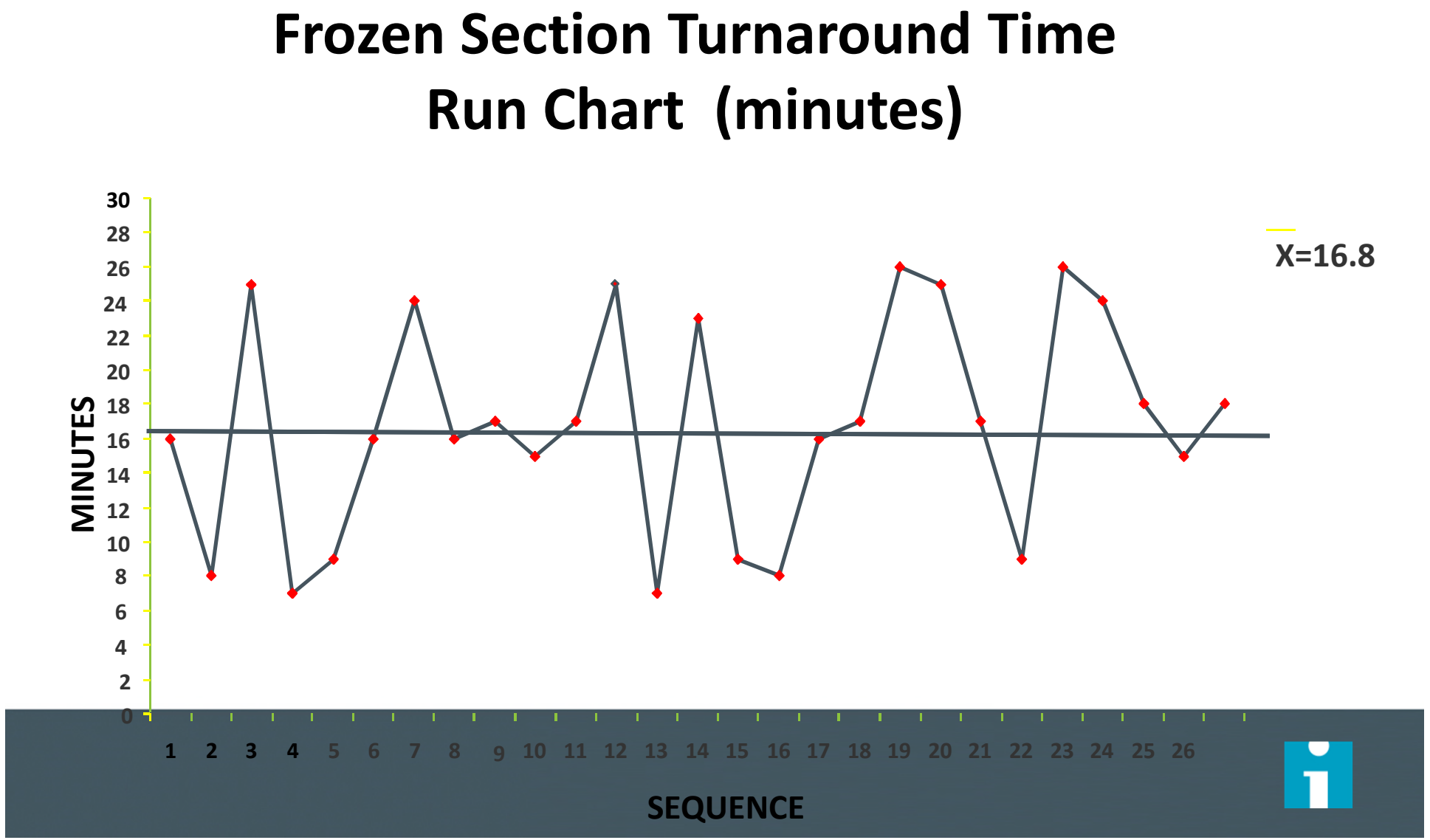
Tabular Data Display

Frozen Section Turnaround Time (minutes)

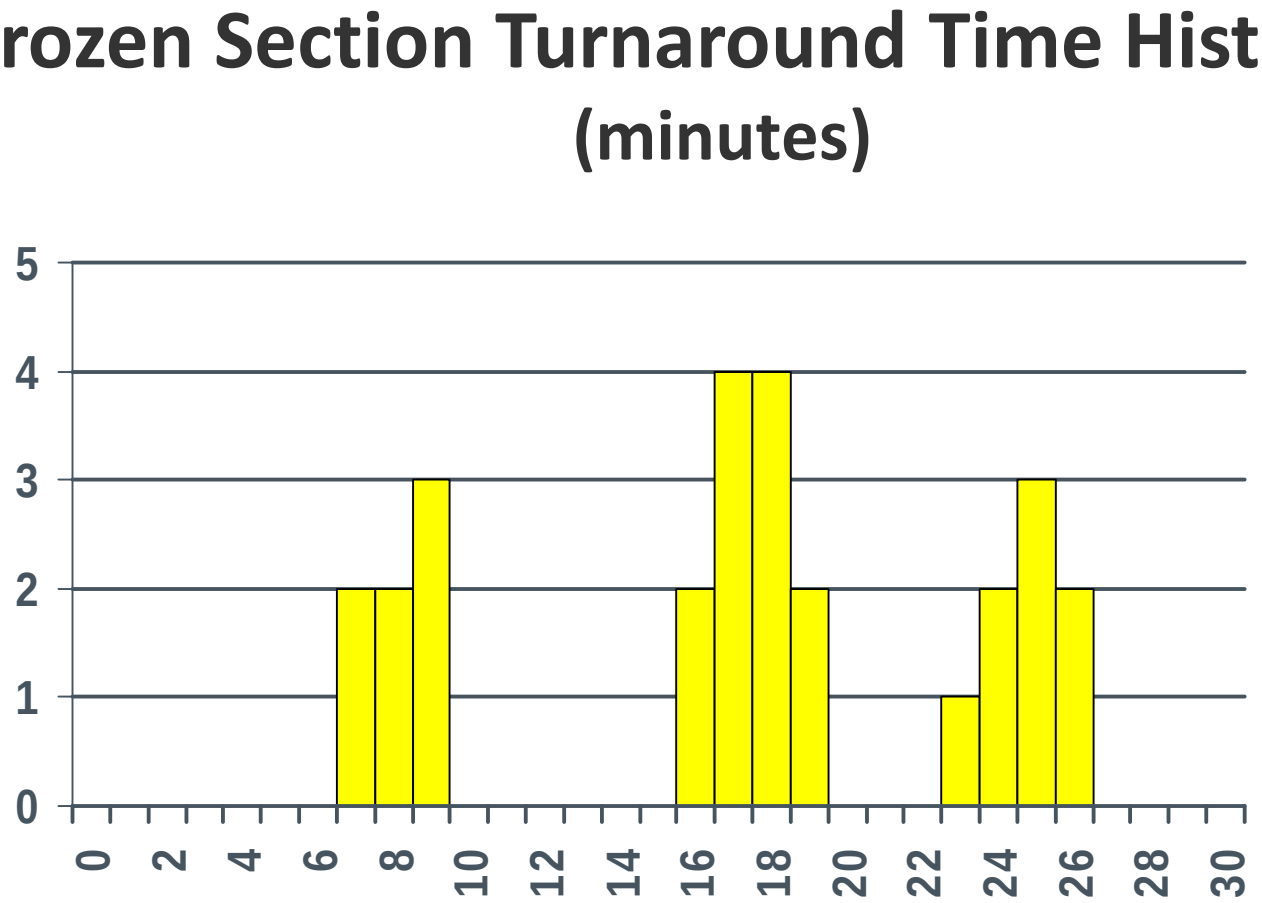
$\bar{X}$=16.8

16	15	26
8	17	25
25	25	17
7	7	9
9	23	26
16	9	24
24	8	18
16	16	15
17	17	18

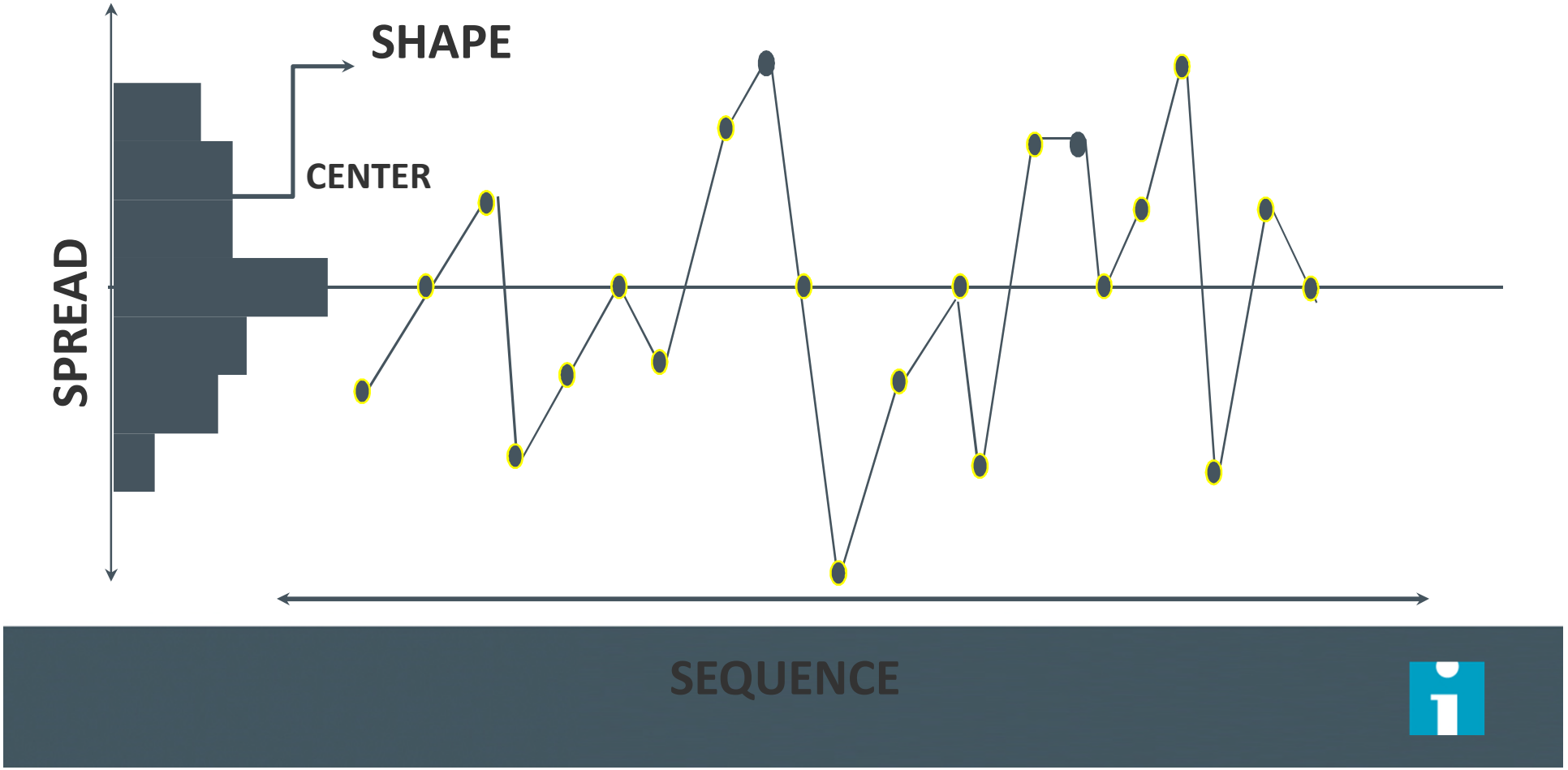
Graphical Data Display



Graphical Data Display



Four Dimensions of Data



Your drive to work….

Types of Variation

Special Cause Variation

- Is assignable to a specific cause or causes
- Arises because of special circumstances which are not inherent in the process
- Is generally easier to detect than common causes
- When present, the process is unstable or “out of statistical control”

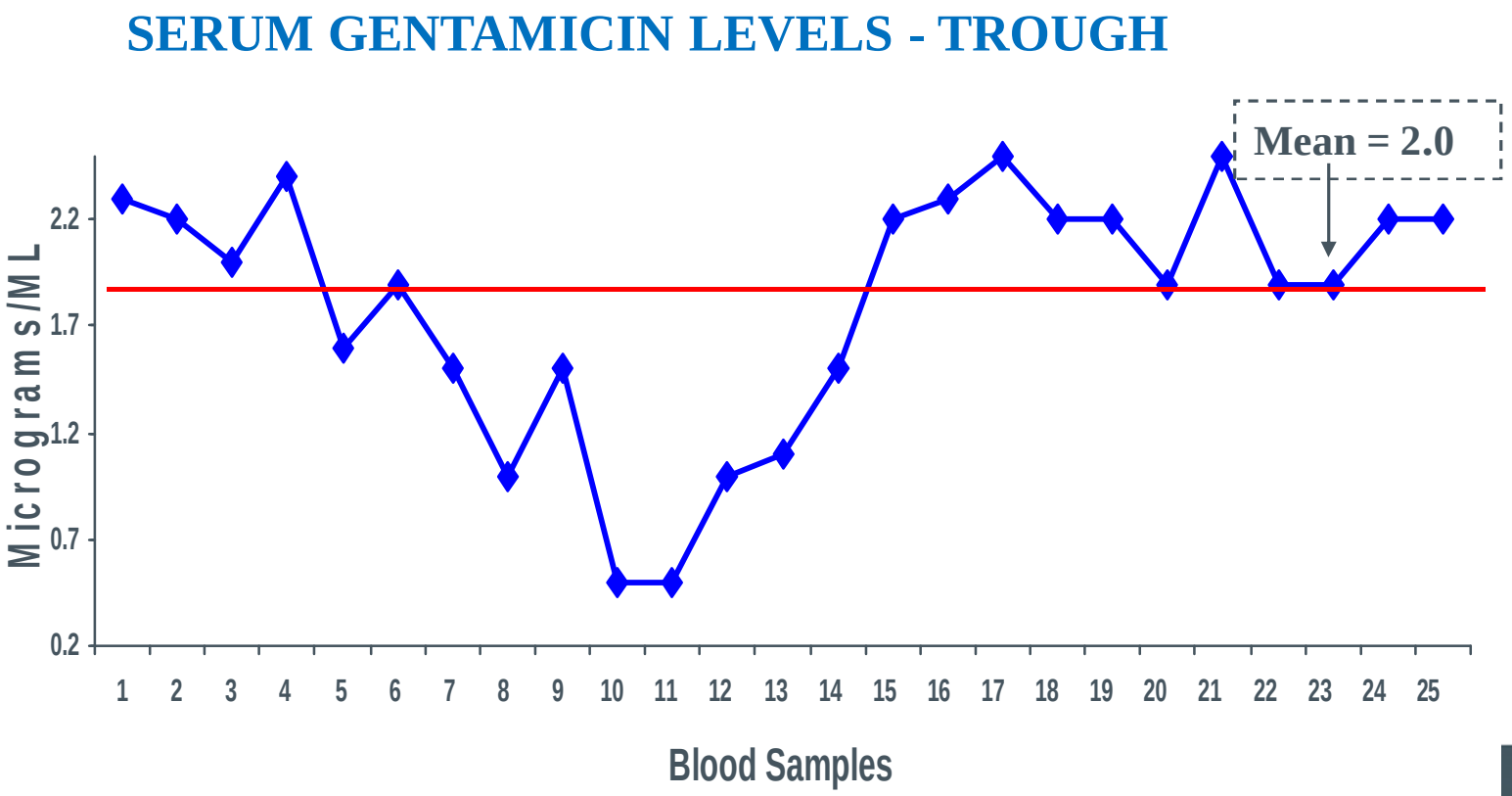
Management of Variation

	Special Cause Variation	Common Cause Variation
Appropriate Action	•Identify and study the special cause. •React to special cause - *If it is a negative impact, prevent it or minimize impact.* -*If it is a positive impact, build into process.*	•Recognize that the capability will not change unless the process is changed. •Work to reduce variation due to common causes •*Do not* react to individual occurrences or differences between high and low numbers. Meds stored in open boxes in OB operating rm
Inappropriate Action	•Change the system to react to special causes	•Treat every occurrence as a special cause

Analysis of Run Charts

Special Cause Rule Number 1: Shifts

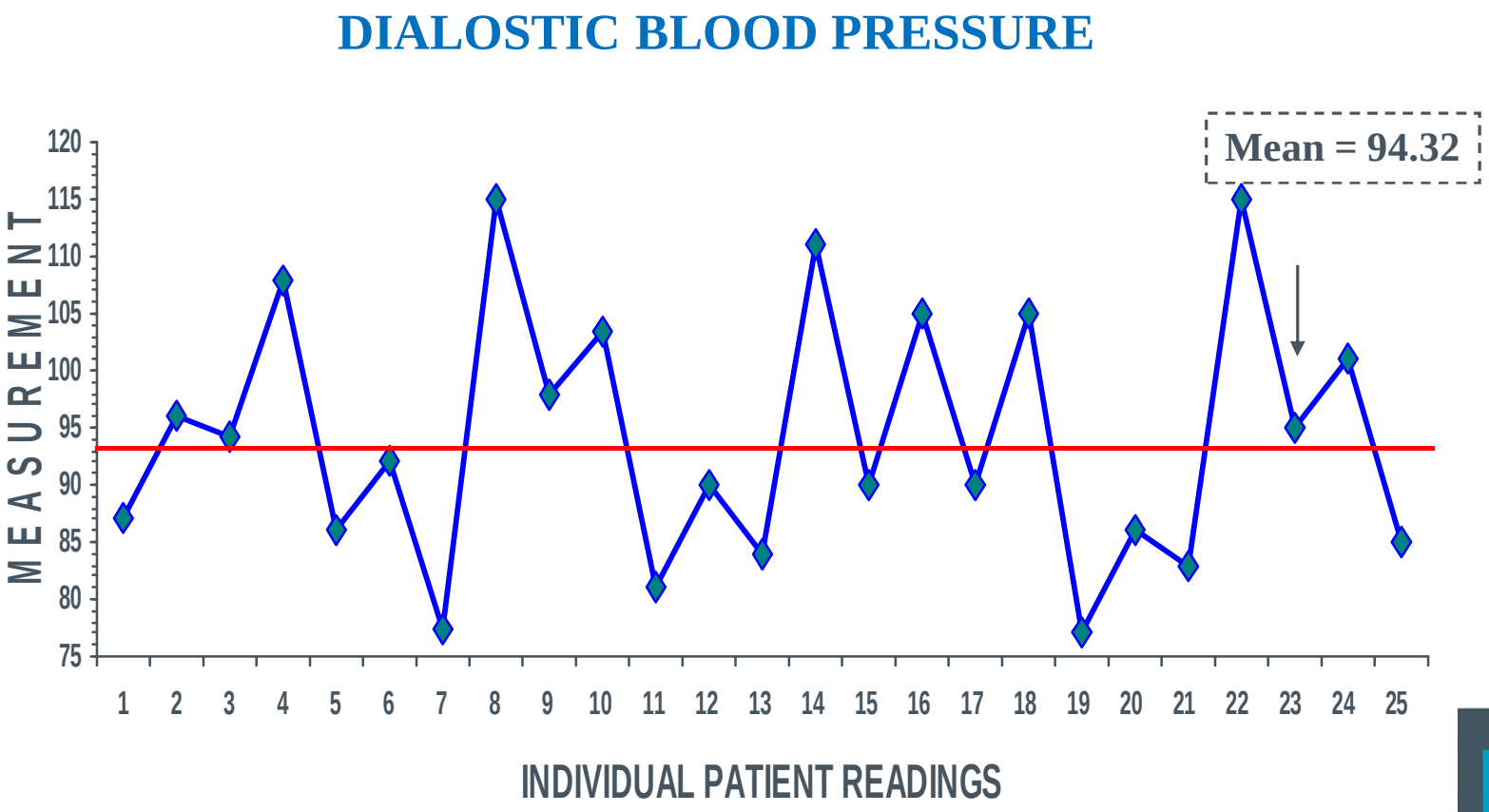
eight or more consecutive points either above of below the center line (mean or median). Values on the center line are ignored, they do not break a run, nor are they counted as points in the run.



Analysis of Run Charts

Special Cause Rule Number 2: Patterns

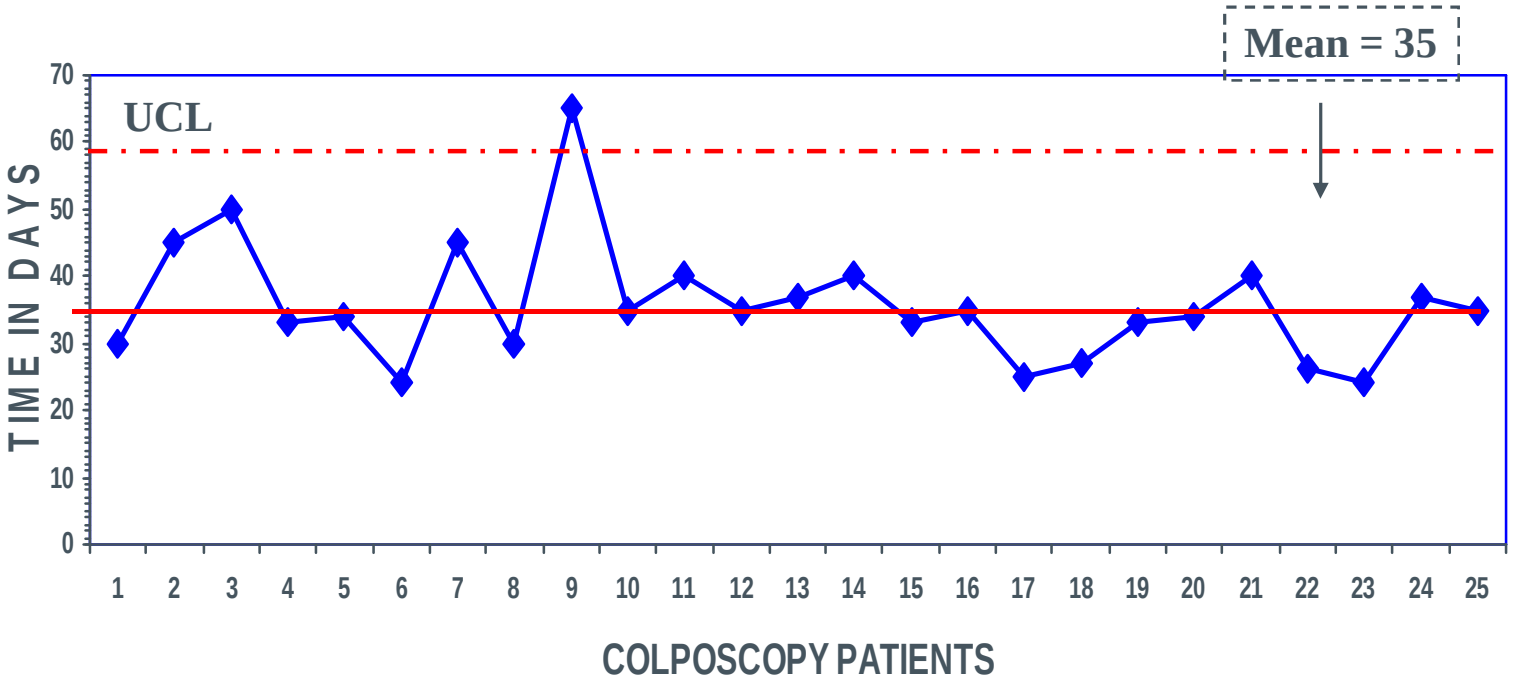
Any non-random pattern may be an indication of a special cause variation. A general rule is to investigate any non-random pattern that recurs eight or more consecutive times.



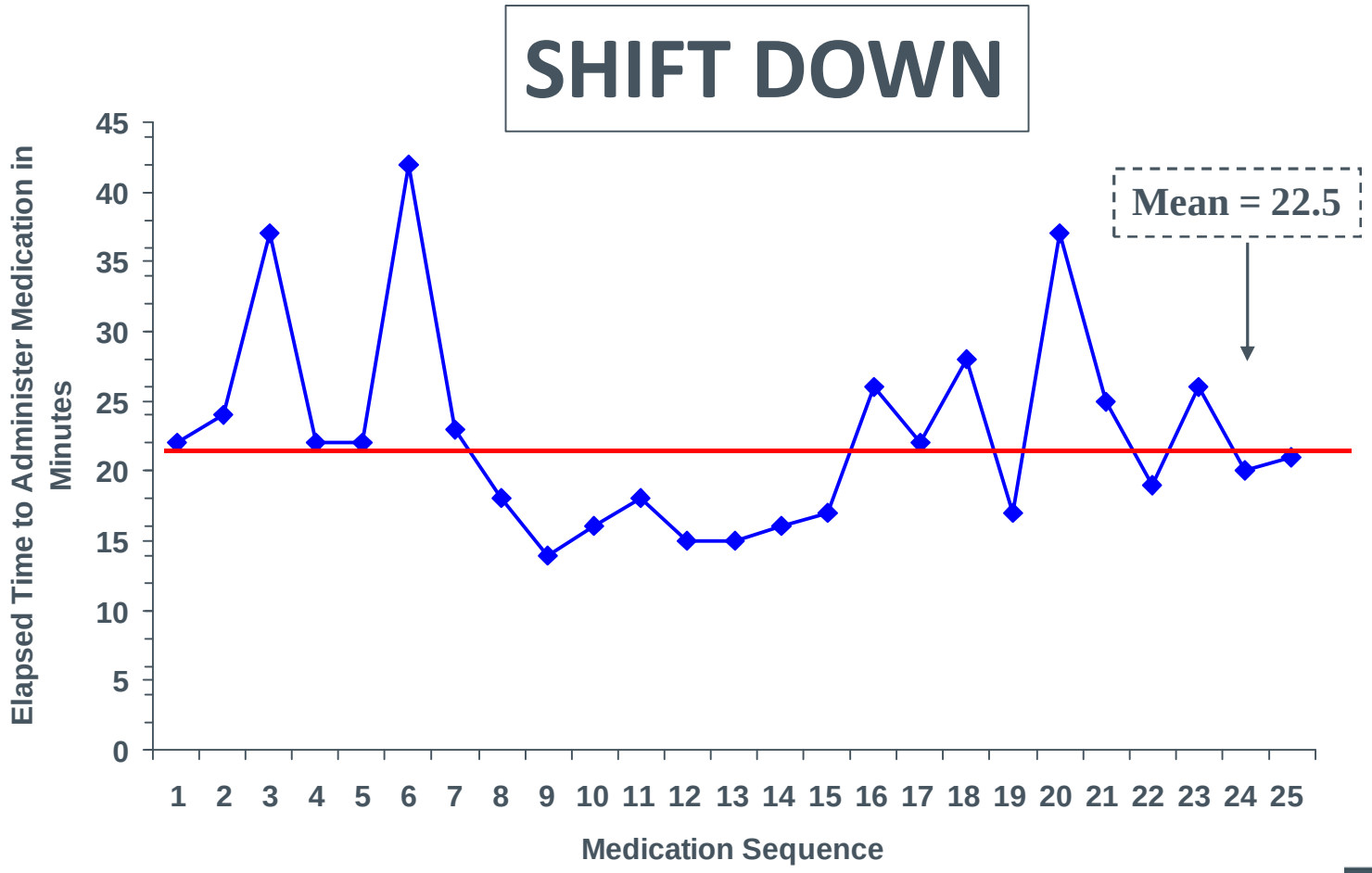
Analysis of Run Charts

Special Cause Rule Number 3: Points Outside Limits

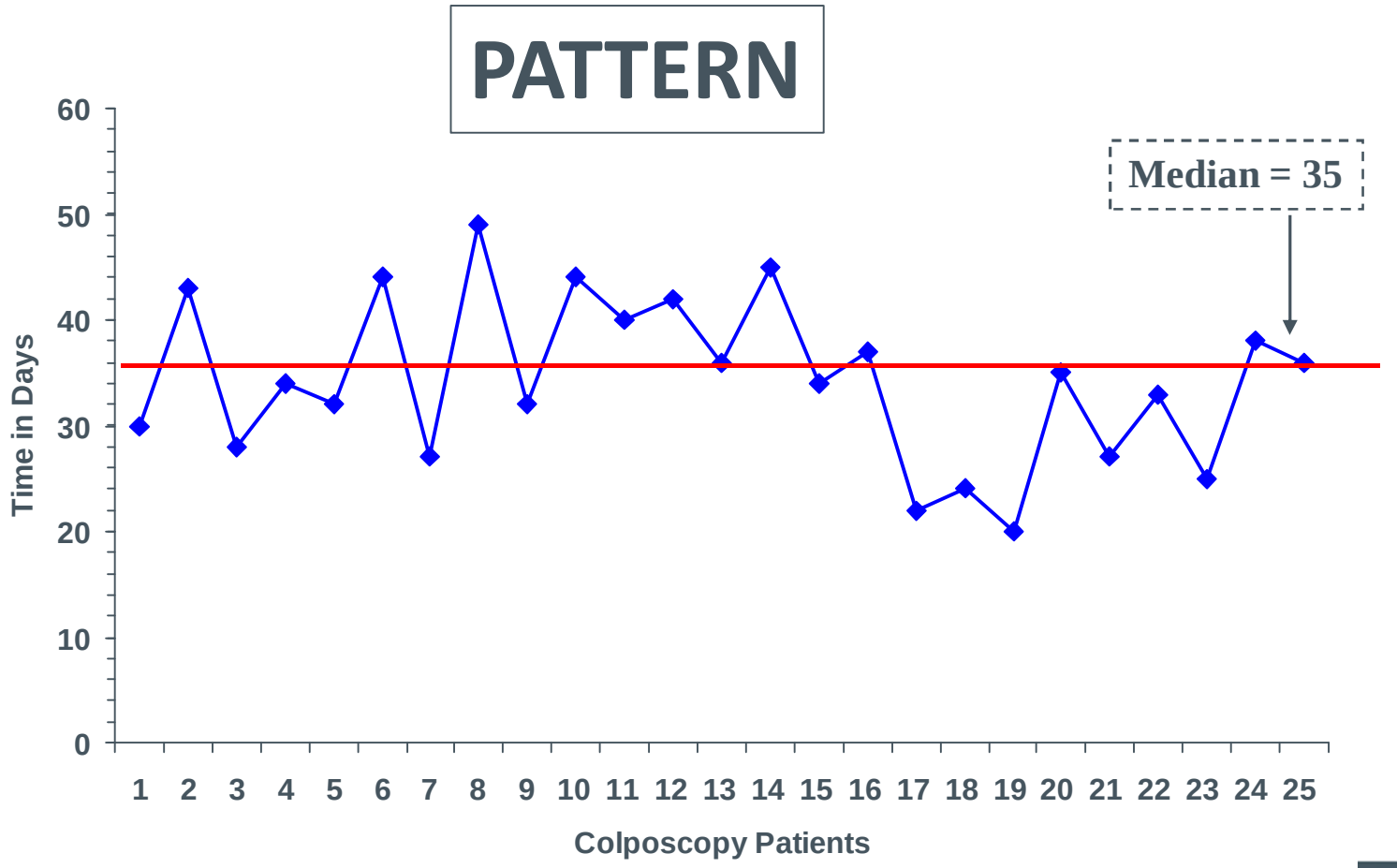
A point or points outside control limits is/ are evidence of special cause. Control limits are calculated based on data from the process.



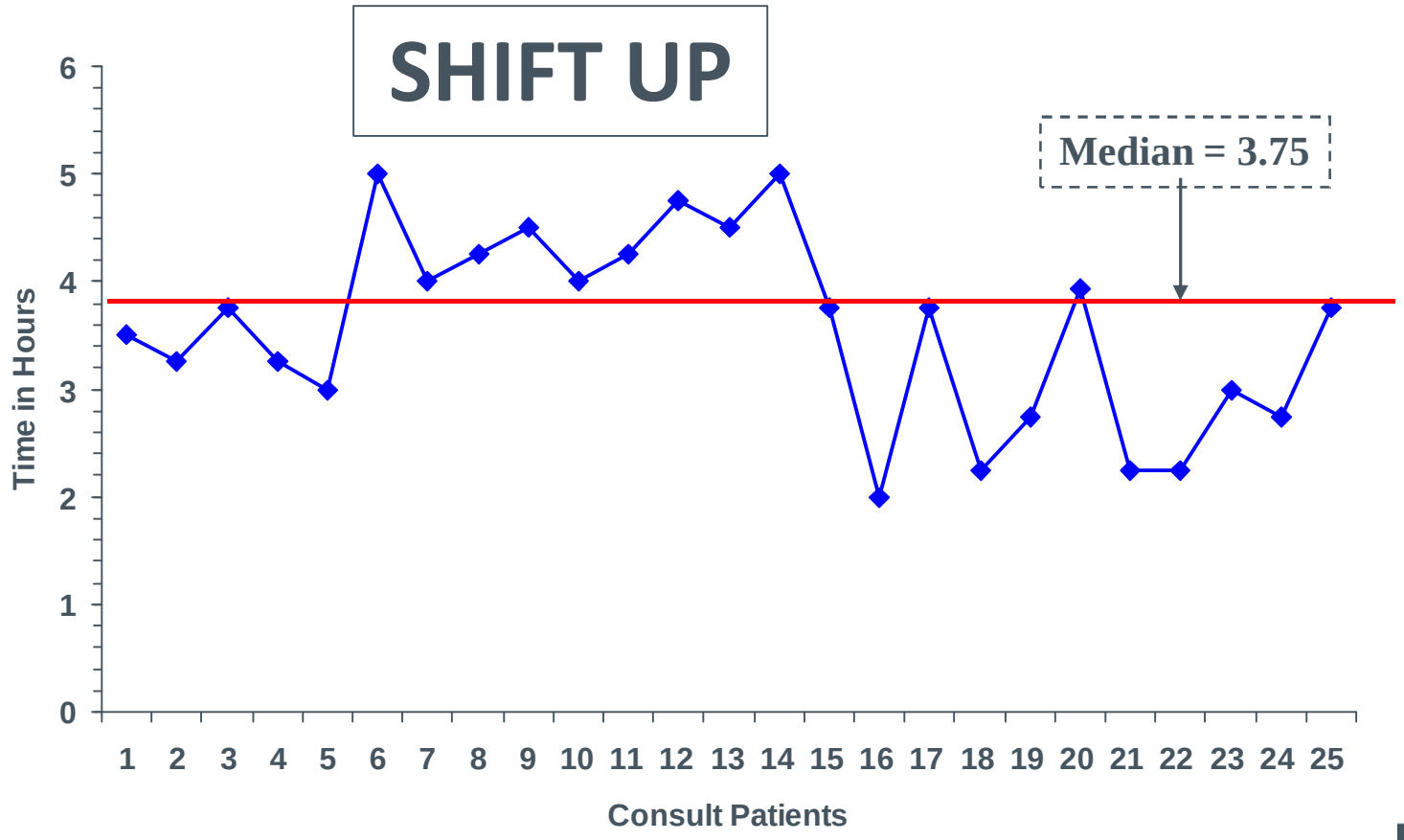
Medication Administration Process



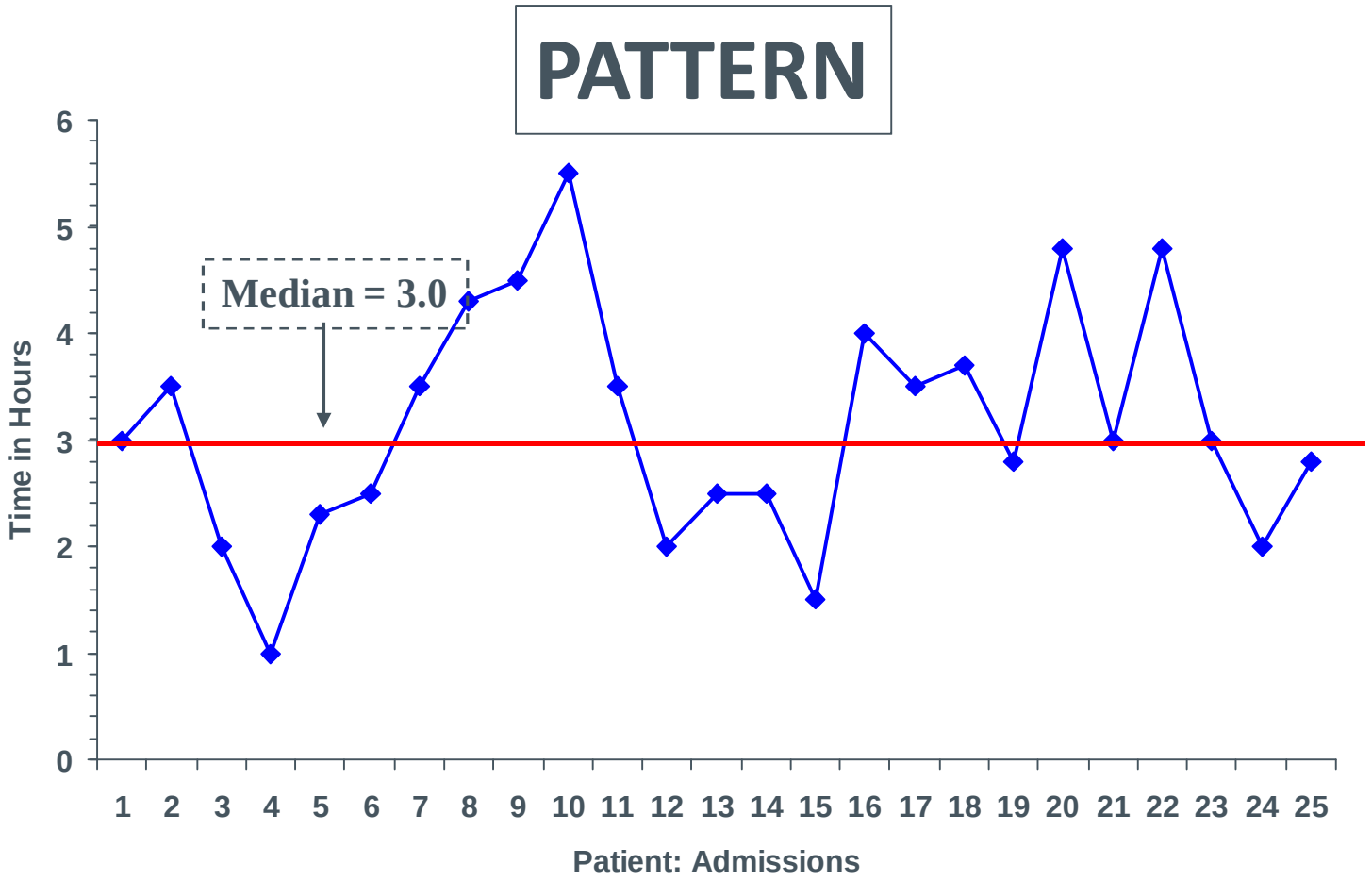
Abnormal Pap Test Follow-up Process



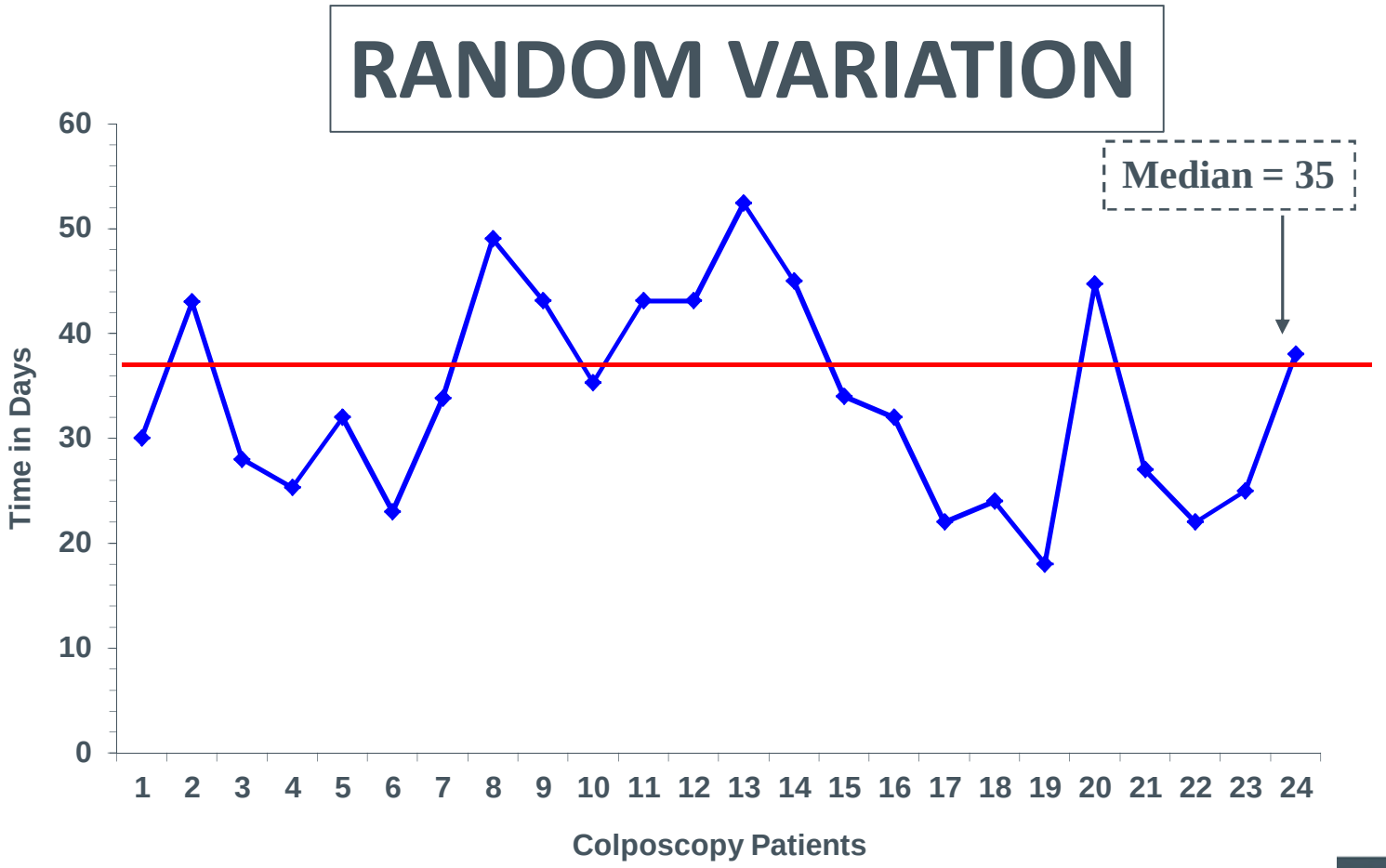
Process for Obtaining a Stat Consult



Process for Admitting from Outpatient Clinic



Abnormal Pap Test Follow-up Process



Prioritizing, defining a vision, a strategy, an action plan for Patient Safety

Anthony Staines, PhD
Associate Professor, IFROSS, University of Lyon 3, France
Patient Safety Program Director, Fédération des hôpitaux vaudois
Staines Improvement Research, Research and Consulting

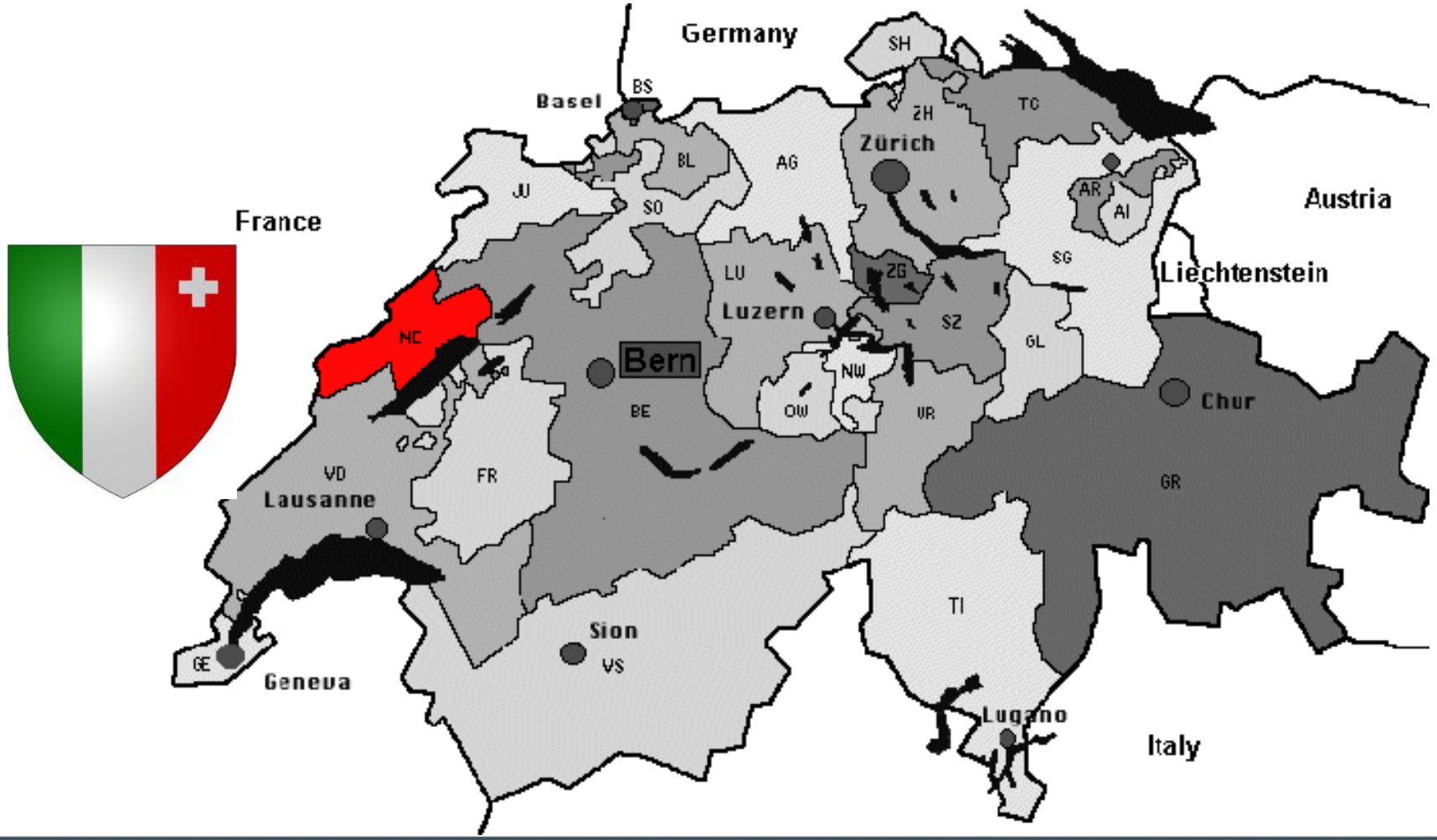
International Forum on Quality and Safety in Healthcare

April 21, 2015

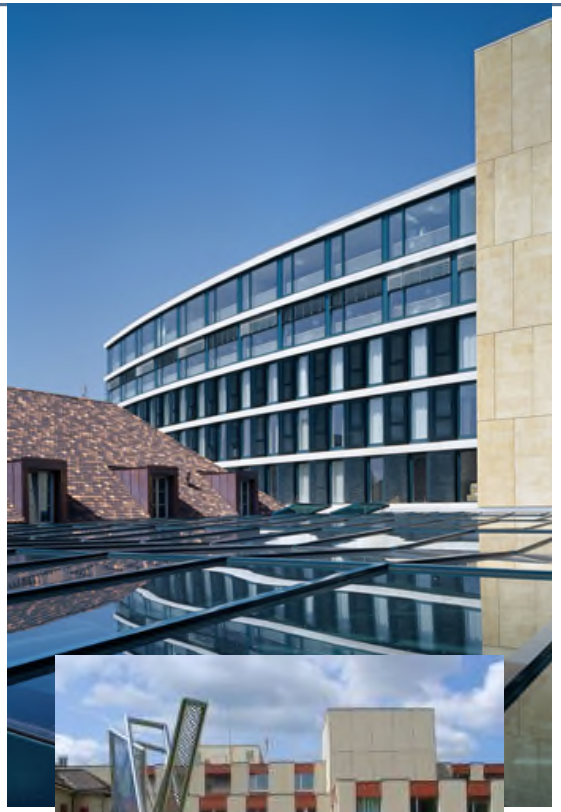
London – Full day course M5

Carol Haraden, Anthony Staines

Neuchâtel on the map of Switzerland



Hôpital neuchâtelois



Hôpital Neuchâtelois

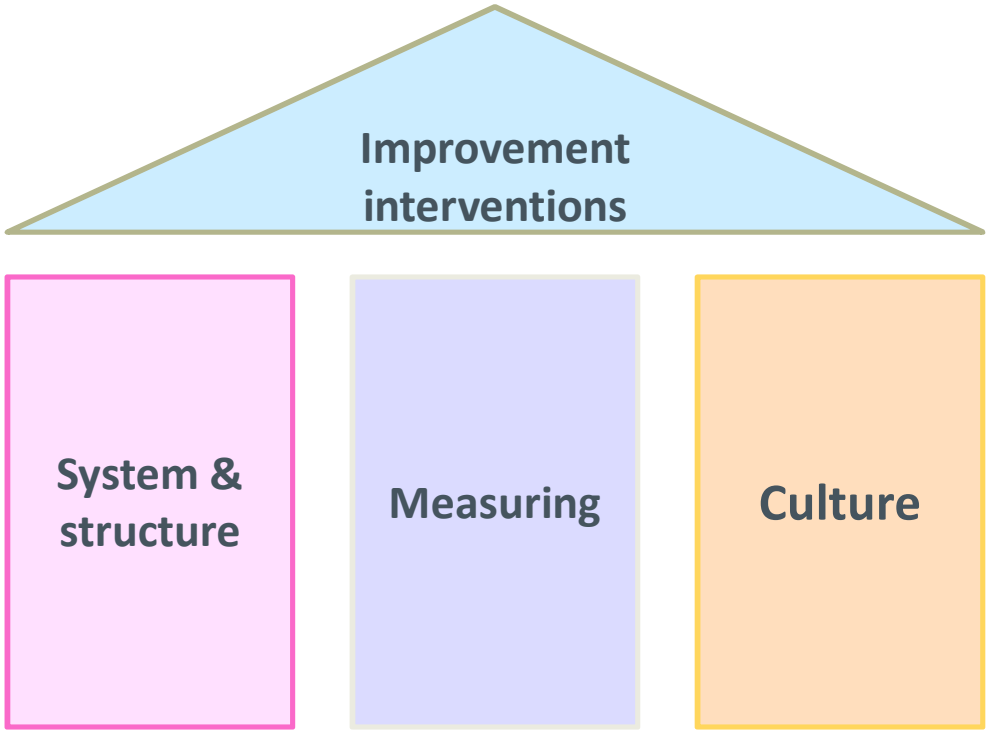
- Founded in 2006 through the merger of 7 hospitals
- 7 locations
- 2 500 employees
- 300 acute beds
- 140 rehabilitation beds
- 17 000 admissions p/year
- 1 700 deliveries p/year

History of the Patient Safety Program

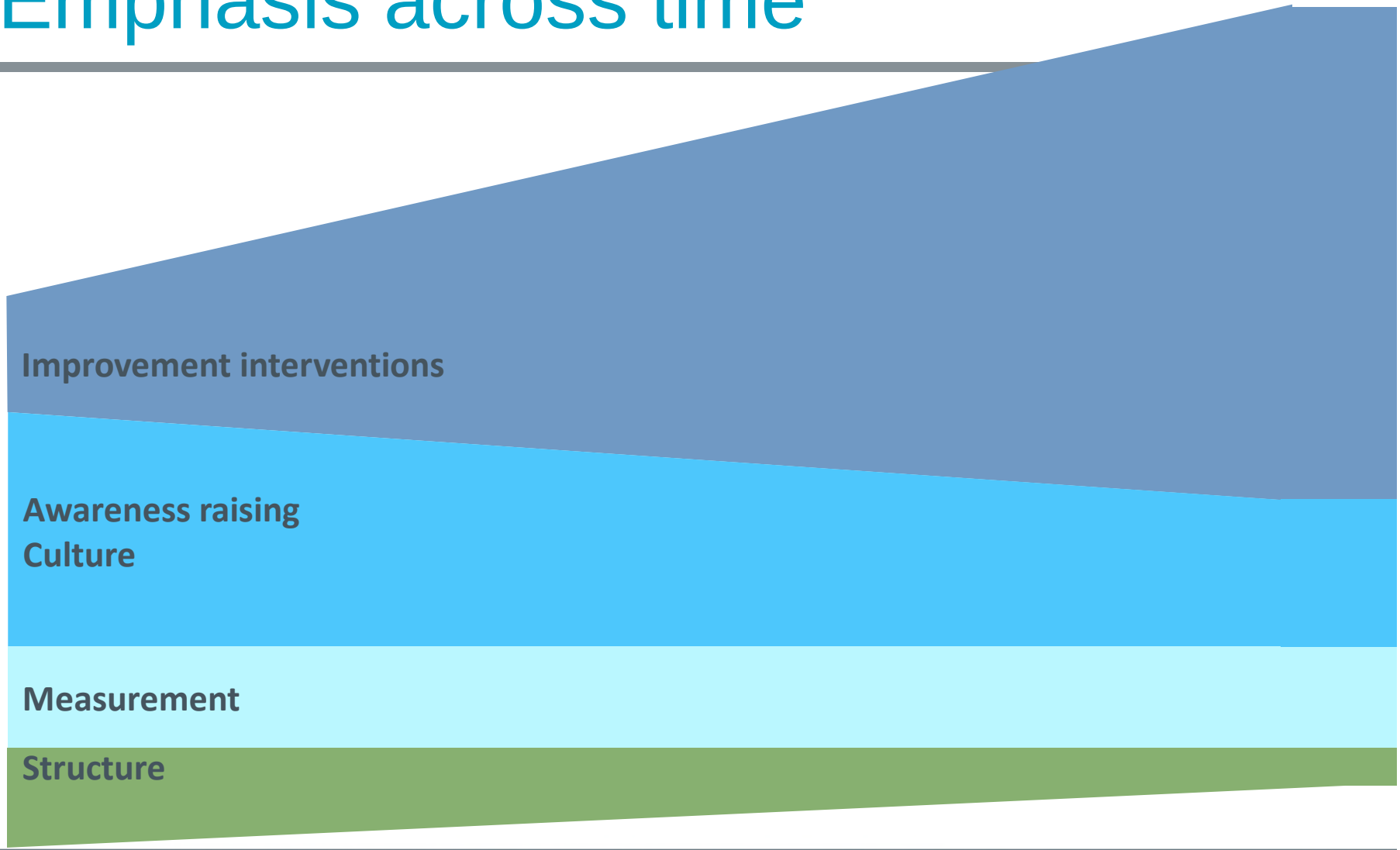
- Patient Safety Program started in 2008, one year after merger.
- Before merger : variety of quality programs, including some classical topics of patient safety (e.g. hygiene, incident reporting).
- 2007 : awareness raising through presentations for leadership team and board of trustees, by consultant
- 2008 : Patient Safety Committee set up, position of “Patient Safety Officer” created, literature review.
- 2009 : PS Culture Survey, gap analysis : literature-practice, action plan.
- Current : implementation.

Hôpital neuchâtelois

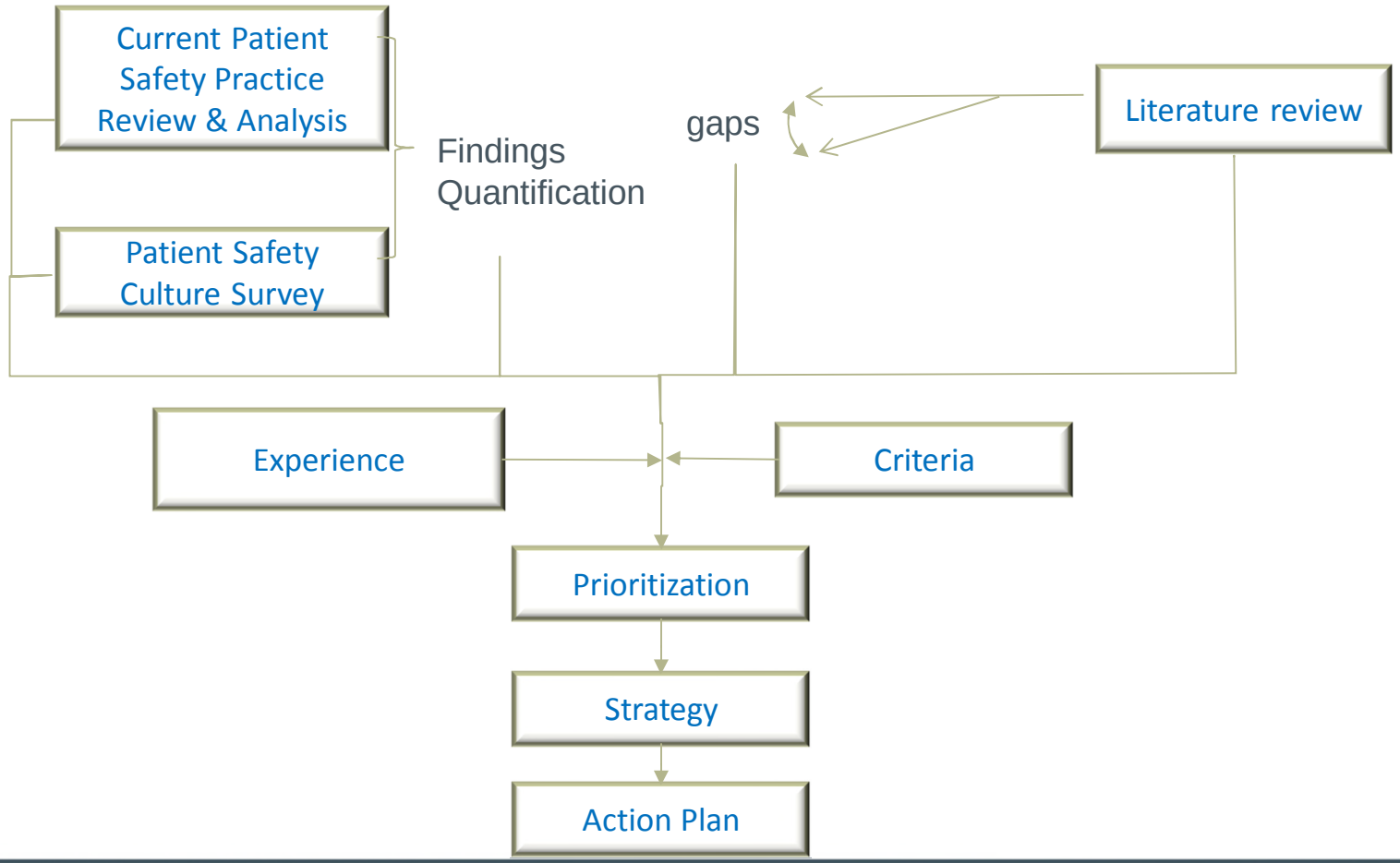
Patient Safety Concept



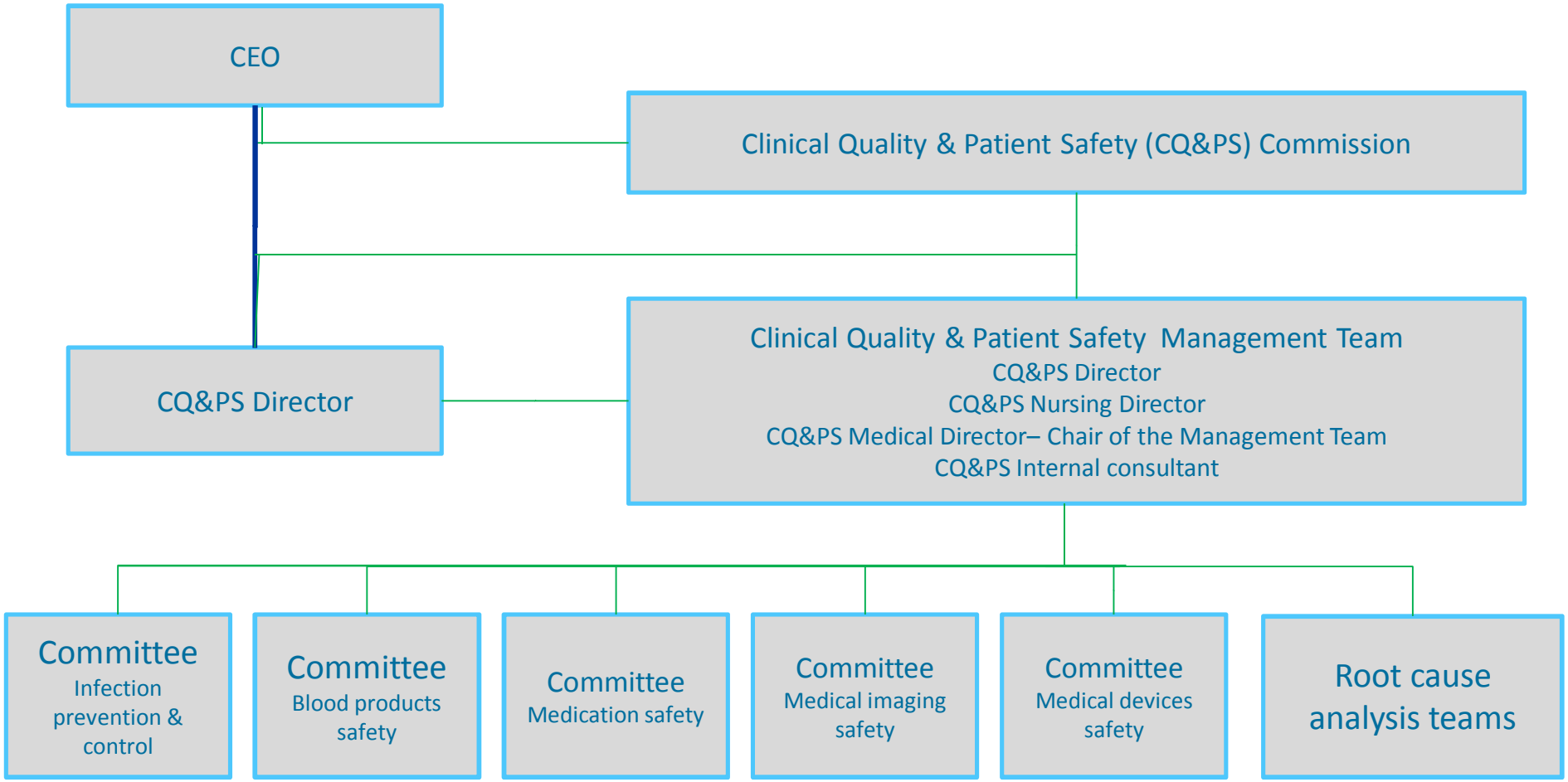
Emphasis across time



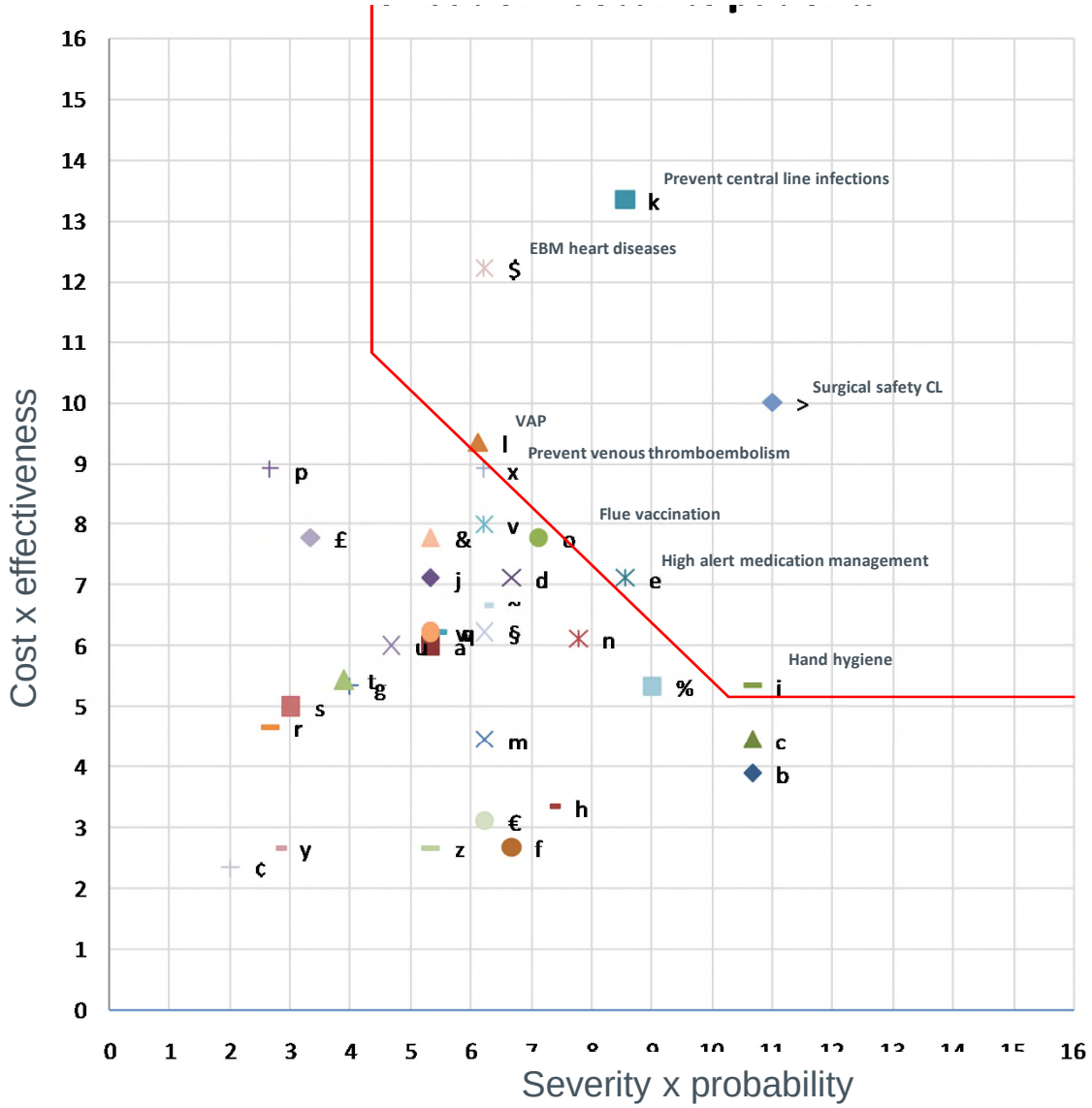
Design of a Patient Safety Action Plan



Clinical Quality & Patient Safety Structure



Prioritization of patient safety projects



a	Equipe d'intervention rapide
b	Détection par déclencheur spécifique aux médicaments + alertes
c	Développement système électronique d'ordres médicaux
d	Pharmacie clinique et formation
e	Protocoles pour médicaments à haut risques (stockage-prescr-adminstr)
f	Bilan comparatif des médicaments (medication reconciliation)
g	Médicaments ressemblants
h	Médicaments : stockage et préparation
i	Hygiène des mains - désinfection
j	Prévention infections voies urinaires
k	Prévention infections voies centrales
l	Prévention pneumopathies ventilation mécanique
m	Réduction infections MRSA
n	Prévention infection du site opératoire
o	Vaccination contre la grippe (soignants - patients à risque)
p	Comptage des compresses et instruments
q	Tourniquet pneumatique : risque ischémique ou thrombotique
r	Chir élective: évaluation chaq patient risque accident ischémique
>	Sécurité chirurgicale (check-list) & prévention erreurs site chirurgical
s	Prévention feux chirurgicaux
t	Evaluation pour chaque patient risque bronchoaspiration
u	Evaluation chaq patient recevant anticoagulants-professionnel spéc
v	Prévention insuffisance rénale par produits de contraste iodés
w	Evaluer chaque patient - risque malnutrition
x	Prévention thromboembolies veineuses
y	Revue décès non attendus
z	Gestion des soins intensifs par intensivistes exclusivement
£	Sécurité transfusionnelle
%	Prévention des chutes
&	Prévention escarres
§	Prévention des erreurs d'identification du patient
$	Application systématiques pratiques EBM pour maladies cardiaques
€	Réduction du déclin fonctionnel des aînés hospitalisés
¢	prévention des enlèvements de nourrissons à l'hôpital
~	Amélioration des transmissions relatives aux patients

Topic	Recommendation	Current Practice	Plan
Prevention of CLABSI I. Basic practices for prevention and monitoring of CLABSI: recommended for all acute care hospitals	**A. Before insertion** 1. Educate healthcare personnel involved in the insertion, care, and maintenance of central venous catheters about CLABSI prevention (A-II).		
	B. At insertion 1. Use a catheter checklist to ensure adherence to infection prevention practices at the time of central venous catheter insertion (B-II). 2. Perform hand hygiene before catheter insertion or manipulation (B-II). 3. Avoid using the femoral vein for central venous access in adult patients (A-I). 4. Use an all-inclusive catheter cart or kit (B-II). 5. Use maximal sterile barrier precautions for central venous catheter insertion (A-I). 6. Use a chlorhexidine-based antiseptic for skin preparation in patients older than 2 months of age (A-I).		
	C. After insertion 1. Disinfect catheter hubs, needleless connectors, and injection ports before accessing the catheter (B-II). 2. Remove nonessential catheters (A-II). 3. For non-tunneled central venous catheters in adults and adolescents, change transparent dressings and perform site care with a chlorhexidine-based antiseptic every 5-7 days or more frequently if the dressing is soiled, loose, or damp; change gauze dressings every 2 days or more frequently if the dressing is soiled, loose, or damp (A-I). 4. Replace administration sets not used for blood, blood products, or lipids at intervals not longer than 96 hours (A-II). 5. Perform surveillance for CLABSI (B-II). 6. Use antimicrobial ointments for hemodialysis catheter insertion sites (A-I).		

Gap analysis - example

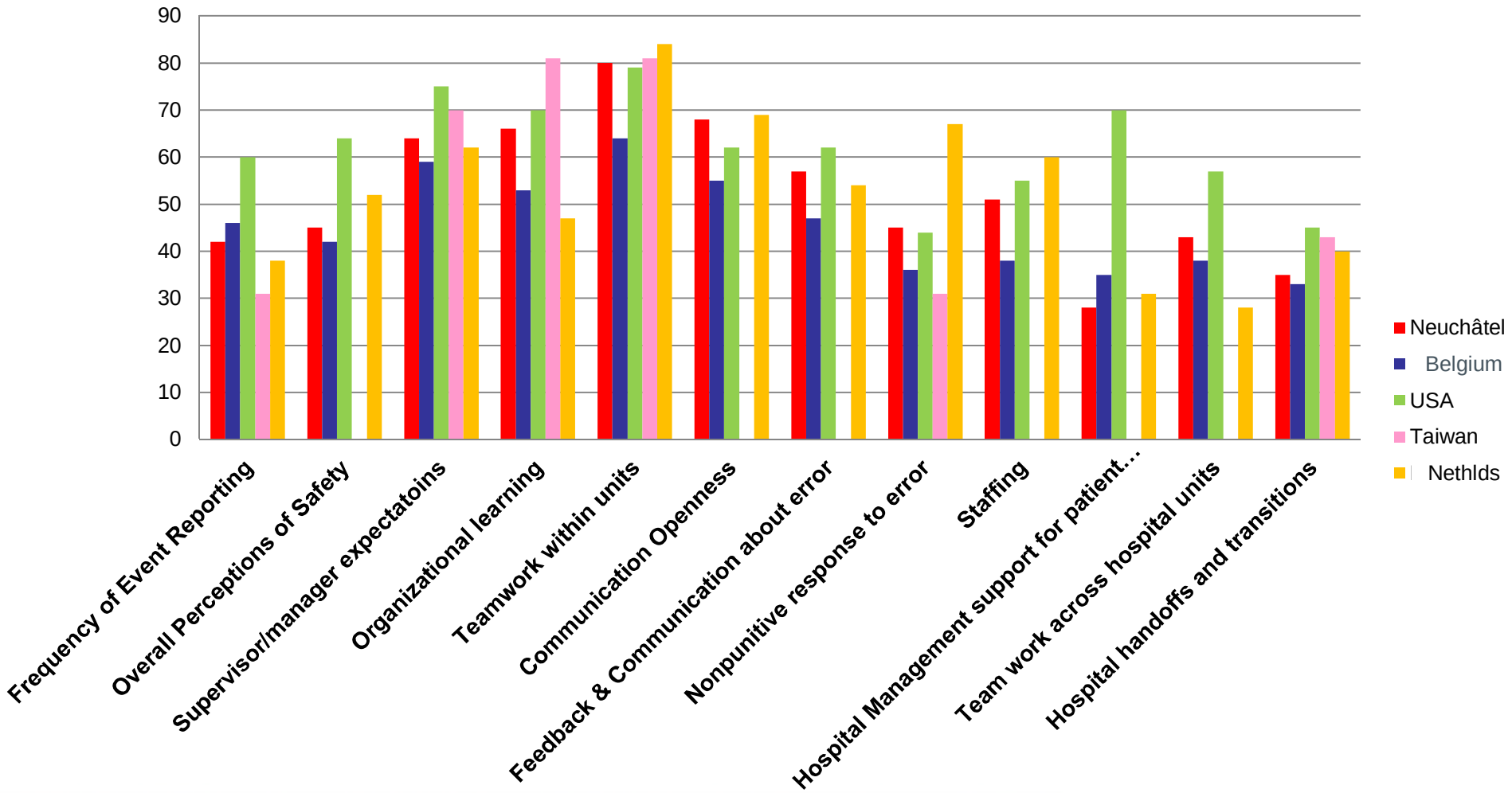
Topic	Recommendation	Current Practice	Plan
II. **Special** approaches for the prevention of CLABSI	1. Bathe intensive care unit (ICU) patients older than 2 months of age with a chlorhexidine preparation on a daily basis (B-II). 2. Use antiseptic- or antimicrobial-impregnated central venous catheters for adult patients (A-I). 3. Use chlorhexidine-containing sponge dressings for central venous catheters in patients older than 2 months of age (B-I). 4. Use antimicrobial locks for central venous catheters (A-I).		
III. Approaches that should **not** be considered a routine part of CLABSI prevention	1. Do not use antimicrobial prophylaxis for short-term or tunneled catheter insertion or while catheters are in situ (A-I). 2. Do not routinely replace central venous catheters or arterial catheters (A-I). 3. Do not routinely use positive-pressure needleless connectors with mechanical valves before a thorough assessment of risks, benefits, and education regarding proper use (B-II).		

Yokoe, D. S., Mermel, L. A., Anderson, D. J., Arias, K. M., Burstin, H., Calfee, D. P., et al. (2008). A compendium of strategies to prevent healthcare-associated infections in acute care hospitals. *Infect Control Hosp Epidemiol, 29 Suppl 1, S12-21.*

Frequency of Event Reporting

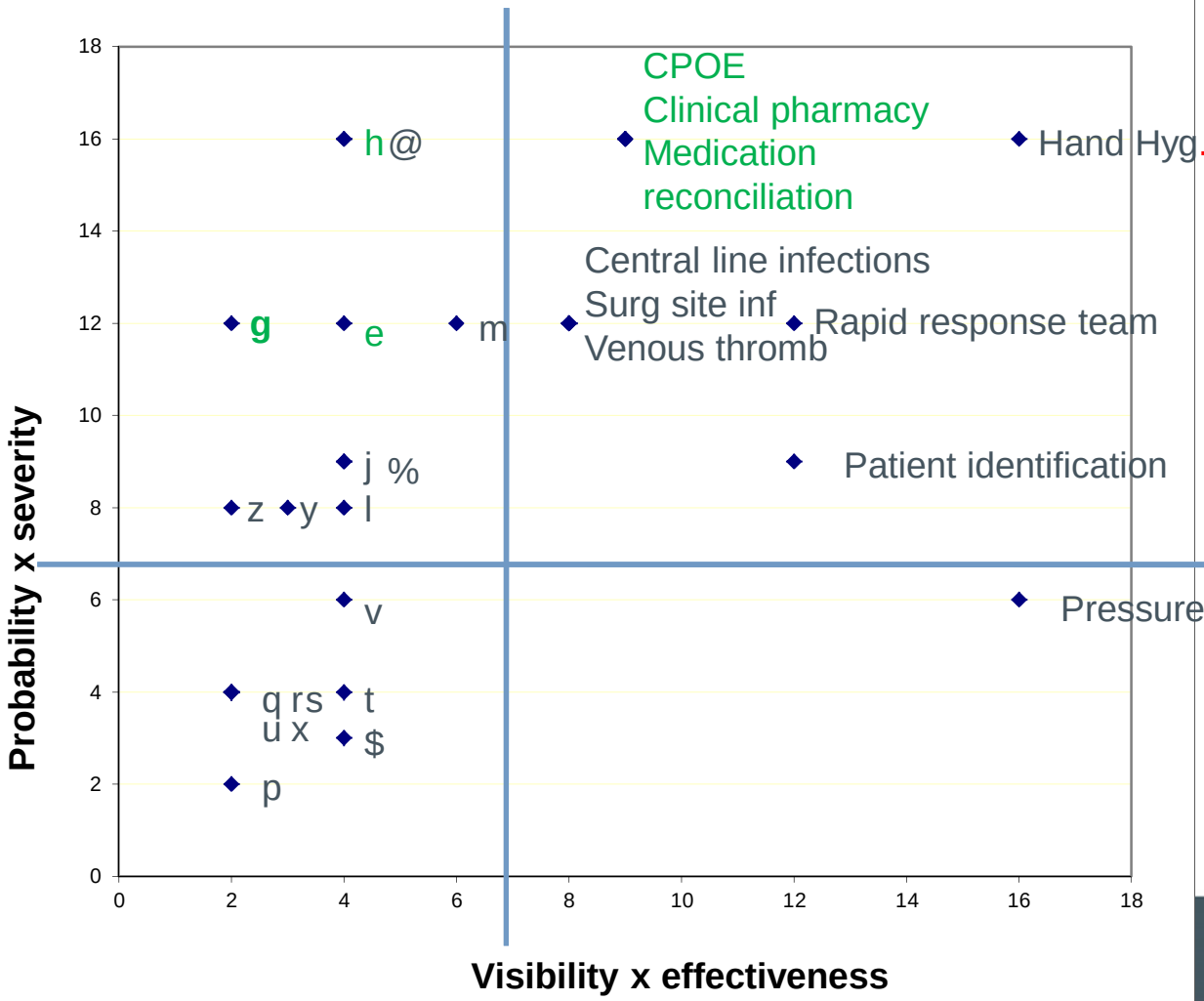
% of positive responses to questions on frequency of event reporting, by hospital member of Hôpital neuchâtelois.

International Benchmarking



HÔPITAL DU CHABLAIS
MONTHEY • AIGLE • MIREMONT

Evaluation des actions d'amélioration de la sécurité des patients



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w	Prévention thromboembolies veineuses
x	Revue décès non attendus
y	Gestion des soins intensifs par intensivistes exclusivement
z	Sécurité transfusionnelle
%	Prévention des chutes
&	Prévention escarres
@	SBAR
§	Prévention des erreurs d'identification du patient
$	Prévention erreurs site chirurgical

Support from Hospital Federation

Possible criteria to prioritize patient safety interventions

1	Visibility	Are an opportunity to show institutional commitment in safety improvement.
2	Clinical effectiveness	Are grounded on scientific evidence (evidence-based)
3	Buy-in	Have a potential to create buy-in from the clinicians.
4	Value	Can simultaneously improve safety and cut costs or increase revenue
5	Feasibility	Are easy to implement.
6	Results driven	Help getting and showing results.
7	System-wide	Involve a spread that is system-wide and leaves no clinical unit out.
8	Cultural impact	Help creating a safety culture within the institution.
9	Cost effectiveness	Can be implemented with little extra cost or can generate more savings or extra revenue than cost increase.
10	Mandatory	Helps complying with legal or regulatory requirements.
11	Patient involvement	Allows patient involvement.
12	Innovative	Gives the institution an image of being innovative, pioneer, and can be helpful for other institutions.
13	Volume	Volume of patients that will benefit from the intervention.
14	Severity of risks	Deal with risks that have the most severe potential consequences for patients
15	Multi-professional	Promotes interprofessional discussions and consensus.

A checklist to design your Patient Safety Strategy

Alignment

- Structure – leadership – governance
- Reporting system (incidents, adverse events, near misses)
- Institutional Risk Management System
- Resources (investment, operations)
- Protocols - guidelines
- Patient engagement
- Safety culture
- Measurement - quantification
- Improvement interventions
- Research and education

Institute for Healthcare Improvement

L29: Integrating Patient Safety into Your System's DNA

Leadership for Quality and Safety Improvement

Anthony Staines, Ph.D.
Patient Safety Program Director, Fédération des hôpitaux vaudois, Switzerland
Professeur associé, IFROSS, University of Lyon 3, France


Great leaders don't tell you what
to do....they show you how its done

Leadership for Quality and Safety

- Preparation
  - Understand where your organization stands
  - Understand the principles, methods, pressures
  - Understand the organization’s experience and readiness

Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

Where you stand Example

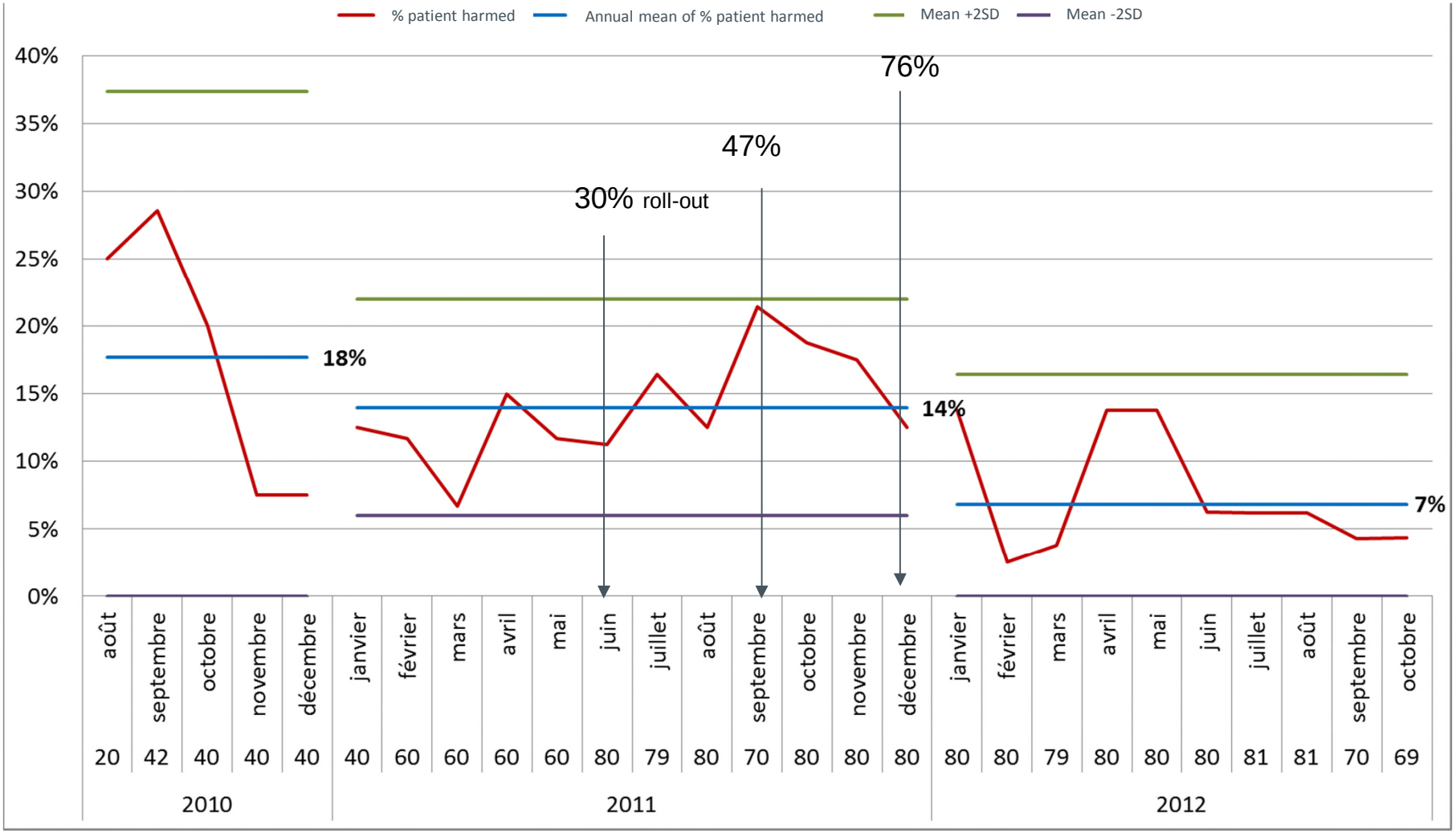
Fédération des hôpitaux vaudois

- Measurement of medication harm
  - Adverse Drug Event Trigger Tool: 20 charts per month
  - Initially, 18% of patients with AE
  - 18 month breakthrough collaborative
  - 7% of patients with AE

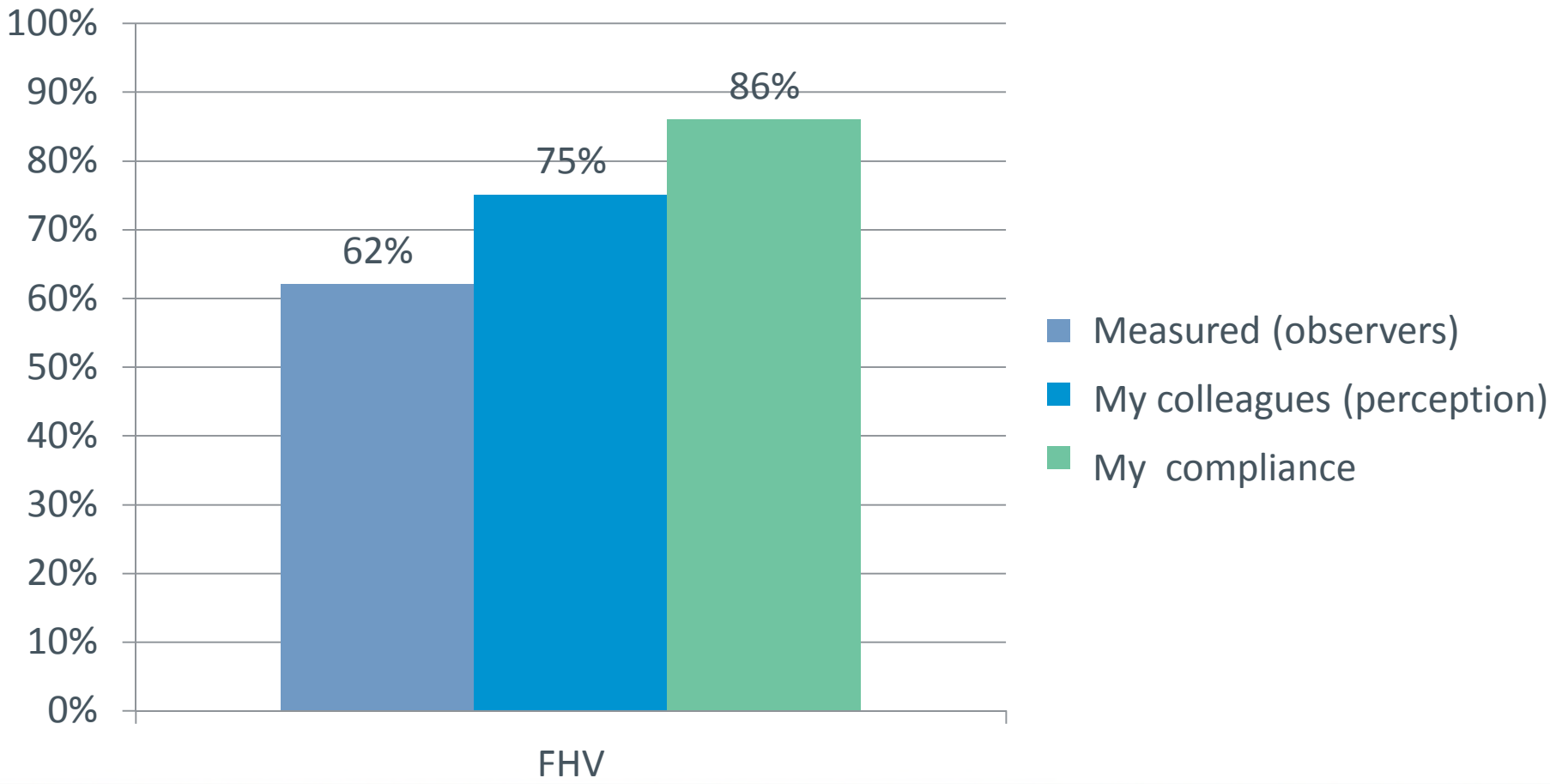
Examples of Triggers

- Diphenhydramine
- Vitamin K
- Romazicon
- Anitemetics
- Naloxone
- Antidiarrheals
- Serum glucose <50
- WBC <3,000
- Platelet <50,000
- Digoxin level > 2
- Rising serum creatinine
- Oversedation / fall / lethargy / hypotension
- Rash
- Abrupt medication stop
- Transfer to higher level of care
- C. difficile positive
- INR >6

All hospitals involved in phase 2
% of patients harmed by at least 1 ADE



Hand hygiene compliance
Perception and observation



Leadership for Quality and Safety

- Vision and strategy
  - Create an inspiring vision collaboratively
  - Choose improvements that are strategically important
  - Create an improvement strategy
- Communication, involvement and motivation
  - Show involvement
  - Build consensus within top leadership, sustainability and priority
  - Define a communication strategy

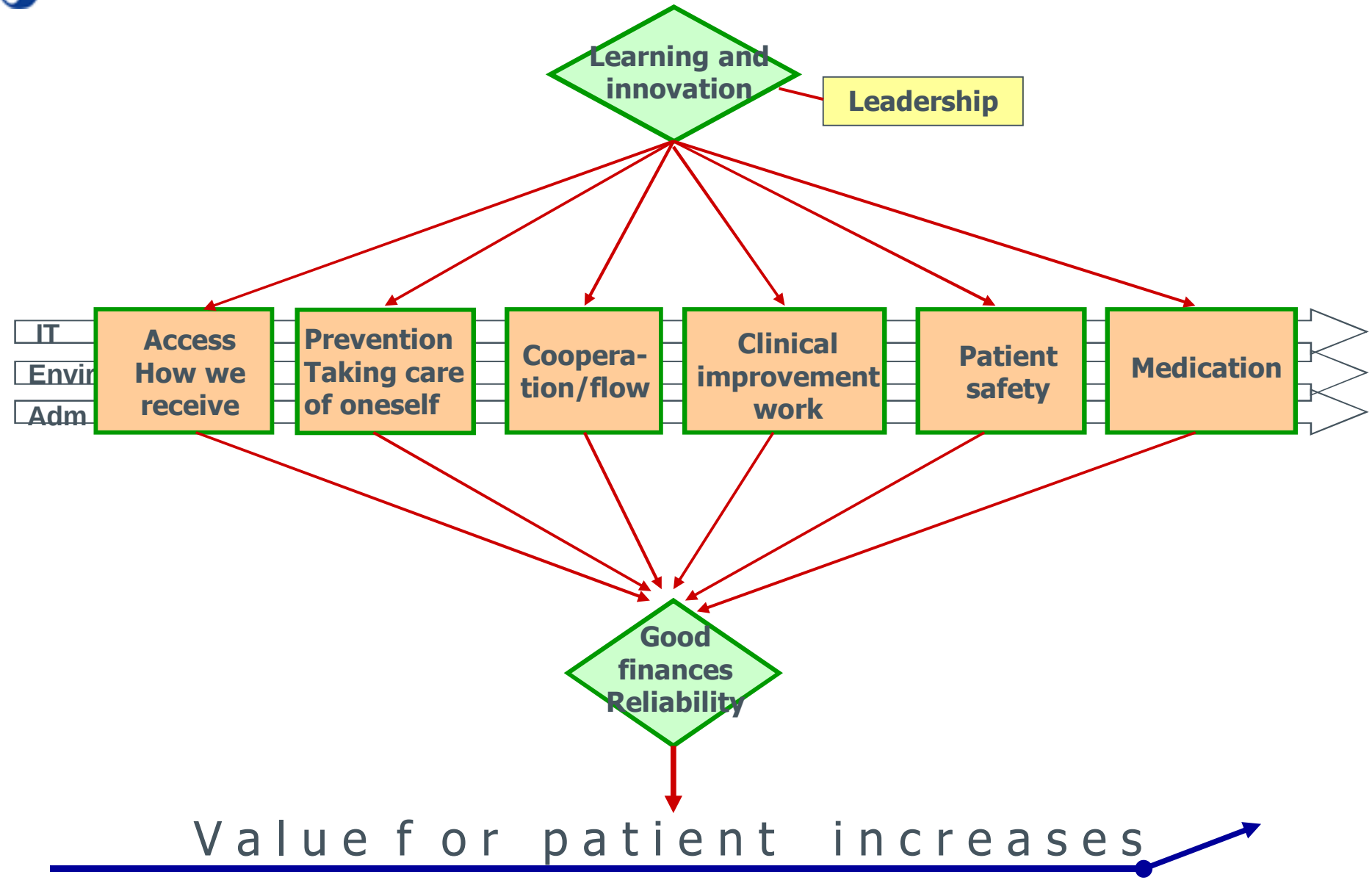
Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

The County Council vision:

For a good life in an attractive county

LANDSTINGET i Jönköpings län

Strategic Improvement Areas



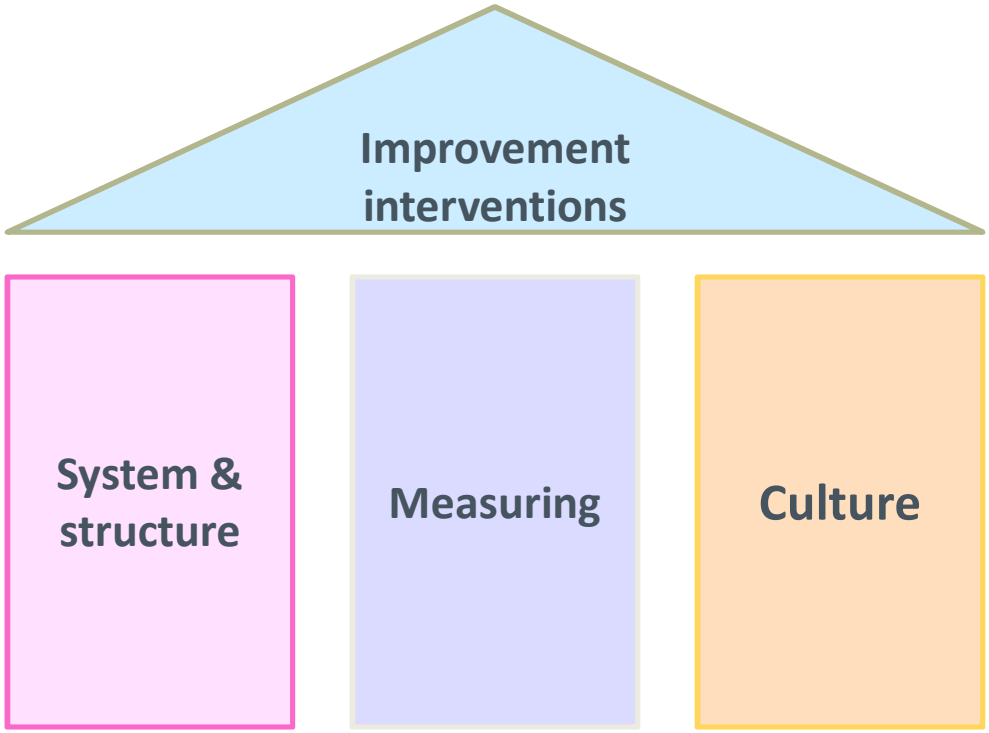
Source : Henriks G, Bojestig M, Karlsson S-O, « To do best possible and Pursuing Perfection, International Forum on Quality and Safety in Healthcare, Paris, April 2008

ASCENSION HEALTH

- In 2003 a bold strategic quality goal was established: excellent clinical care with no preventable injuries or deaths by July 2008.

Hôpital neuchâtelois

Patient Safety Concept



Leadership for Quality and Safety

- Build infrastructure for change and define responsibilities
  - Define top management team responsibilities + all managers
  - Establish quality and safety groups at all levels
  - Ensure experts are available for support
  - Appoint physician and nurse leaders
  - Provide networks to support experts
  - Form project teams
  - Ensure patient safety and error reporting are in all job descriptions

Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

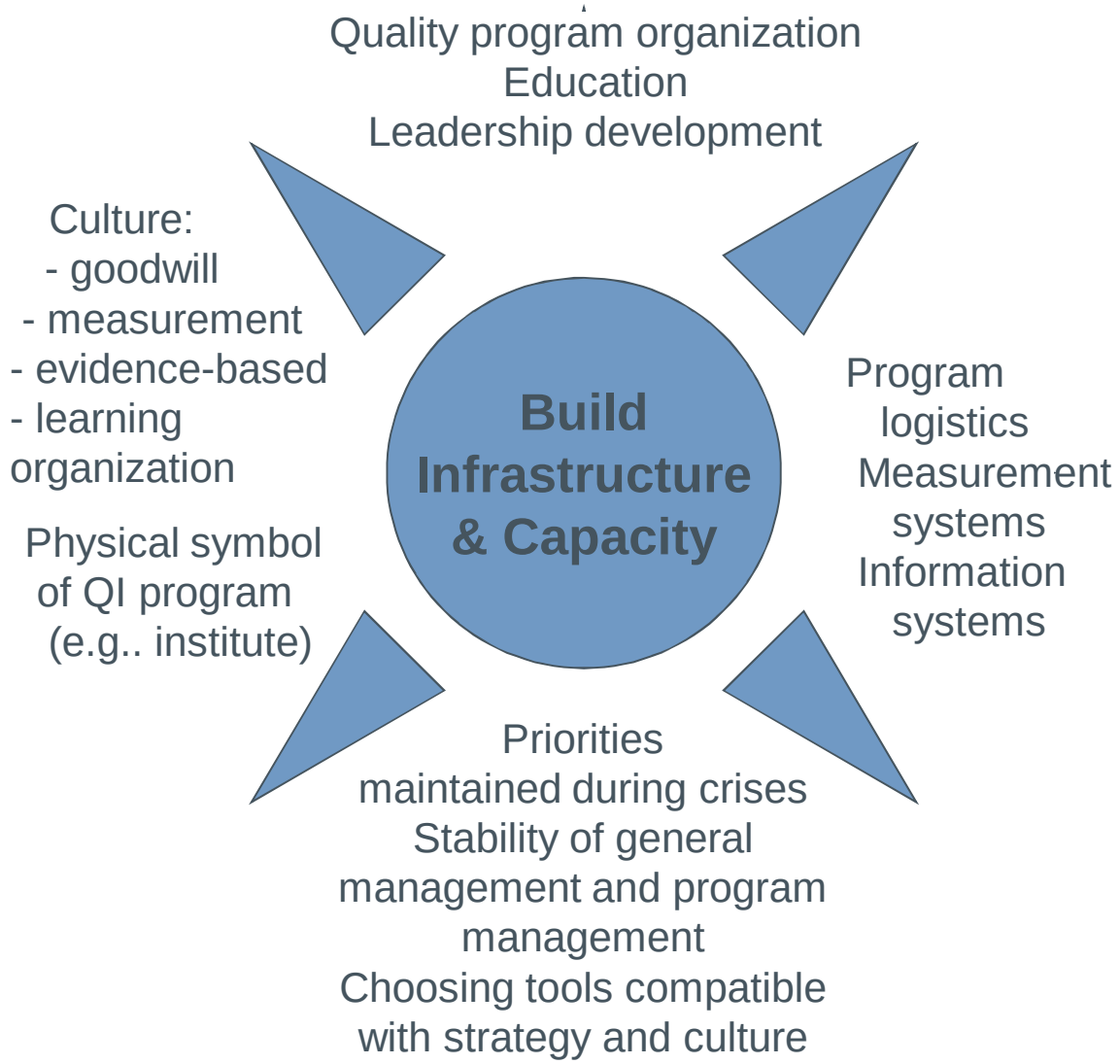
Findings

Factors that can help or hinder QI programs to come to improved patient results

Staines A. The relation between quality improvement progams and results for patients [Doctoral dissertation]. University of Lyon 3, 2007.

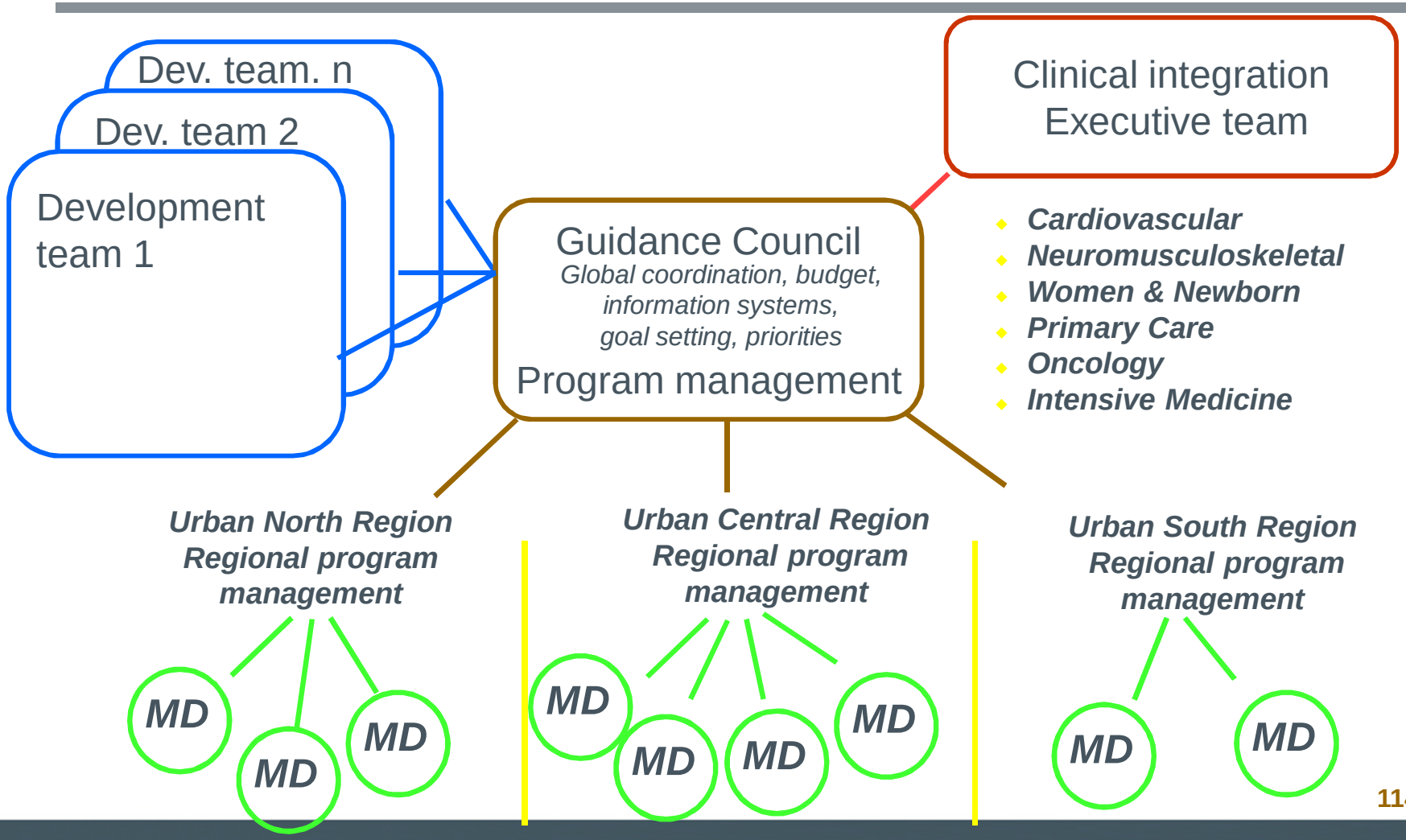
Findings

Factors used by leading QI programs to come to improved patient results



Staines A. The relation between quality improvement progams and results for patients [Doctoral dissertation]. University of Lyon 3, 2007.

Clinical programs structure

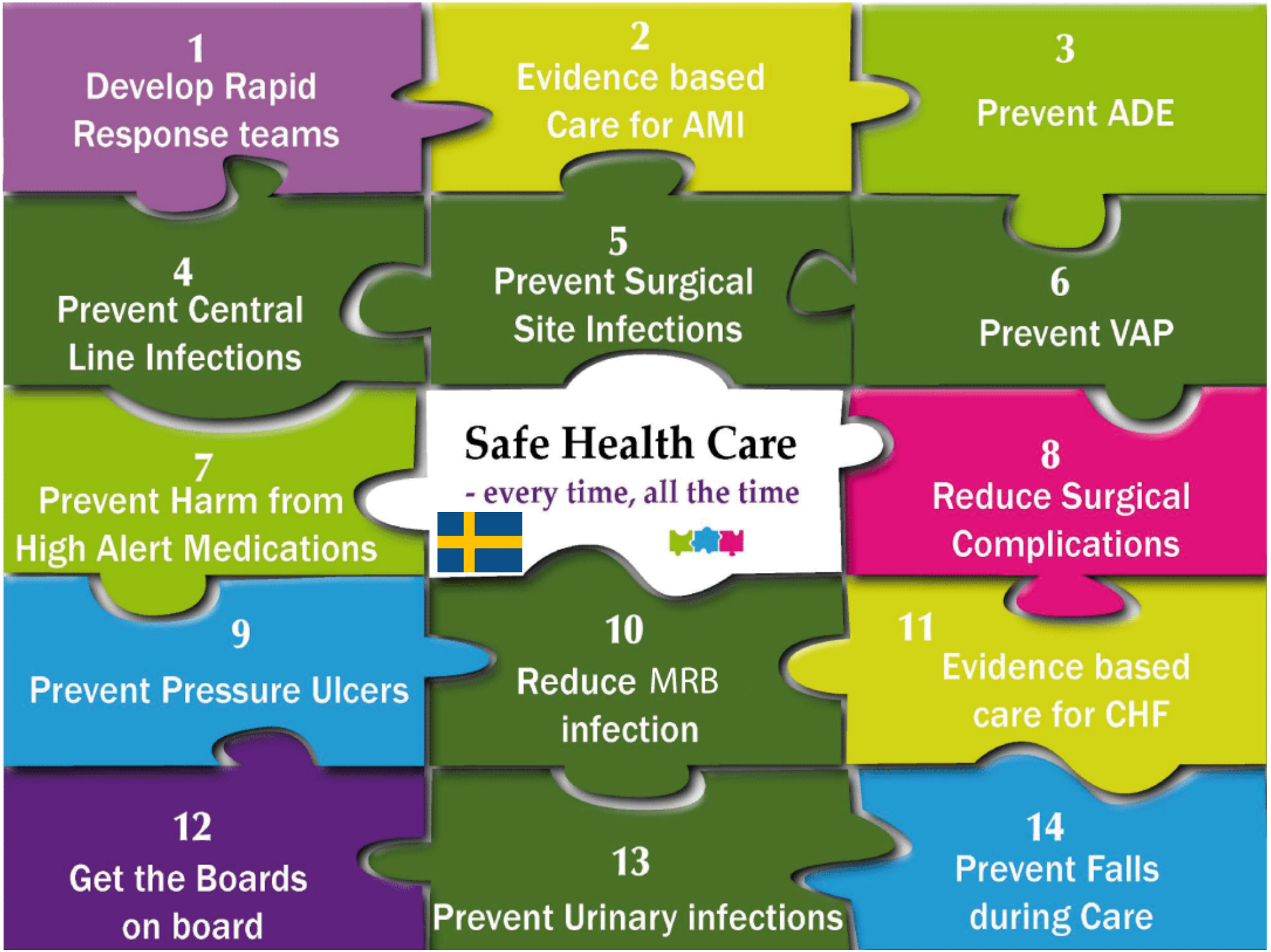


Leadership for Quality and Safety

- Systems change
  - Create and improve patient feedback systems
  - Create a personnel reporting system for adverse events and near misses
  - Create a system fro prioritizing, investigating and preventing events
  - Change reporting systems to include quality and safety indicators along finance and production data
  - Change IT systems to allow collection of data and fast feedback
  - Change appraisal recognition and reward systems to align with strategy

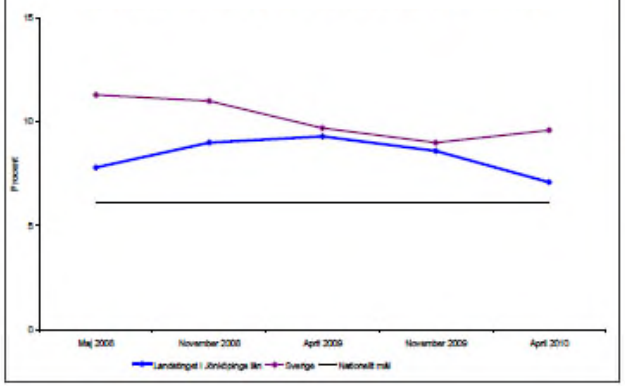
Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

Ortopedkliniken

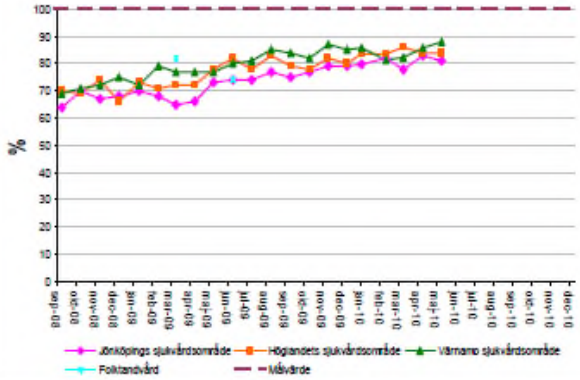

1
Develop Rapid Response teams
2
Evidence based Care for AMI
3
Prevent ADE
4
Prevent Central Line Infections
5
Prevent Surgical Site Infections
6
Prevent VAP
7
Prevent Harm from High Alert Medications
Safe Health Care
- every time, all the time
8
Reduce Surgical Complications
9
Prevent Pressure Ulcers
10
Reduce MRB infection
11
Evidence based care for CHF
12
Get the Boards on board
13
Prevent Urinary infections
14
Prevent Falls during Care

Corporate dashboard – Safe Health Care Program – Updated June 15, 2010

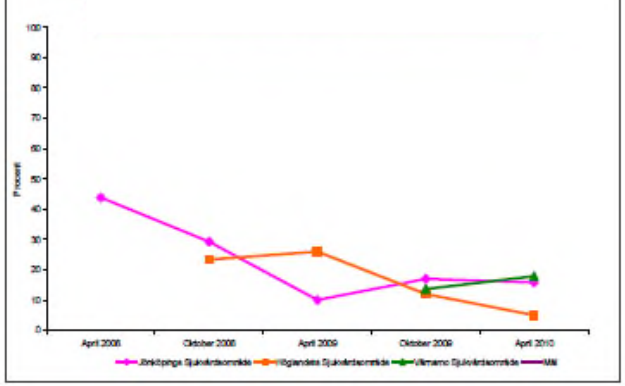
Point prevalence – nosocomial infections



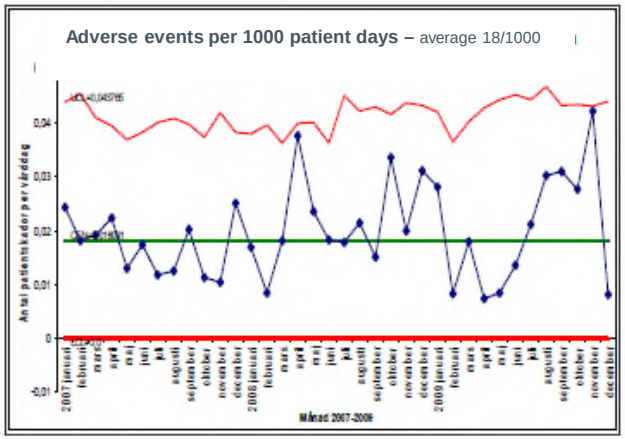
Basic hygiene protocol compliance



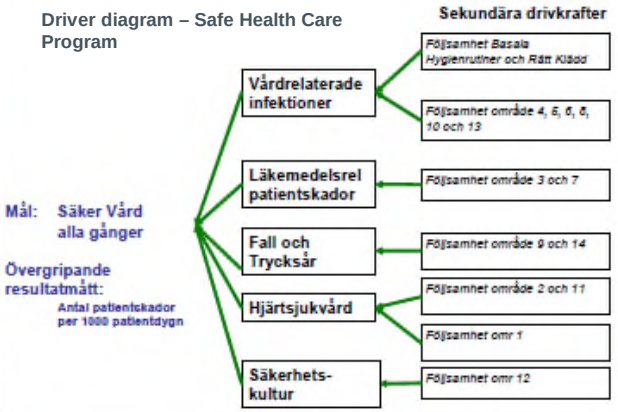
Adverse drug events



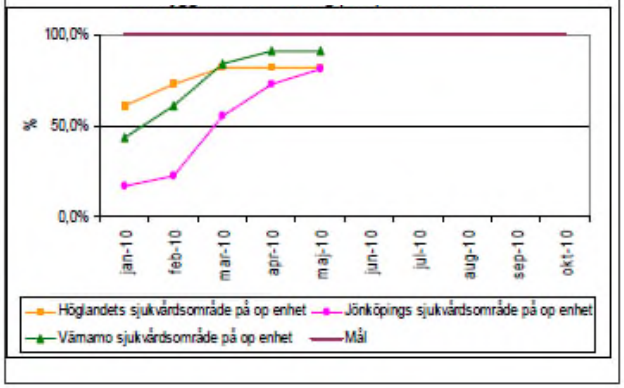
Adverse events per 1000 patient days – average 18/1000



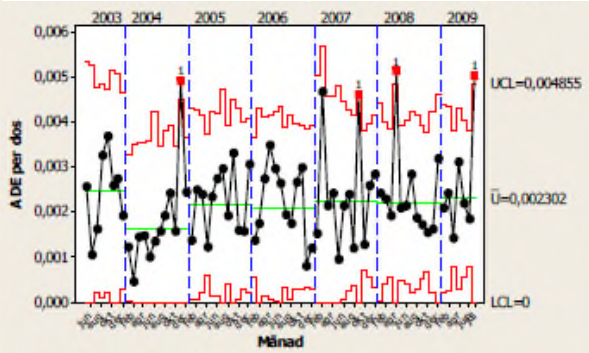
Driver diagram – Safe Health Care Program



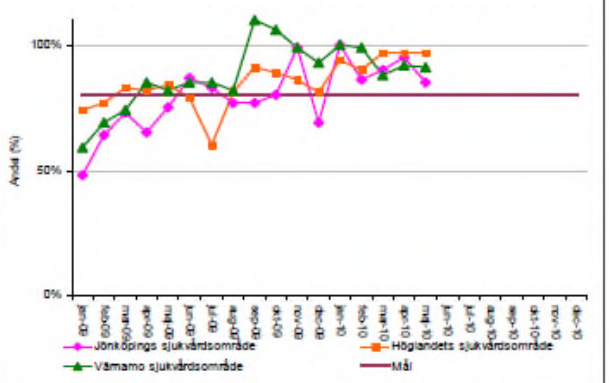
WHO Surgical Check-list compliance



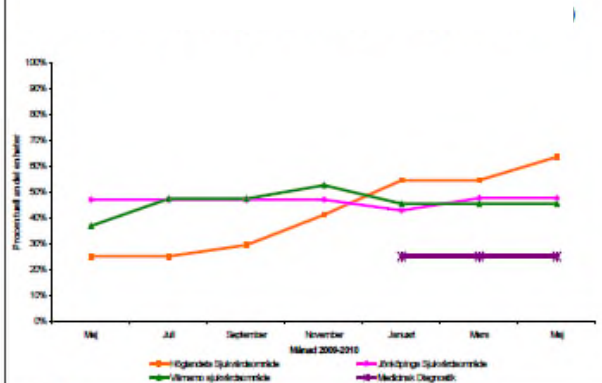
Adverse drug events per 1000 doses – average 2.3/1000



Compliance with falls, pressure ulcers and nutrition assessment



Leadership committment – self assessment



Resultatmått

Processmått

Leadership for Quality and Safety

- Human resources, people and team development
  - Include quality and safety in all personnel introduction programs
  - Agree policies with professional groups and unions on reporting
  - Provide quality and safety training to middle managers and leaders
  - Develop top and middle management teams
  - Develop the ability of quality experts to translate and apply methods locally
  - Provide quality methods training and development
  - Ensure managers and experts apply latest knowledge

Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

Leadership for Quality and Safety

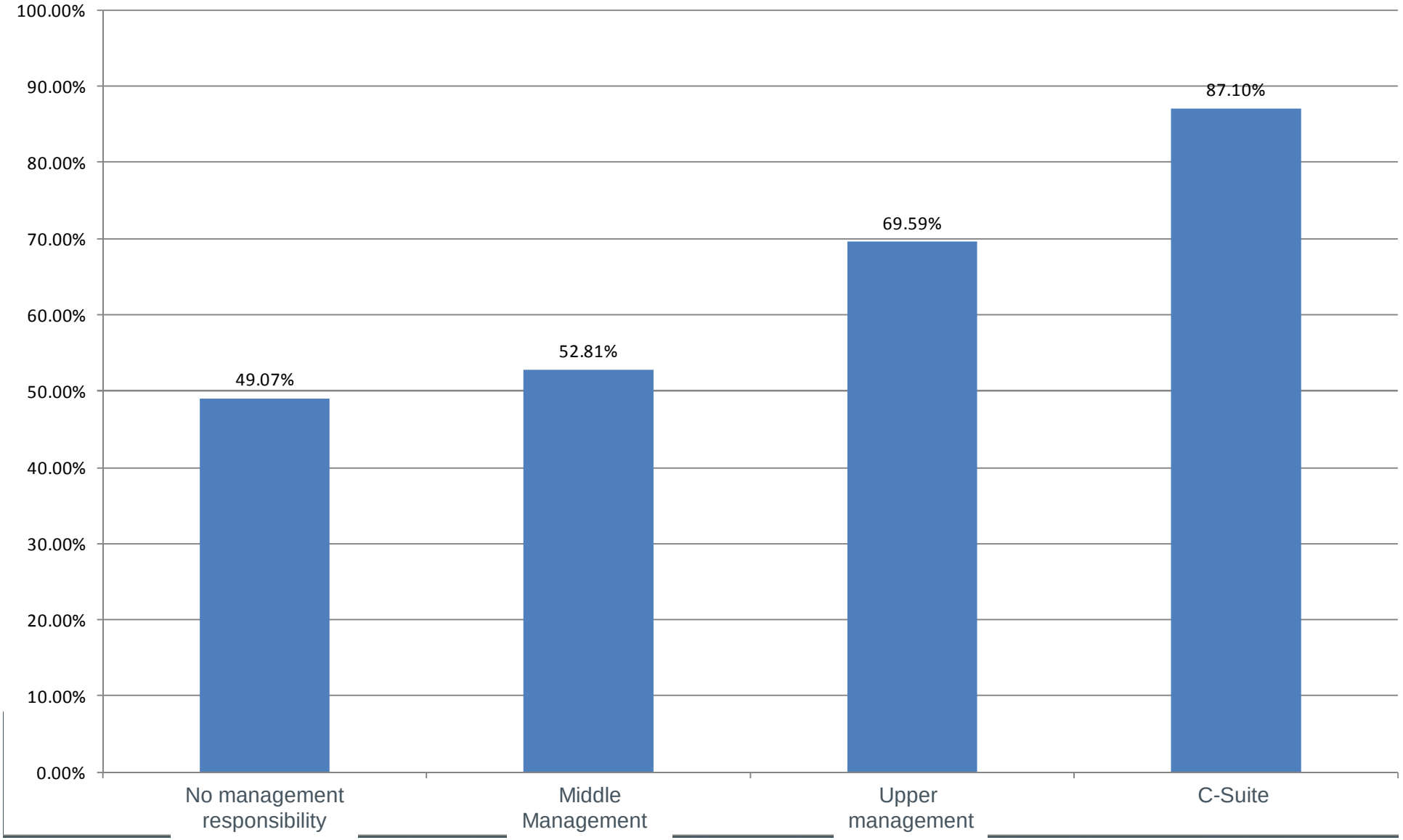
- Other actions
  - Use your boundary-spanning or mediating role to identify and overcome boundary problems for patients
  - Identify and support physician enthusiasts for quality and safety
  - Improve relations with physicians through regular contact, discussion about clinical outcomes
  - Talk about patient cases,– not to criticize but to show where there is room for improvement. Tell stories.
  - Regularly visit different units to discuss needs, incidents, safety issues
  - Listen and ask more questions than give instructions: why do we do it this way, do others do it better, is it possible there is a better way, how do we know?l

Øvretveit J. *The Leaders Role in Quality and Safety Improvement.* Stockholm: Sveringes Kommuner och Landsting; June 2005.

Hospital management provides a work climate that promotes patient safety

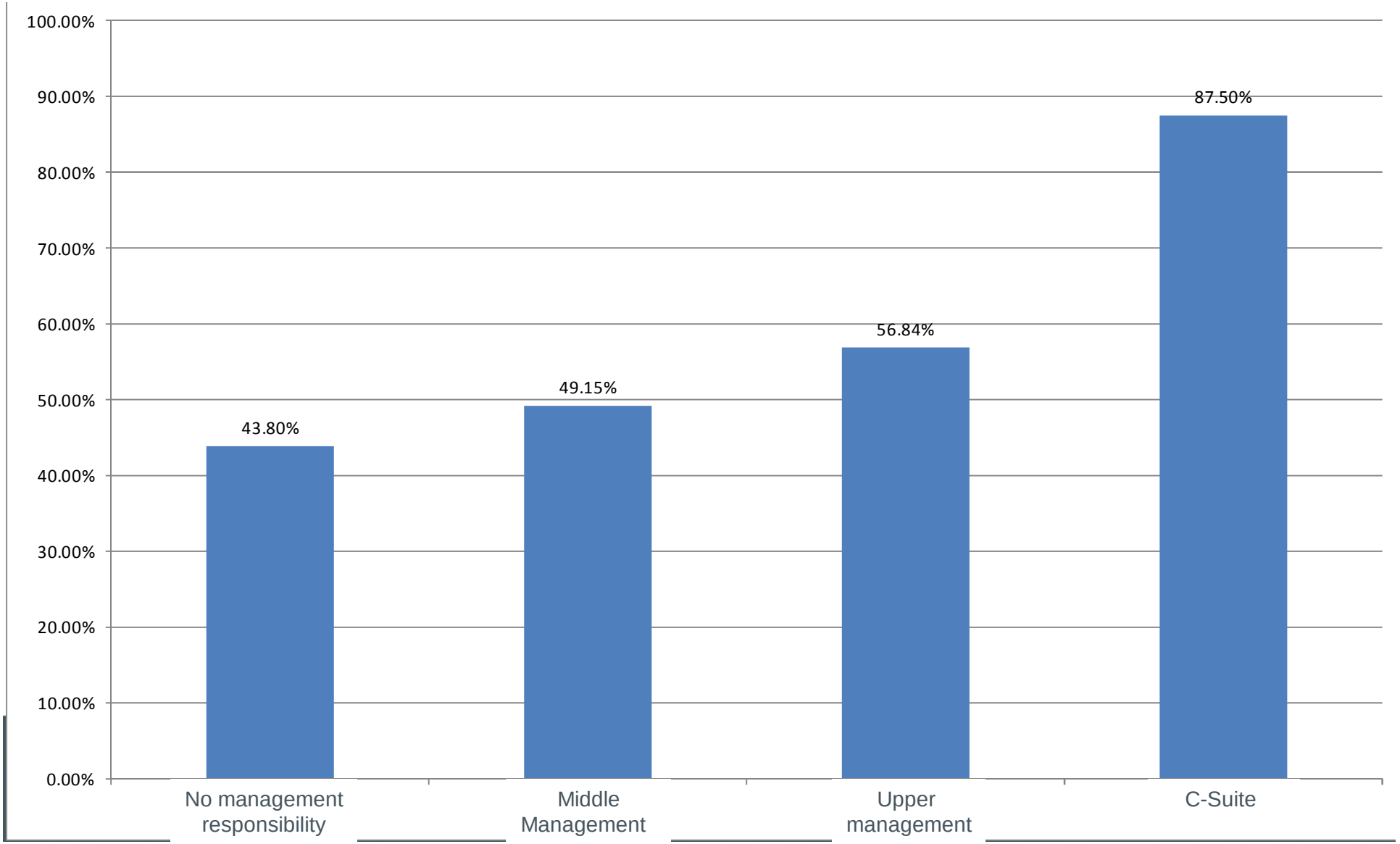
% of positive replies (“strongly agree” and “agree”) by hierarchical level

Hospital Survey on Patient Safety Culture within a hospital in Switzerland



The actions of hospital management show that patient safety is a top priority

% of positive replies (“strongly agree” and “agree”) by hierarchical level
Hospital Survey on Patient Safety Culture within a hospital in Switzerland



The Governance Intervention

6 steps to engage the Board

- ***Setting Aims:*** *Set a specific aim to reduce harm this year. Make an explicit, public commitment to measurable quality improvement.*
- ***Getting Data and Hearing Stories:*** *Review progress toward safer care as the first agenda item at every board meeting, putting a "human face" on harm data.*
- ***Establishing and Monitoring System-Level Measures:*** *Identify a small group of organization-wide "roll-up" measures of patient safety that are continually updated and are made transparent to the organization and its customers.*
- ***Changing the Environment, Policies, and Culture:*** *Commit to establish and maintain an environment that is respectful, fair, and just for all who experience avoidable harm : the patients, their families, and the staff.*
- ***Learning… Starting with the Board:*** *Develop your capability as a board. Learn about how "best in the world" boards work with executive and MD leaders to reduce harm. Set an expectation for similar education and training for all.*
- ***Establishing Executive Accountability:*** *Oversee the effective execution of a plan to achieve your aims to reduce harm including executive team accountability for clear quality improvement targets.*

Perceiving the challenges

- A survey, carried out in the US[21], by Board chairs, showed that 66% perceived quality within their hospital to be better or much better than average, whereas only 1% perceived it to be worse or much worse than average.
- The same survey, carried out in the UK[22], comes to a similar conclusion : only 2% of Board chairs perceive quality of care to be worse than average in their hospital.
- Generally, boards perceive quality in their hospital much more optimistically than CEOS or nursing leaders[10].

Survey, US, Board chairs

Governance practice		Process of care	Risk-Adj. Mortality
Having a single board committee that focuses exclusively on quality			
(57.6% of yes)	**Yes**	83.8%*	6.2%*
	No	80.2%*	7.9%*
The following indicators are included in the performance monitoring dashboard			
Clinical quality : internal data			
(85.9% of yes)	**Yes**	83.2%*	6.5%*
	No	76.9%*	9.1%*
Clinical quality : National benchmarks			
(74.3% of yes)	**Yes**	83.6%*	6.4%*
	No	77.6%*	8.6%*

Jiang HJ, Lockee C, Bass K, Fraser I. Board oversight of quality: any differences in process of care and mortality? *J Healthc Manag*. Jan-Feb 2009;54(1):15-29.

Governance practice		Process of care	Risk-Adj. Mortality
Discussion of quality at Board meetings			
Most to all of board meetings have a specific item on the agenda devoted to quality (75.0% de Yes)	**Yes**	83.2%*	6.6%*
	No	79.9%*	7.7%*
More than 20% of board meeting time spent on quality (40.4% of yes)	**Yes**	83.6%*	6.4%
	No	82.0%*	7.0%
The executive team member's performance evaluation includes measures for quality and patient safety (71.9% of yes)	**Yes**	83.1%*	6.6%*
	No	80.4%*	7.6%*
Policy, goals and agenda setting			
The board establishes strategic goals for quality improvement (80.0% of yes)	**Yes**	82.8%*	6.6%*
	No	80.3%*	7.9%*

Jiang HJ, Lockee C, Bass K, Fraser I. Board oversight of quality: any differences in process of care and mortality? *J Healthc Manag*. Jan-Feb 2009;54(1):15-29.

Governance Institute Survey, 2007

Governance practice		Process of care	Risk-Adjusted Mortality
The board has a standing quality committee			
(65.2% de Yes)	**Yes**	90.8%*	4.4%*
	No	87.0%*	4.9%*
At most board meetings, devotes a significant amount of time to quality issues/discussion			
(68.5% de Yes)	**Yes**	83.6%*	4.4%*
	No	82.0%*	4.9%*

Jiang HJ, Lockee C, Fraser I. Enhancing board oversight on quality of hospital care: an agency theory perspective. *Health Care Manage Rev* 2012;37(2):144-53.

Governance Institute Survey, 2007

Unadjusted comparison of responses between top- and bottom-performing hospitals	Nat. Averg	Top perf†	Botto m perf†	P-value*
Quality performance is on the agenda at every board meeting	63%	75%	47%	<0.001
Financial Performance is on the agenda at every board meeting	93%	91%	94%	0.25
At least 20% of board time is spent on issues of clinical quality	42%	52%	34%	0.001
At least 20% of board time is spent on issues of financial performance	45%	35%	58%	<0.001
Board has a quality subcommittee	59%	75%	35%	<0.001
Subcommittee reports to full Board at every meeting	64%	67%	53%	0.03

Jha A, Epstein A. Hospital governance and the quality of care. *Health Aff (Millwood).* Jan-Feb 2010;29(1):182-187.

	National Average	Top Hospitals†	Bottom Hospitals†	P-value*
The Board Chair reports that the Board:				
Has at least moderate expertise in quality of care	**74%**	87%	64%	<0.001
Expertise in clinical quality at least moderately important in selecting new members	**43%**	51%	35%	0.003
Has a formal training program for the board that covers clinical quality	**32%**	50%	19%	<0.001
Would find additional training in quality at least moderately useful	**79%**	81%	79%	0.63
The Board Chair reports that:				
Quality of care is one of the two biggest priorities for board oversight	**52%**	72%	32%	<0.001
Quality of care is one of the two biggest priorities for CEO evaluation	**44%**	62%	24%	<0.001
The Board is one of the two biggest influences in quality of care delivered	**20%**	36%	11%	<0.001
The CEO is one of the two biggest influences in quality of care delivered	**69%**	64%	74%	0.03

Jha, A., & Epstein, A. Hospital Governance And The Quality Of Care. *Health Affairs, 29*(1), 182-187.

Attention is the currency of leadership

Institute *for* Healthcare Improvement

This presenter has nothing to disclose

Engaging Middle Managers

Manager, noun

- *Textbook Definition*: An individual who is in charge of a certain group of tasks, or a certain subset of a company. A manager often has a staff of people who report to him or her.
- *Modern Translation*: An individual who races through the halls in a frantic attempt to make the next meeting on time while also answering e-mails on his or her mobile device.

Discussion

- How are middle managers engaged in patient safety in your organization?
- If not, why not?

"Top management can spend all their time creating strategy, but without someone there to implement it, where are you at the end of the day?“

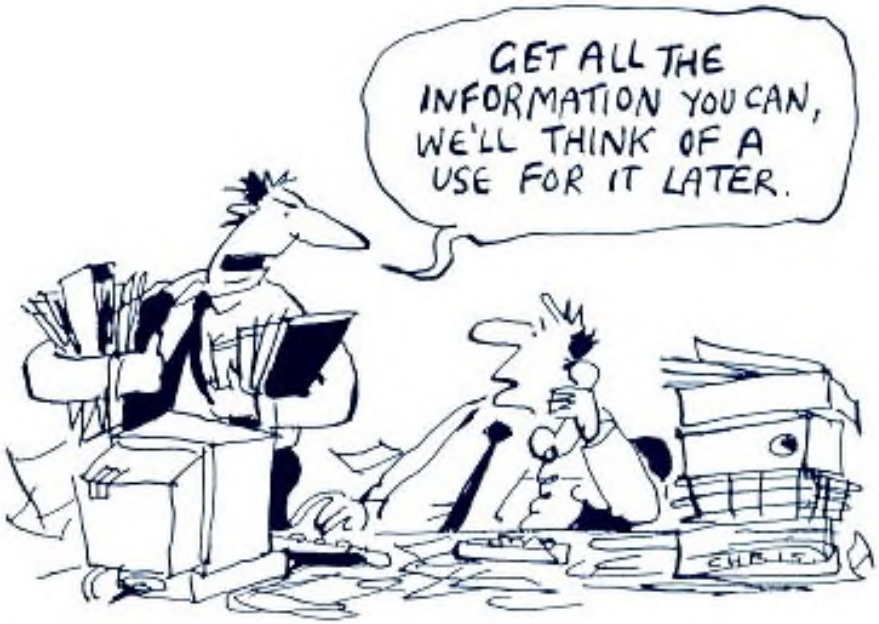
Thomas Colligan Wharton Executive Education

Why Middle Managers?

- They play a key role in developing organisational culture
- They set the culture in their microsystem
- They have a role in supporting and empowering their teams in improvement
- They have wide remits with responsibility for delivery of targets

Observations of Middle Managers

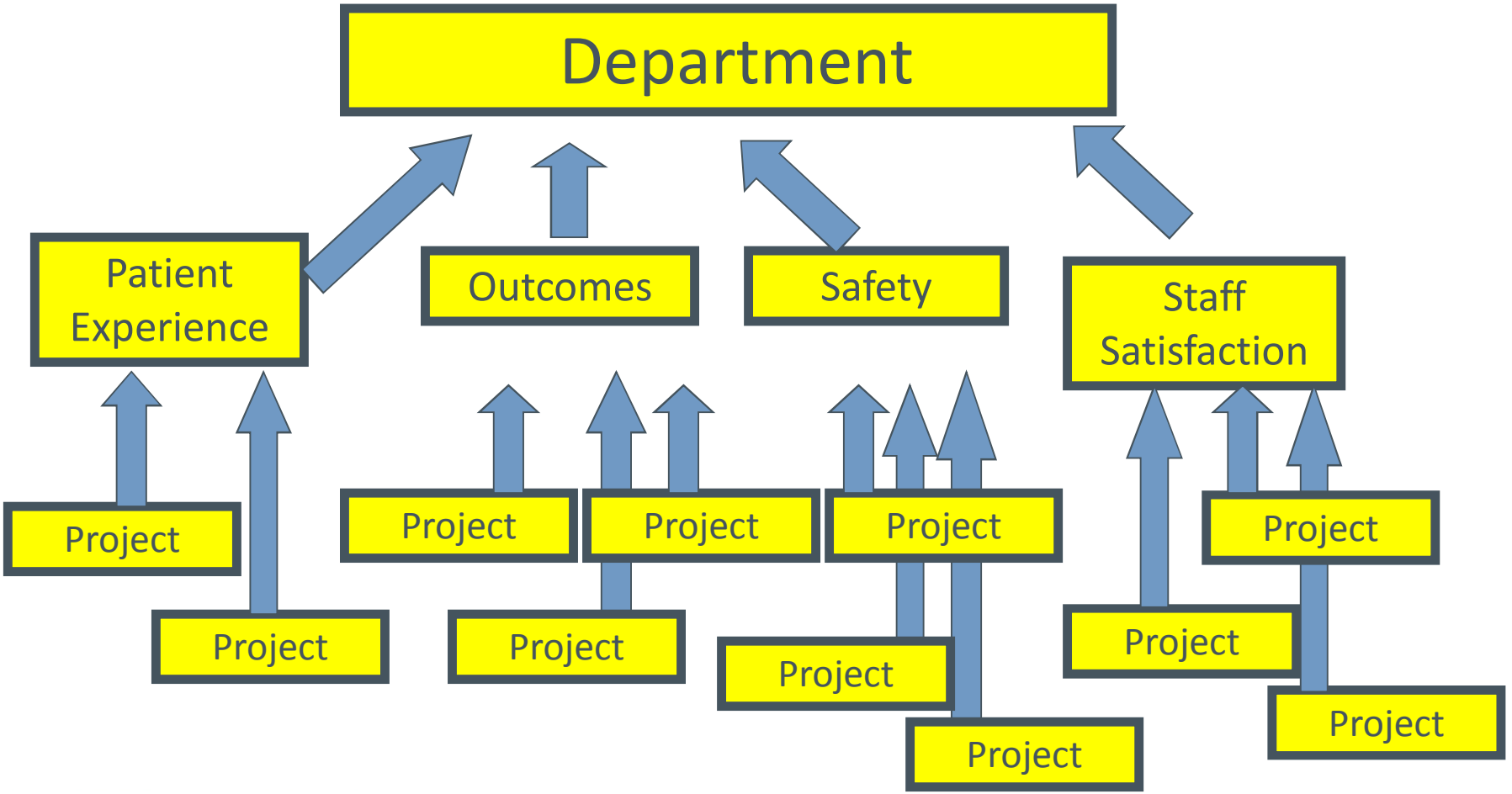
Information overload



Observations of Middle Managers

- Focus: “What am I being evaluated on?”
  - Productivity
  - Budget
  - “Keep the trains running on time”

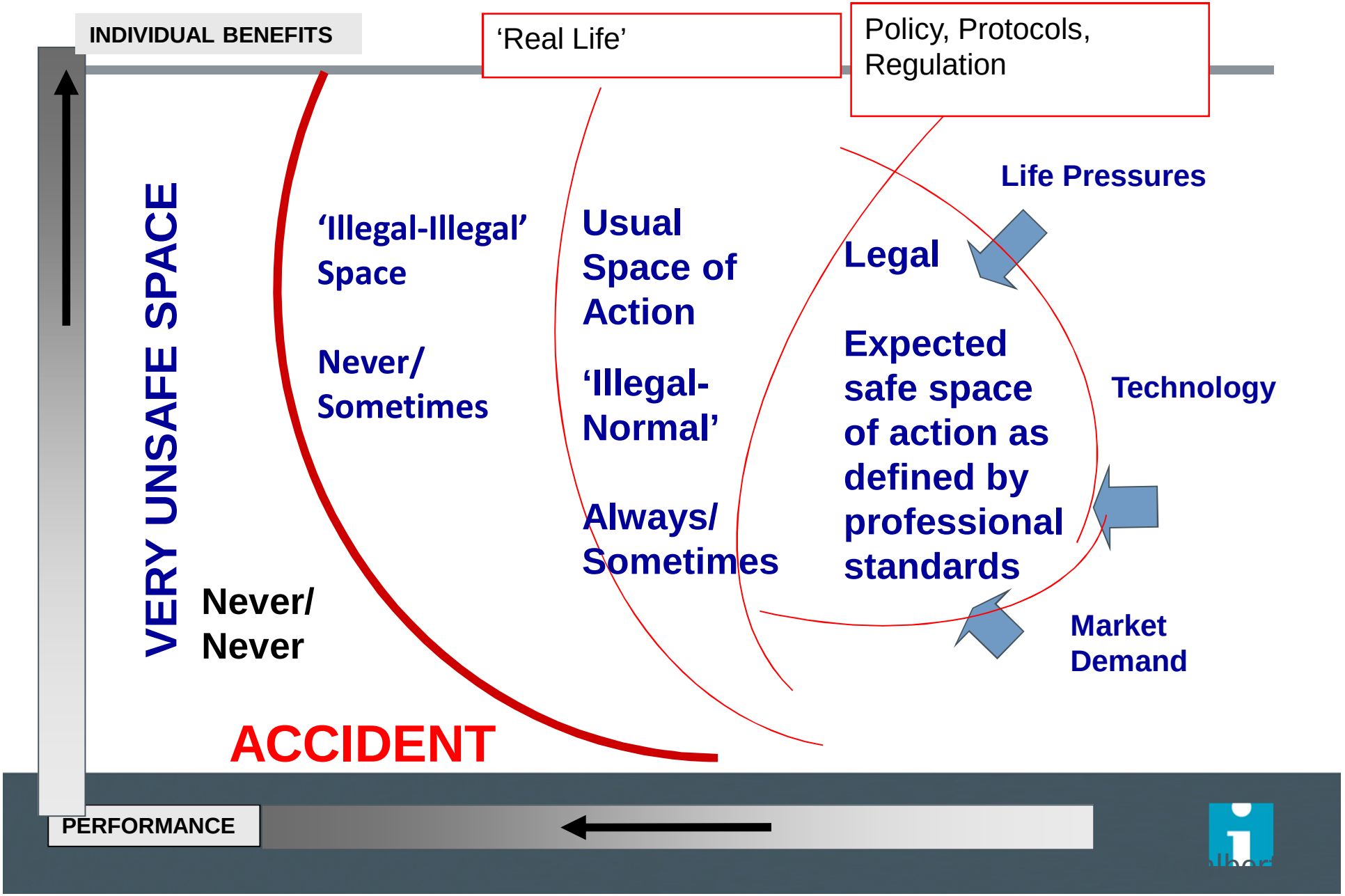
Lack of Expertise in Managing a Portfolio



Observations of Middle Managers

- Change is difficult: no one wants to take a risk
  - Managers are risk averse
  - "Most people are more comfortable with old problems than with new solutions." John Maxwell
- As with most of health care: they do not receive training in quality improvement techniques

Systemic migration to boundaries

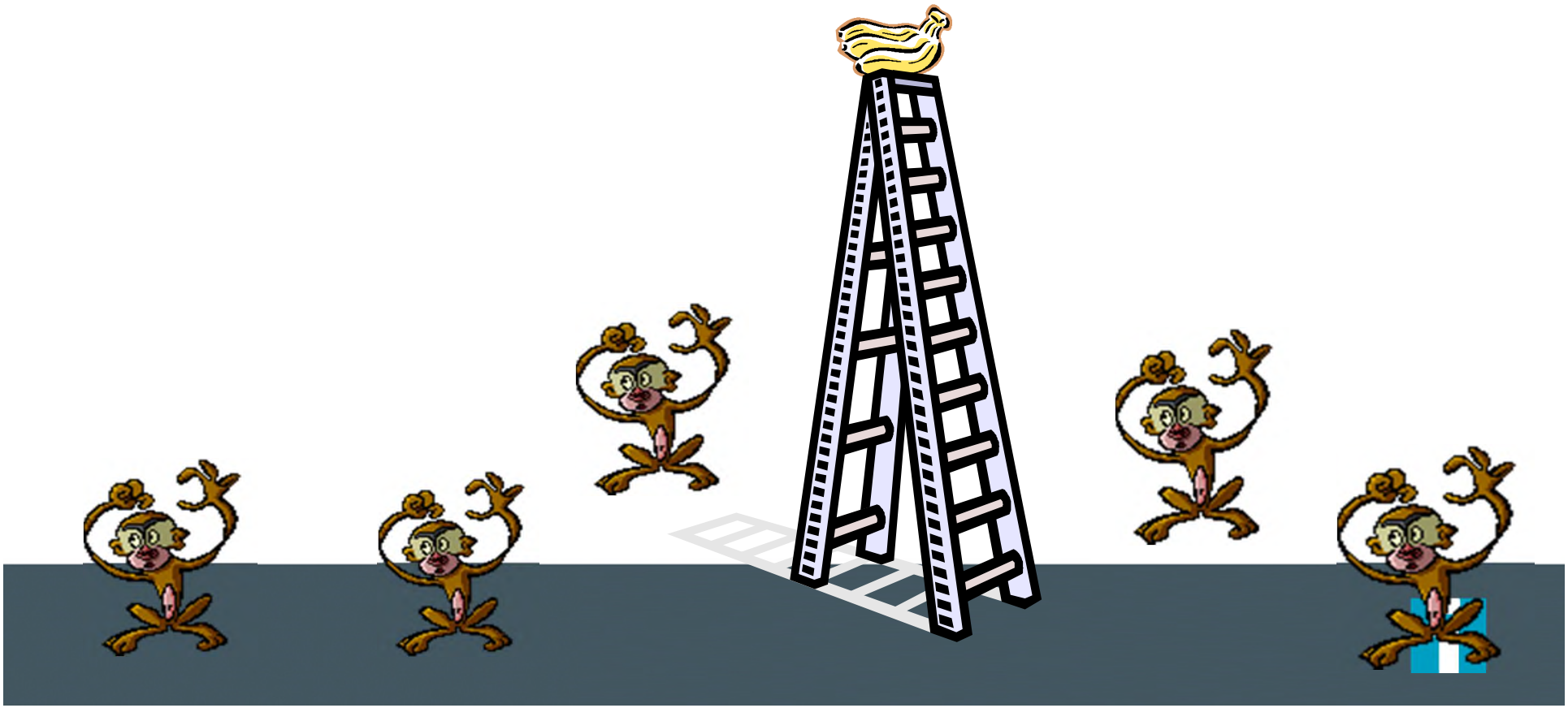


Why is this relevant?

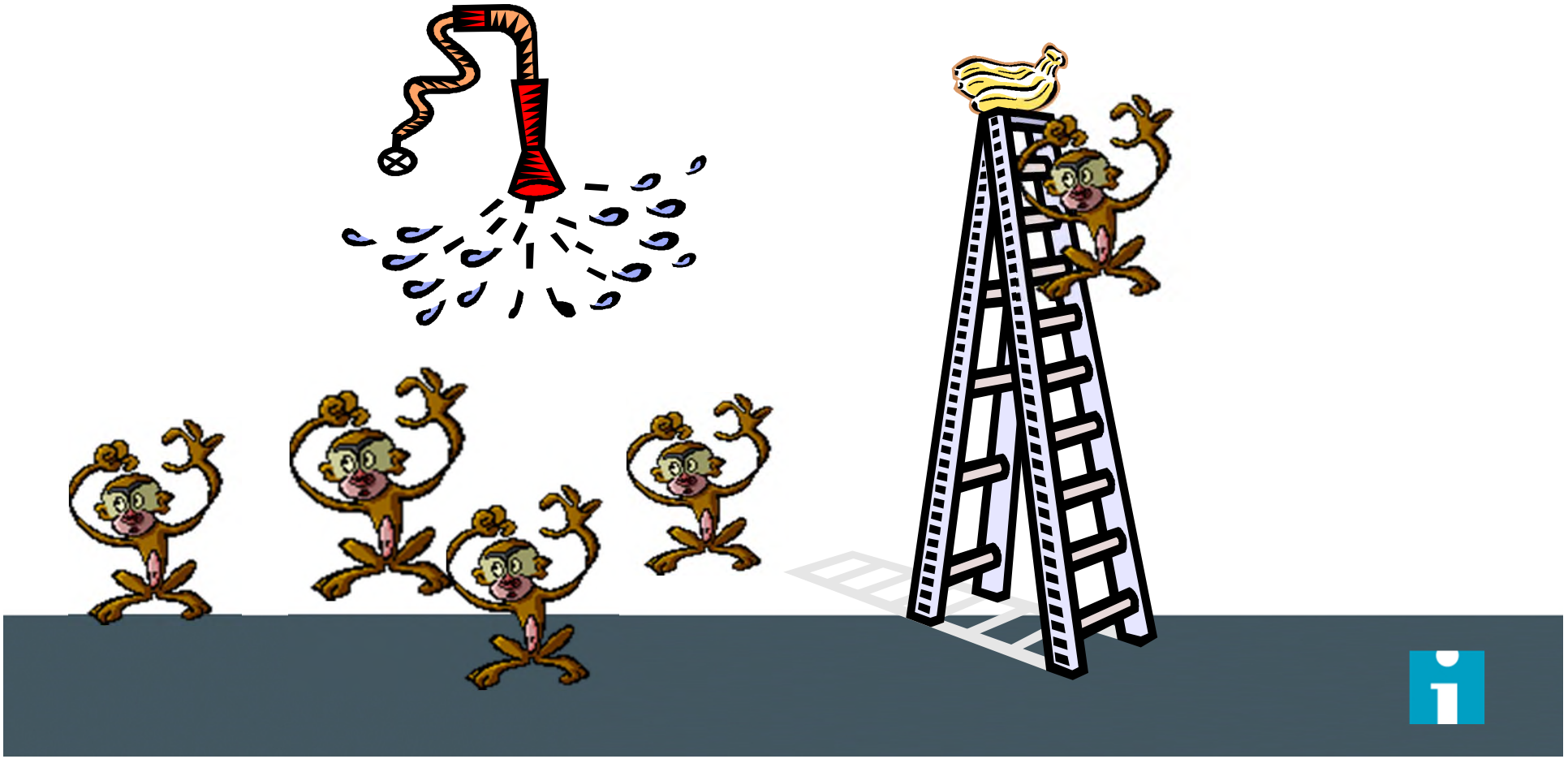
- So much work is carried outside of the safe space
- Managers need to learn how to see it
- When things go wrong, they need to understand the system versus individual dimension
- This all impacts on the culture in which care is given


How is a paradigm formed?

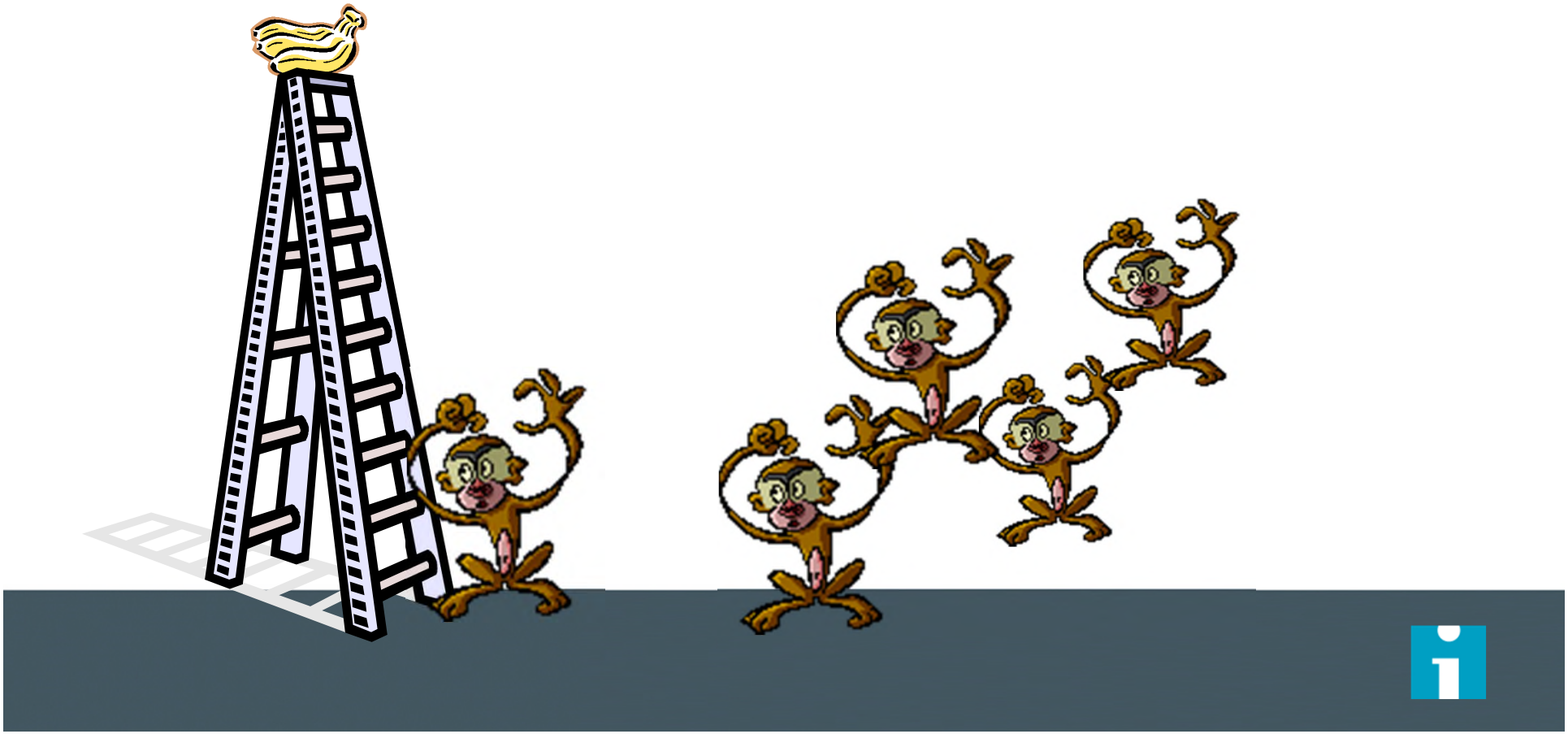
A group of scientists placed 5 monkeys in a cage and in the middle, a ladder with bananas on the top



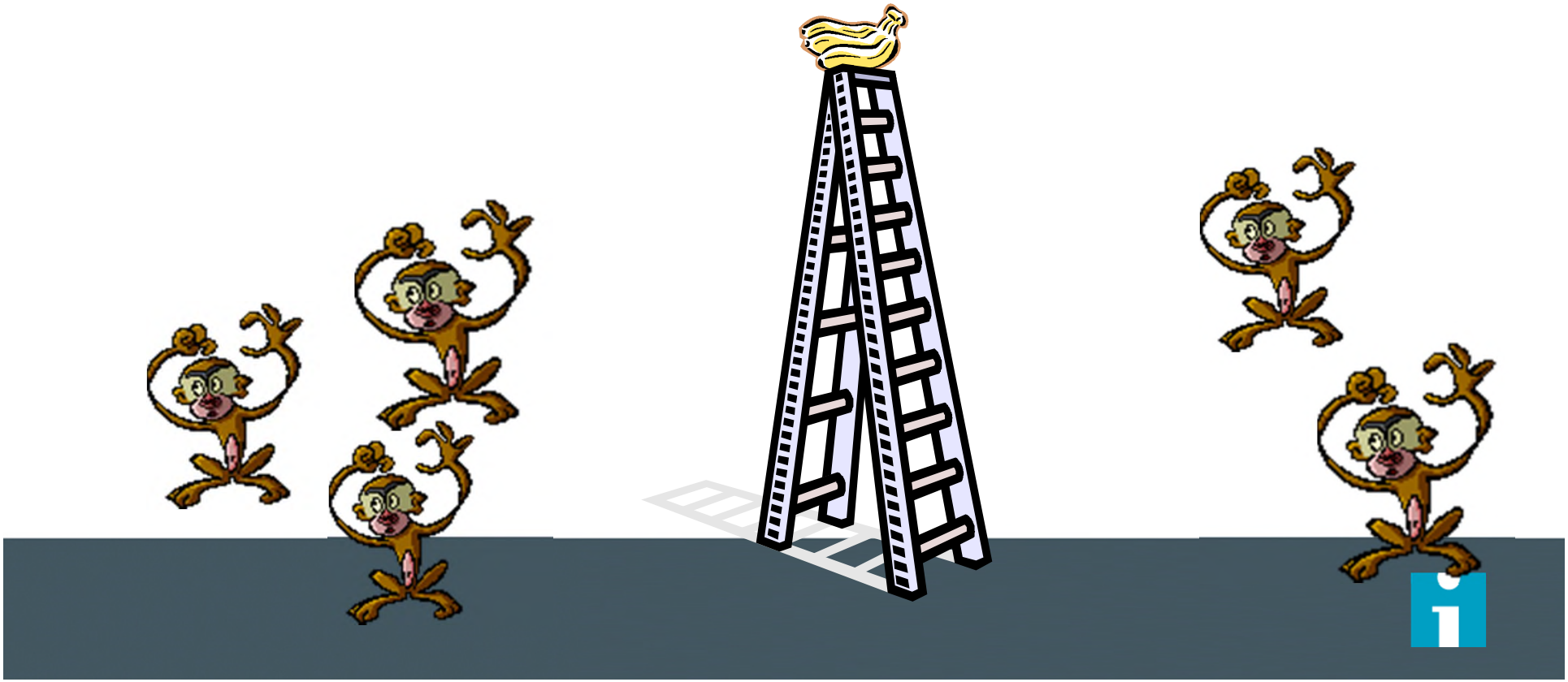
Every time a monkey went up the ladder, the scientists soaked the rest of the monkeys with cold water



After a while, every time a monkey went up the ladder, the others beat up the one on the ladder

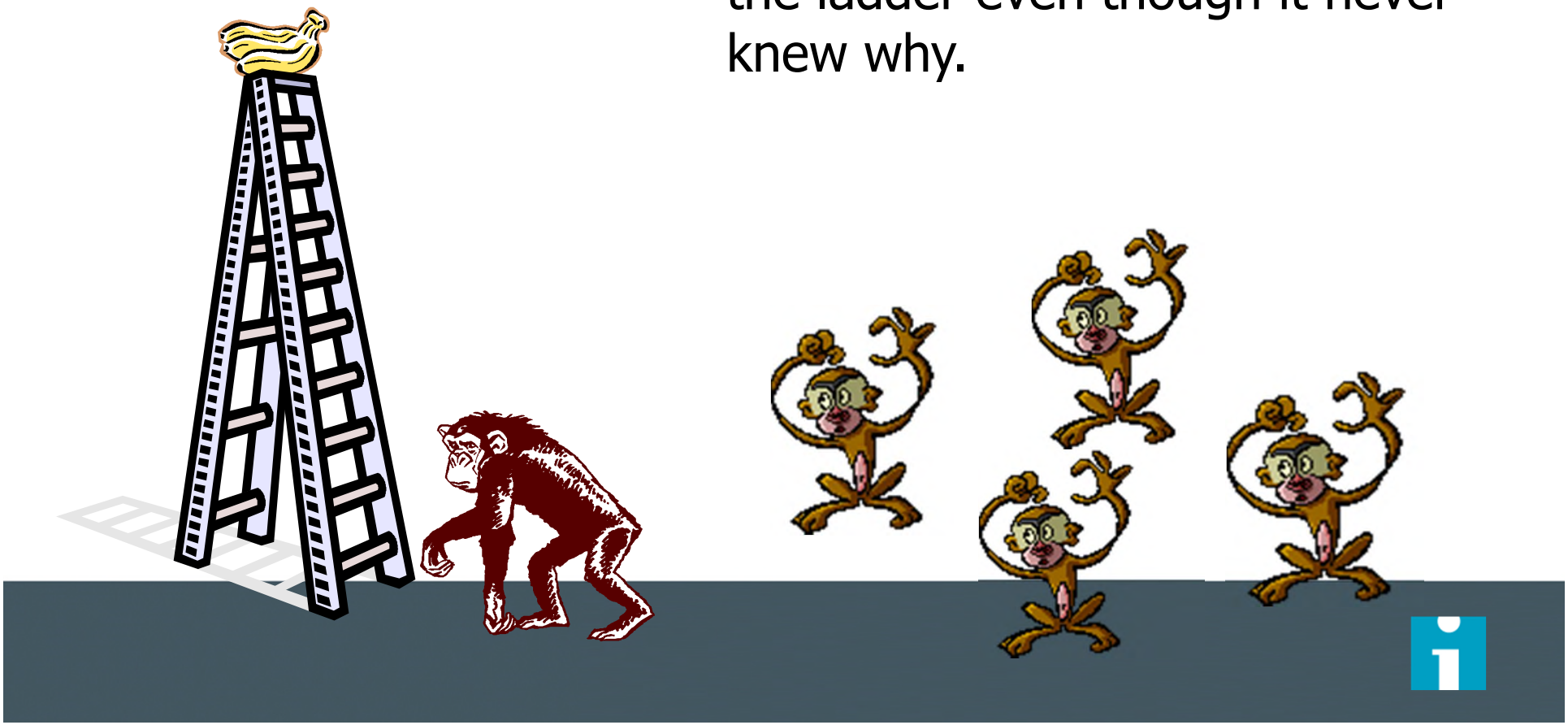


After some time, no monkey dare to go up the ladder regardless of the temptation

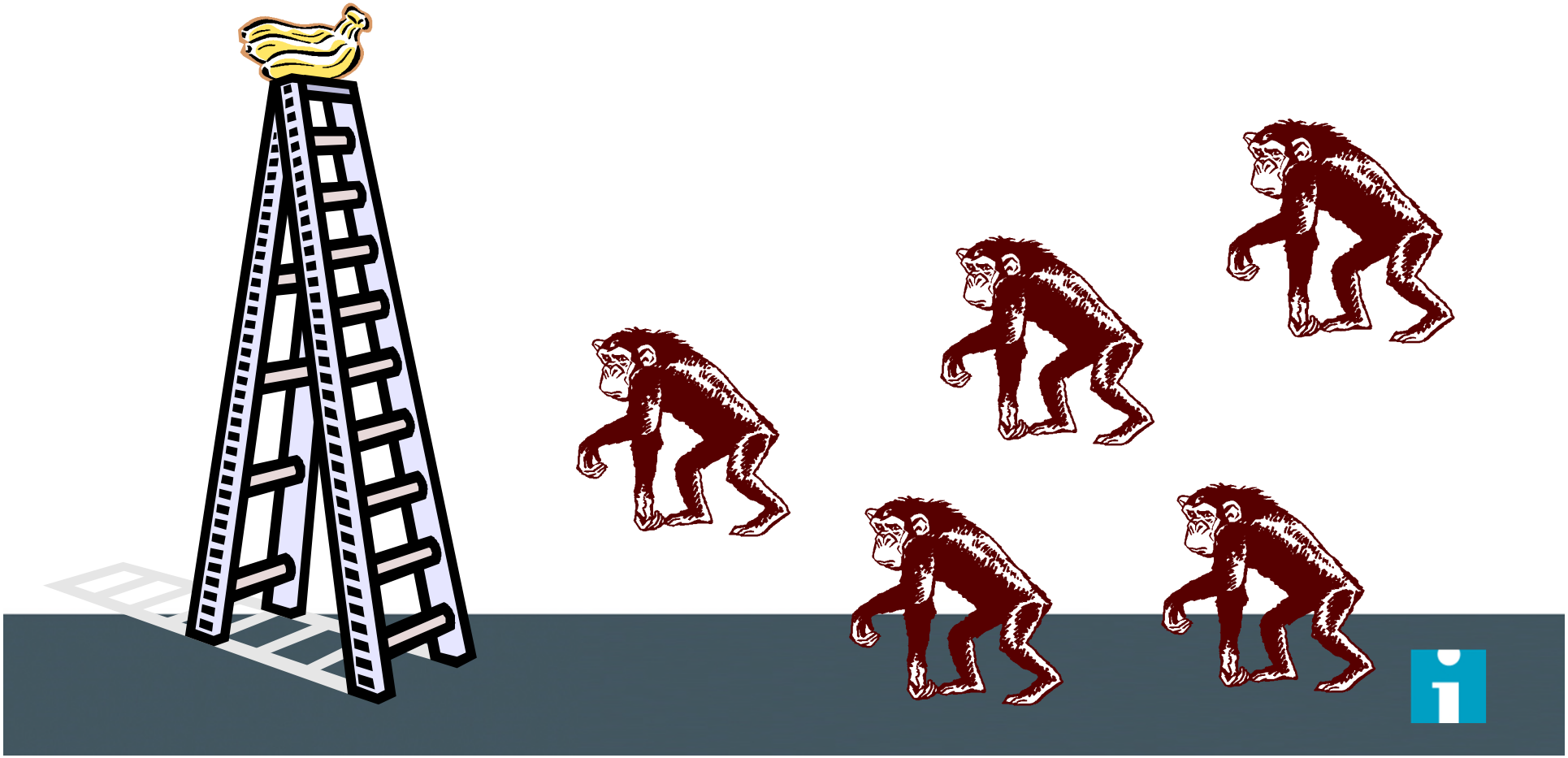


Scientists then decided to substitute one of the monkeys. The first thing this new monkey did was to go up the ladder. Immediately the other monkeys beat him up.

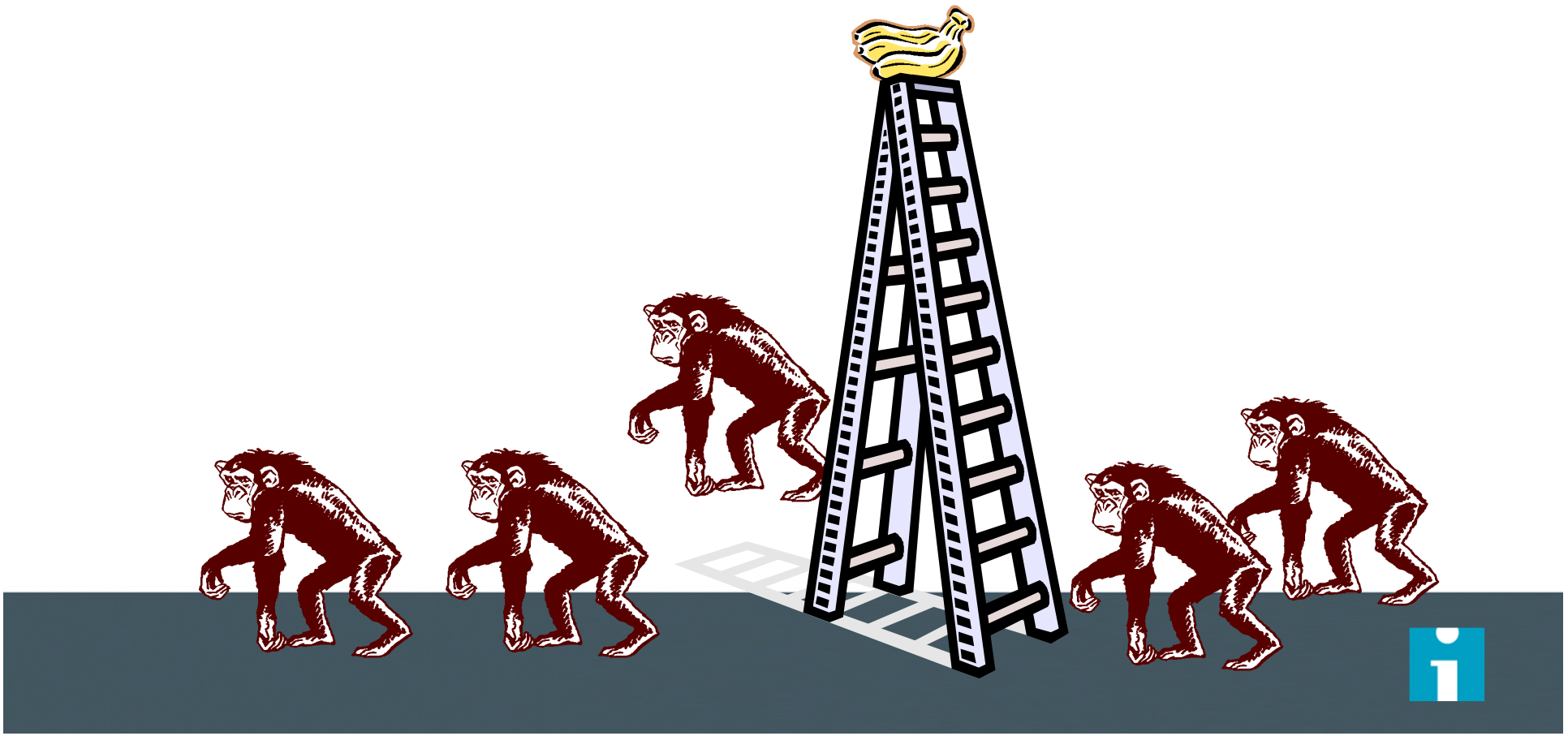
After several beatings, the new member learned not to climb the ladder even though it never knew why.



A second monkey was substituted and the same occurred. The first monkey participated on the beating for the second monkey. A third monkey was changed and the same was repeated (beating). The fourth was substituted and the beating was repeated and finally the fifth monkey was replaced



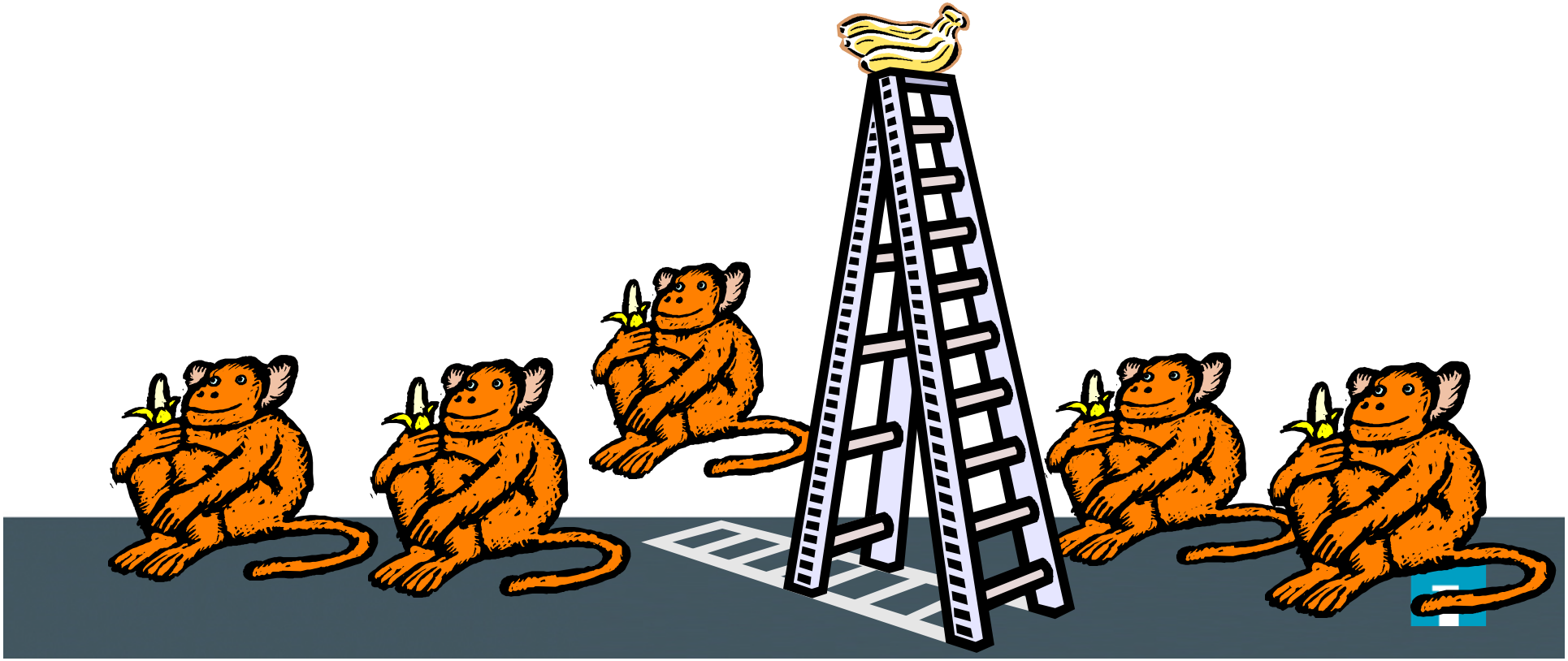
What was left was a group of five monkeys that even though never received a cold shower, continued to beat up any monkey who attempted to climb the ladder



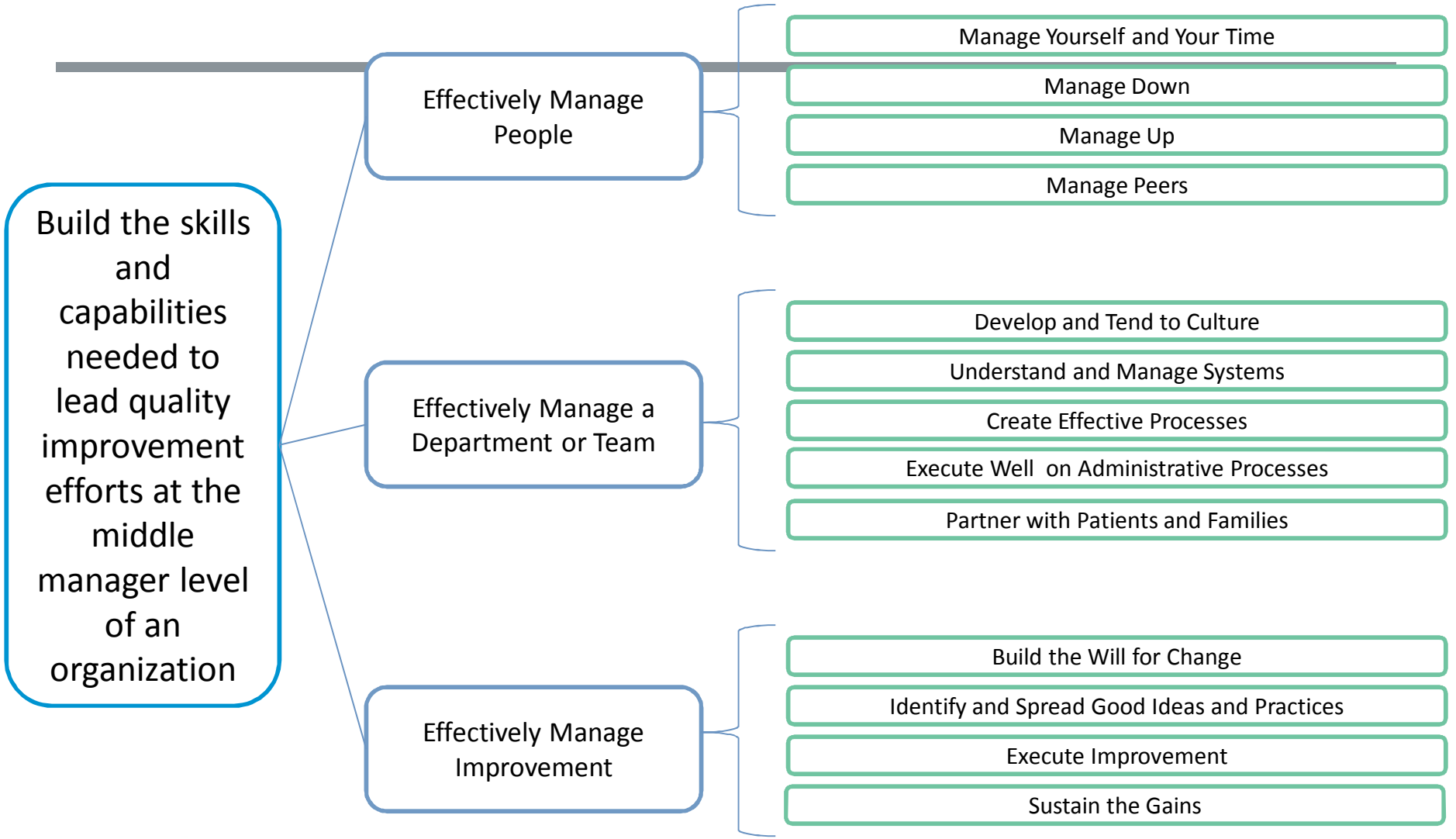
If it was possible to ask the monkeys why they would beat up all those who attempted to go up the ladder….. I bet you the answer would be….

"I don't know – that's how things are done around here"

Does it sounds familiar?



Leading Quality Improvement: Essentials for Managers Driver Diagram



Mid-Level Manager Development Options

- Lead a project with a capable mentor
- Lead a project in a collaborative
- Attend seminars and conferences
- Lead an improvement workshop for direct reports
- Join an internal interest / study group
- Self study / e-learning modules
- Rotation into the high performer improvement team

Exercise

- Discuss how you engage middle managers in your organization/department/area of responsibility

Middle Manager Self Assessment Tool

Secondary Driver	Early	Medium	Advanced	Opportunities
Effectively Manage Yourself and Your Day (Ideal: 25%)	Most time is spent fighting fires, attending meetings, and email.	A percentage of time is spent on strategic and proactive planning. The rest is spent doing “early” activities.	Most of day is spent in high-leverage activities, strategic activities, with a minimal time for non-value added activities. You spent approximately the suggested percentage of time managing yourself, down, up, and peers.	
Effectively Manage Down				
Effectively Manage Up				
Effectively Manage Peers				
Develop and Tend to Culture				
Understand and Manage Systems				
Create Effective Processes				
Execute Well on Administrative Processes				
Partnering with Patients				
Build the Will for Change				
Identify and Spread Good Ideas and Practices				
Execute Improvement				
Sustain the Gains				

A Checklist for Middle Managers to Help Sustain Patient Safety Performance Over Time

Daily

- ☐ Model the safety-enhancing behaviors that you expect of your staff (e.g., admitting faults, providing support, challenging others)
- ☐ Work to create a "Just Culture" in which individuals that make errors are treated fairly, unsafe behavior is addressed, and reckless behavior is appropriately disciplined
- ☐ Maintain "zero tolerance" for "disruptive behavior" (i.e., behavior that threatens an environment of psychological safety for ALL staff/physicians)
- ☐ Observe and coach staff/physicians on patient safety behaviors/actions

Weekly

- ☐ Review complaints and grievances to identify and address patient safety concerns
- ☐ Start meetings with a safety message
- ☐ Share patient safety data, stories, and other information with frontline staff/physicians

Monthly

- ☐ Recognize and reward frontline staff/physicians for working safely and reporting responsibly
- ☐ Perform proactive hazard identification (this is a formal "safety search" looking for issues related to facilities, equipment, supplies, staffing knowledge & competence, communications, workflow and the like)

Take a moment to reflect on the your own work. What will you incorporate from this session into your plans?

Institute for Healthcare Improvement

This presenter has nothing to disclose

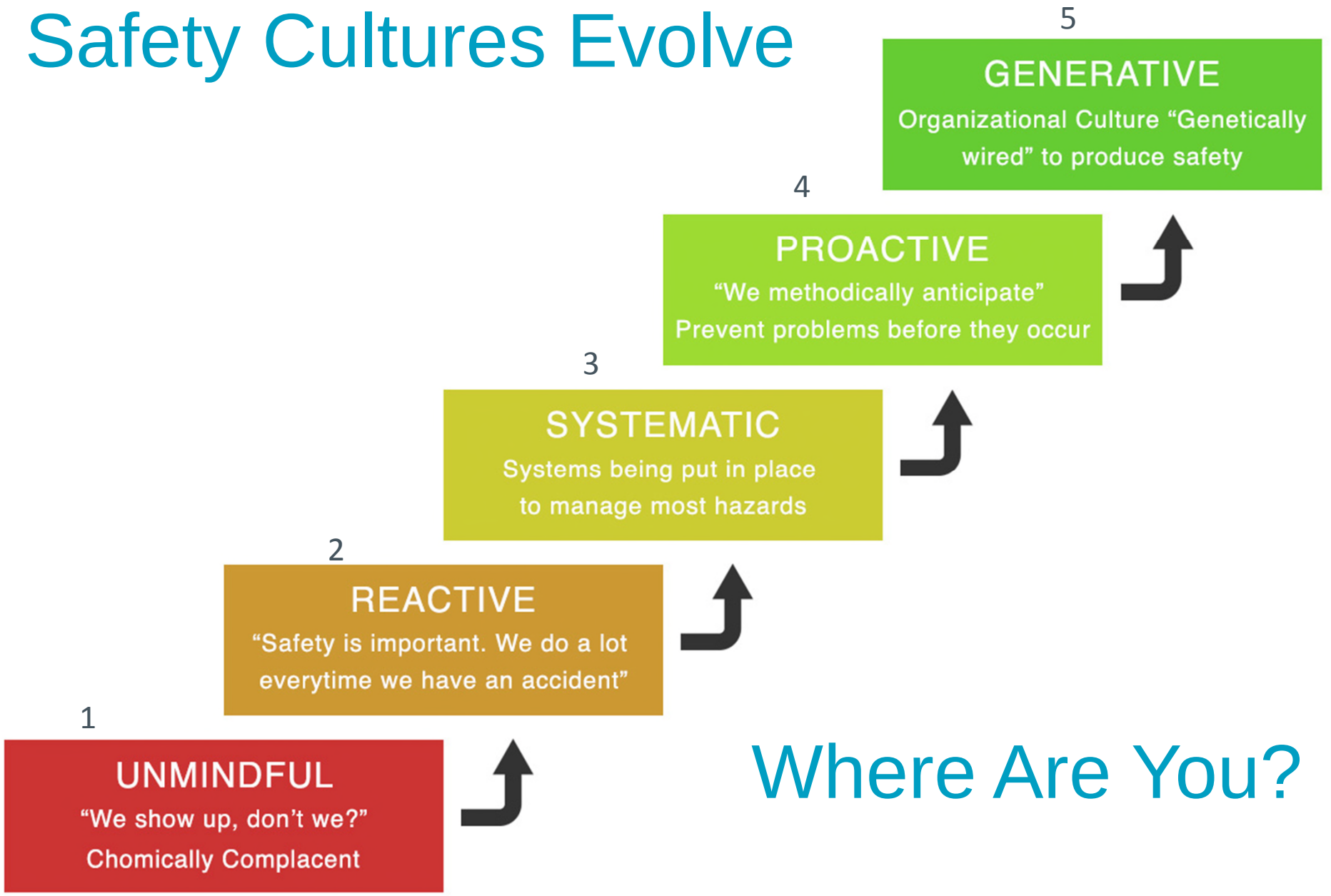
What Great Teams Do Well

Attribution for these slides to: Safe and Reliable Care LLC and Doug Salvador, MD

SocioTechnical Framework

- Patient & Family Centered Care
- Leadership – Senior and Clinical
- Effective Teamwork
- Psychological Safety
- Organizational Fairness
- Reliable Processes of Care
- Learning System – Improvement

Safety Cultures Evolve



Where Are You?

Attr: Patrick Hudson, Univ. of Leiden

Effective Teamwork

GENERATIVE
Organization wired for safety and improvement

PROACTIVE
Playing offense - thinking ahead, anticipating, solving problems

SYSTEMATIC
Systems in place to manage hazards

REACTIVE
Playing defense – reacting to events

UNMINDFUL
No awareness of safety culture

- Teamwork and continuous learning deeply embedded and central to our culture
- Teamwork methodically taught and modeled across the organization
- Training and tools available, partial implementation
- Focus on teamwork awareness/training in response to adverse events
- If people would just do their jobs we'd have no problems

Teams

What teams do:	The associated behaviors:
Plan Forward	Brief (huddle, pause, timeout, check-in)
Reflect Back	Debrief
Communicate Clearly	Structured Communication SBAR and Repeat-Back
Manage Conflict	Critical Language

Question:

- Of the four critical elements in improving teamwork, how many are you currently working on?
  - A. Zero
  - B. One
  - C. Two
  - D. Three
  - E. All four

Briefings

Briefings: Rounding, Pause, Timeout, Checklist, Huddles

4 COMPONENTS

- Everyone knows the **game plan**
- **Psychological Safety** is ensured
- **Norms of conduct** are discussed
- **Expectation of excellence** is set

Question:

- Based on what you see in your own work environment, what percentage of nurses find it difficult to talk to a doctor when a patient care problem arises?
  - A. 10%
  - B. 25%
  - C. 50%
  - D. 75%

Critical Language

- We are going to stop every time and take one minute to make sure we're doing the right thing.
- **"I just need a little clarity."**
- "I am concerned or unclear. This is unsafe."
- CUS: Concerned, uncomfortable, safety issue

Debriefing – Linking teamwork and Improvement

- What did we do well ?
- What did we learn so we can do it better the next time?
- What got in the way that needs to be fixed ?

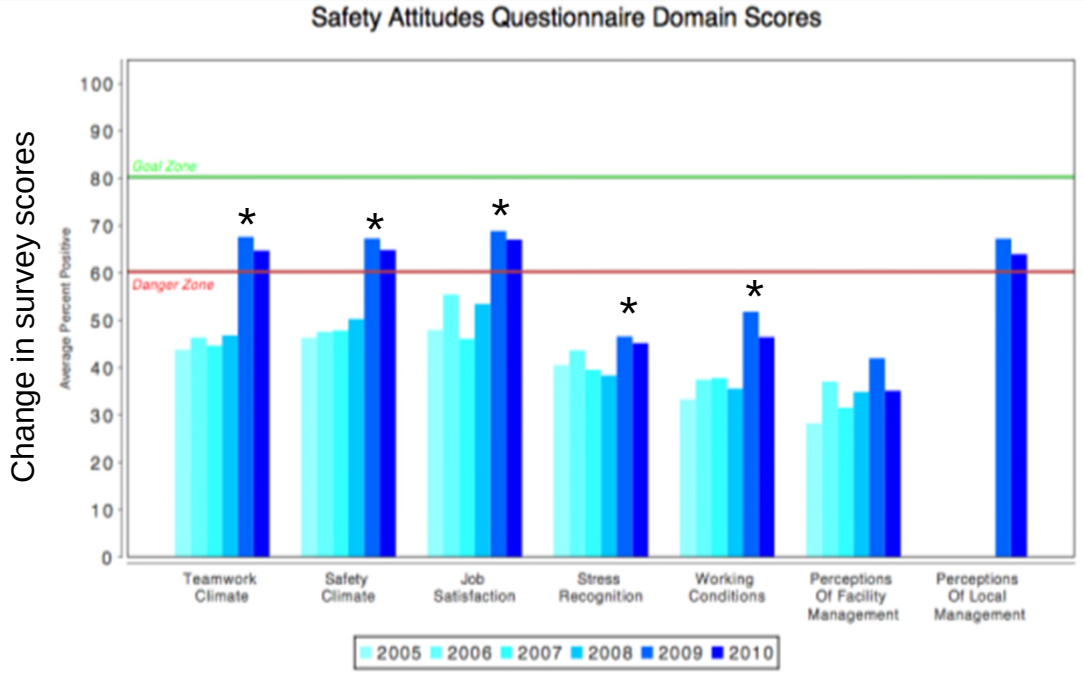
Question:

- What is the influence of teamwork on clinical outcomes?
  - A. Improved culture is useful but not required for better clinical outcomes
  - B. You can not get great clinical outcomes without improving teamwork
  - C. Teamwork within my own profession is important but is not that important between professionals

The Impact Of Acting on Safety Culture Data In Rhode Island ICUs

Rhode Island Quality Institute

ICUs that DEBRIEFED	ICUs that did not DEBRIEF
Reflected on culture scores and took action 1. >15% culture score increase in 5/7 domains 2. >10% BSI reduction 3. >15% VAP reduction	Did not reflect on SAQ scores nor take action 1. 5% culture score drop in 5/7 domains 2. No reduction in BSIs 3. 5% increase in VAPs

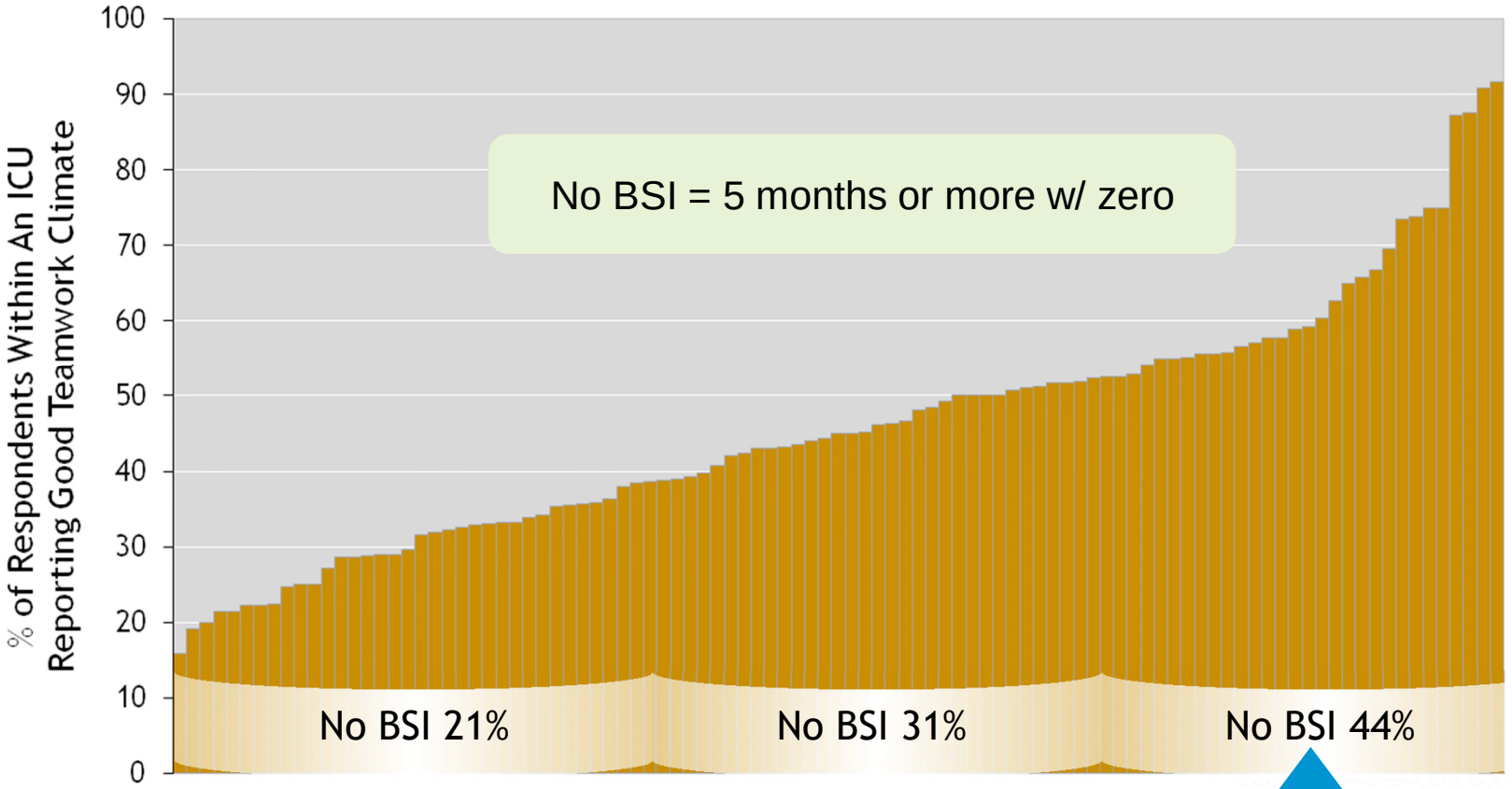


Attribution: M. Vigorito-Cornell et al. *Jt Comm J Qual Patient Saf.* 2011 Nov;37(11):509-14

Effective Leadership

- Set a positive active tone
- Think out loud to share the plan – common mental model
- Continuously invite people into the conversation for their expertise and concern
- Use their names- create a sense of belonging

Teamwork Climate Across Michigan ICUs



The strongest predictor of clinical excellence: caregivers feel comfortable speaking up if they perceive a problem with patient care

Attribution Bryan Sexton

Effective Leaders

- Create psychological safety
- Calibrate drift to minimize shortcuts and workarounds
- Drive effective team performance
- Model the values and behaviors that create value and reduce risk

MASSACHUSETTS GENERAL HOSPITAL
IMAGING

OBSERVATION PAGE

* Complete all fields on this form
* If not applicable, leave rating blank
* Write a short narrative of what you saw

Observer Name:

Observation Date (MM-DD-YY):

Area Observed (check one):

- ❑ Breast IR
- ❑ Abd IR
- ❑ Chest IR
- ❑ Neuro IR
- ❑ Bone/MSK IR
- ❑ Vascular IR

Observation Type (check one):

- ❑ Conversation between providers
- ❑ Rounds
- ❑ Conversation with patient/family
- ❑ General Activity
- ❑ Procedure

Behaviors

Rate usage of special behaviors.

	Very Ineffective ⟷ Very Effective				
Briefing	1	2	3	4	5
Inquiry & Rebriefing	1	2	3	4	5
Assertion & Challenge	1	2	3	4	5
Structured Communication	1	2	3	4	5
Closing the Loop	1	2	3	4	5
Debriefing	1	2	3	4	5

Descriptive Narrative

Behaviors Guidelines

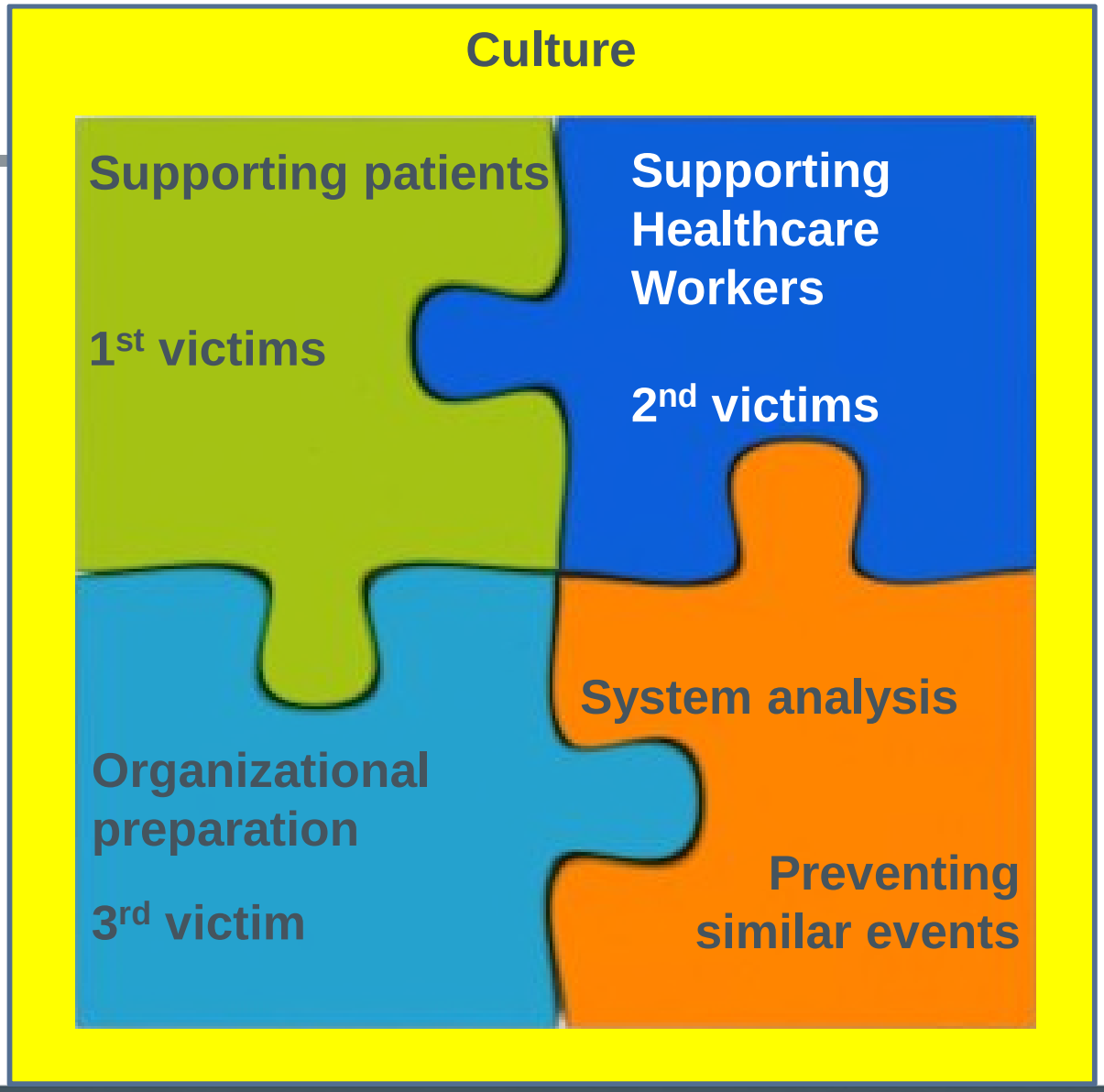
Item	Definition	Rating = 1 Examples	Rating = 2 Examples	Rating = 3 Examples	Rating = 4 Examples	Rating = 5 Examples
Briefing & Rebriefing	Formal task/actions briefing at the start of a procedure. Formal / distinct re-briefing when conditions change in the midst of a procedure.	Formal briefing does not occur when appropriate (e.g., start) Lack of game plan and discussions	Formal briefing is disorganized Components of formal briefing are incomplete Game plan is not always clear to all.	Names/roles & procedure verified All know game plan Details, critical steps & possible problems raised & re-addressed	Importance of briefing emphasized All know the game plan all the time	Looks good All components seen Want to take a video
Closing the Loop	Confirmation that information was received by repeating the content of the information back to the sender (i.e., read back and hear back).	Requests, orders & instructions never repeated Information is confused	Requests, orders, & instructions seldom repeated even though it is pertinent	Pertinent requests, orders & instructions are repeated back to the sender when recev'd	In addition to closing the loop, members note its importance	Looks good All components seen Want to take a video
Debriefing	Formal debriefing following a procedure that covers what went well, what went not so well, and what might be done differently in the future.	Debriefing does not occur when appropriate (e.g., end of procedure)	Debriefing does not cover relevant questions Debriefing does not yield clear takeaways	Debriefing held at end of procedure Debriefing generates clear takeaways	Debriefing exceptionally structured Members comment on importance of debriefing	Looks good All components seen Want to take a video

How are you doing? What is the plan?

What teams do:	The associated behaviors:
Plan Forward	Brief (huddle, pause, timeout, check-in)
Reflect Back	Debrief
Communicate Clearly	Structured Communication SBAR and Repeat-Back
Manage Conflict	Critical Language

JUST CULTURE
THE INCIDENT DECISION TREE

The constructive and respectful management of adverse events and errors



Patient Safety Culture

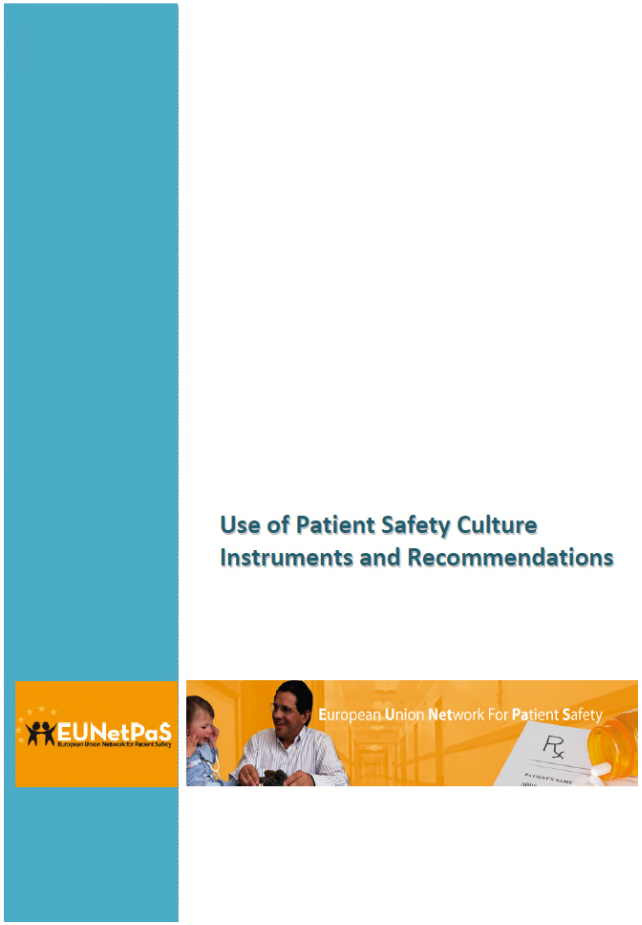
- ***'An integrated pattern of individual and organisational behaviour, based upon shared beliefs and values that continuously seeks to minimise patient harm, which may result from the processes of care delivery.'***

ESQH, 2006


Hello.
My Name is
CULTURE
strategy
Culture eats
strategy for lunch!

EUNetPaS : Recommendations for Patient Safety Assessment Instruments

- The ***"instrument criteria"*** to be an eligible candidate for the listof recommendable instruments :
  1. *The instrument must capture the definition of Patient Safety Culture*
  2. *The original instruments must have well-documented scientific properties (validated), and the instrument must have been translated into at least one european language and tested practically*
  3. *Be feasible in application (survey planning, data collection, data analysis, feedback etc.)*
  4. *Target as a minimum the clinical staff as informants (doctors/nurses/therapists/others)*
  5. *Be available in English*
  6. *Be free of charge and easily accessible, requiring no certification to be allowed to use it.*



The recommended instruments

EUNetPaS
European Union Network for Patient Safety


HOSPITAL SURVEY ON PATIENT SAFETY CULTURE

INSTRUCTIONS

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answ

- An incident is defined as any type of error, mistake, accident, accident or deviation, regardless of whether or not it results in patient harm.
- "Patient safety" is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.

SECTION A: Your Work Area/Unit

In this survey, think of your "unit" as the work area, department, or clinical area of the hospital where you spend most of your work time or provide most of your clinical services.

What is your primary work area or unit in this hospital? Mark ONE answer by filling in the circle.

- a. Many different hospital units/no specific unit
- b. Medicine (non-surgical)
- c. Surgery
- d. Obstetrics
- e. Pediatrics
- f. Emergency department
- g. Intensive care unit (any type)
- h. Psychiatry/mental health
- i. Rehabilitation
- j. Pharmacy
- k. Laboratory
- l. Radiology
- m. Anesthesiology
- n. Other, please specify:

Please indicate your agreement or disagreement with the following statements about your work area/unit. Mark your answer by filling in the circle.

Think about your hospital work area/unit...	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1. People support one another in this unit	①	②	③	④	⑤
2. We have enough staff to handle the workload	①	②	③	④	⑤
3. When a lot of work needs to be done quickly, we work together as a team to get the work done	①	②	③	④	⑤
4. In this unit, people treat each other with respect	①	②	③	④	⑤
5. Staff in this unit work longer hours than is best for patient care	①	②	③	④	⑤
6. We are actively doing things to improve patient safety	①	②	③	④	⑤
7. We use more agency/temporary staff than is best for patient care	①	②	③	④	⑤
8. Staff feel like their mistakes are held against them	①	②	③	④	⑤
9. Mistakes have led to positive changes here	①	②	③	④	⑤
10. It is just by chance that more serious mistakes don't happen around here	①	②	③	④	⑤
11. When one area in this unit gets really busy, others help out	①	②	③	④	⑤
12. When an event is reported, it feels like the person is being written up, not the problem	①	②	③	④	⑤

Manchester Patient Safety Framework (MaPSaF) – Acute

01. Commitment to overall continuous improvement

A — No resources are invested in the identification of problems or areas of good practice. If any auditing occurs it lacks structure and there is no response to what is discovered. Whatever protocols or policies exist are there to meet the organisation's statutory requirements and are not used, reviewed or updated.
Poor quality care is tolerated or ignored. This attitude is evident at Board level and throughout the organisation in the healthcare teams.

B — A continuous improvement framework is developed in response to specific directives/ national directives and does not reflect local needs. Little attempt is made to respond to any such findings. The bare minimum of protocols and policies exist and these are not up-to-date and untested unless an incident occurs that triggers their review. Development of new protocols and policies occurs in response to incidents and complaints.

C — Frontline staff are not engaged in the improvement process and they see it as a management activity that is externally driven.
Lots of auditing occurs but lacks an overall strategy linking with organisational or local needs. Staff are overloaded with protocols and policies (which are regularly reviewed/updated) that are rarely implemented.
Patients and the public may be involved in quality issues but this is lip service rather than real engagement.

D — There is a genuine desire and enthusiasm throughout the organisation for continuous improvement. It is recognised that continuous improvement is everyone's responsibility and that the whole organisation, including patients and the public, needs to be involved.
Such organisations aim to be centres of excellence and compare their performance against that of others. Clinicians are involved in, and have ownership of, the auditing process which leads to continuous improvement. Protocols and policies are developed, reviewed by staff and are used as the basis for care and service provision. Patients and public are formally involved in internal decisions – leading in a patient-centred service.

E — A culture of continuous improvement is embedded within the organisation and is integral to decision making at all levels. The organisation is a centre of excellence, continually assessing and comparing its performance against others both within and outside the health service. Teams design and conduct their own outcome focused audit programme in collaboration with patients and the public.
Staff are alert to potential safety risks. This means that over time the need for protocols and policies is reduced as evidence-based practice is second nature and patient safety is the concern of everyone's mind. Patients and the public are involved in a truly meaningful way with ongoing contribution and feedback.


Teamwork and Safety Climate Survey

MARKING INSTRUCTIONS

Please answer the following items with respect to your specific unit or clinical area. Choose your responses using the scale below:

TEAMWORK CLIMATE

SAFETY CLIMATE

Have you ever completed this survey before?

BACKGROUND INFORMATION

Position: (mark only one)

Mark your gender:

Thank you for completing the survey - your time and participation are greatly appreciated.

SERIAL

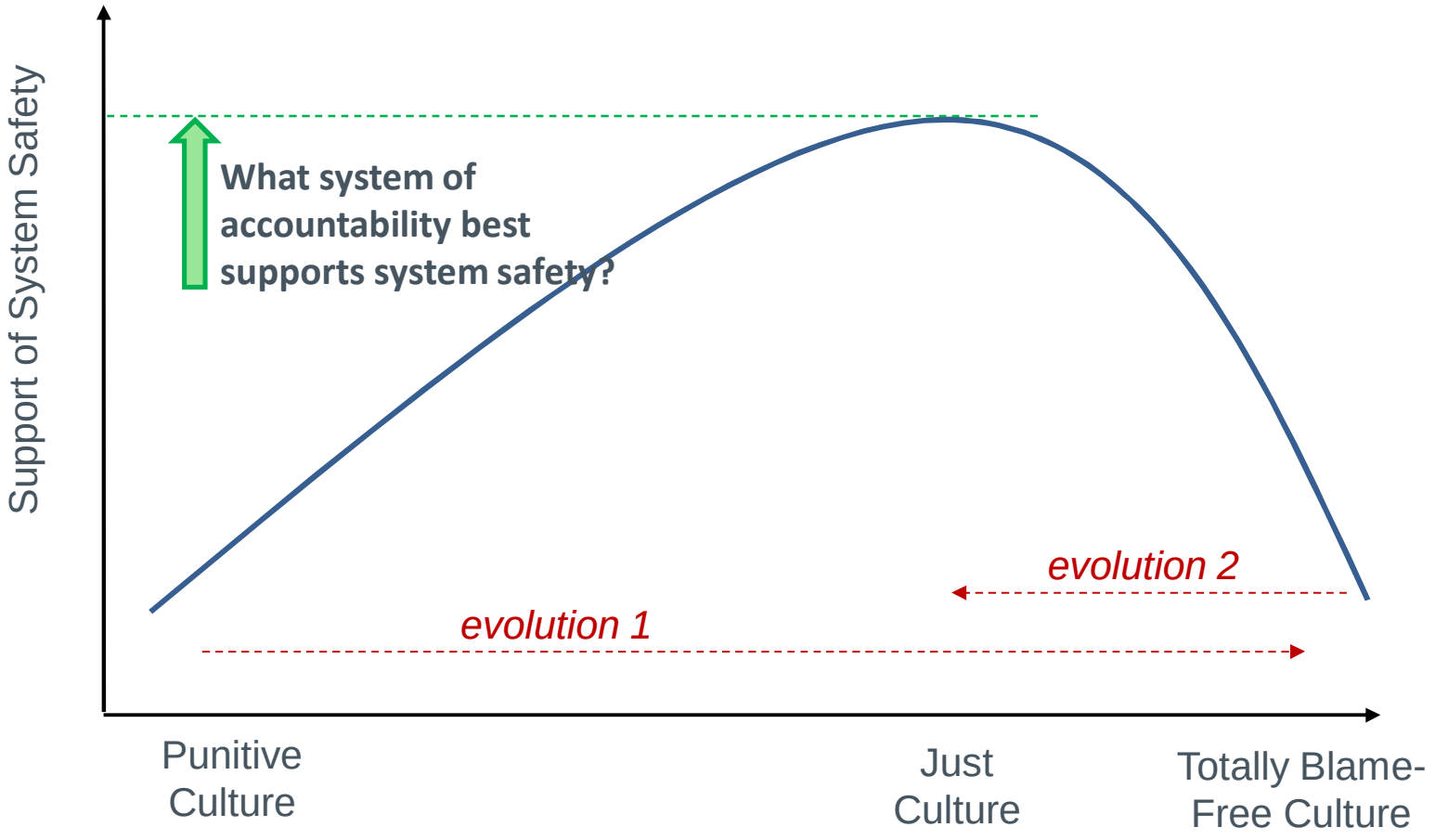
Kristensen S, Bartels P. How to choose a Patient Safety Culture Tool - and the evidence for application? . Paper presented at: International Forum on Quality and Safety in Healthcare2010; Nice, France.

Just Culture

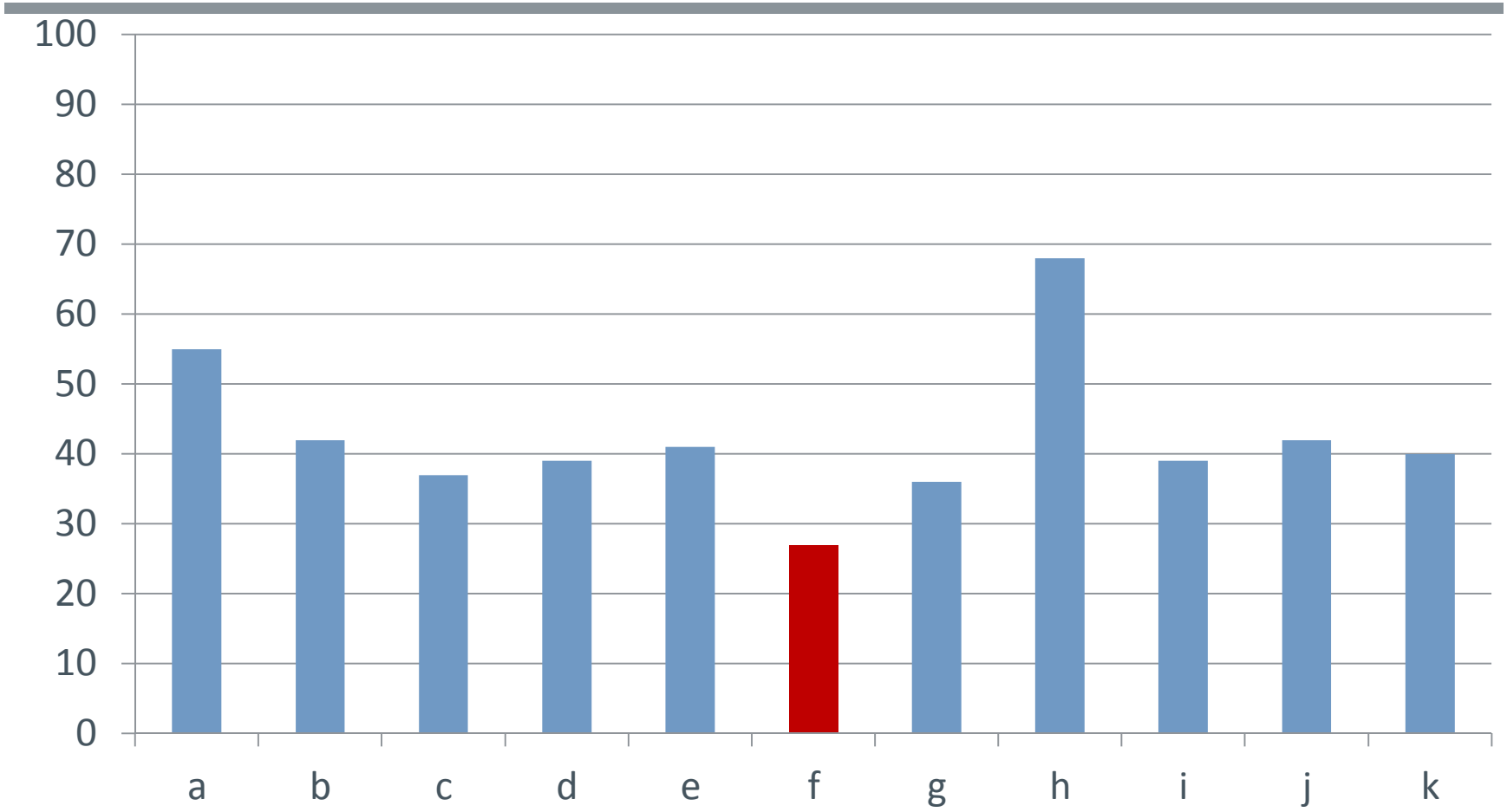
- The term ‘Just Culture’ has been coined to describe an organizational philosophy that is fair to workers who make mistakes, and is effective in reducing safety risks.
- James Reason describes a Just Culture as an atmosphere of trust in which workers are
  - encouraged, even rewarded, for providing essential safety related information (reporting),
  - but in which it is also clear where the line must be drawn between acceptable and unacceptable behavior.
  - an effective reporting culture depends on the way organizations handle reports of error and hazardous situations.

Walsh D, Greenall J. A just culture is the balanced approach to safety. *Hospital News.* April 2007:21

Seeking the right balance



Non-punitive reaction to error
% positive responses



BEHAVIOR AND ACCOUNTABILITY

Test

- Count the number of «e» in the following slide.

Our Accountability for Our Behaviors

Human Error

Inadvertent action:
Slip, Lapse, Mistake

Manage through

- Processes
- Procedures
- Trainaing
- System design

Our Accountability for Our Behaviors

At-Risk Behavior

A choice : risk not recognized or believed justified

Manage through:

- Removing incentives for At-Risk Behavoirs
- Creating incentives for healthy behaviors
- Increasing situational awareness

Our Accountability for Our Behaviors

Reckless Behavior

Conscious disregard of unreasonable risk

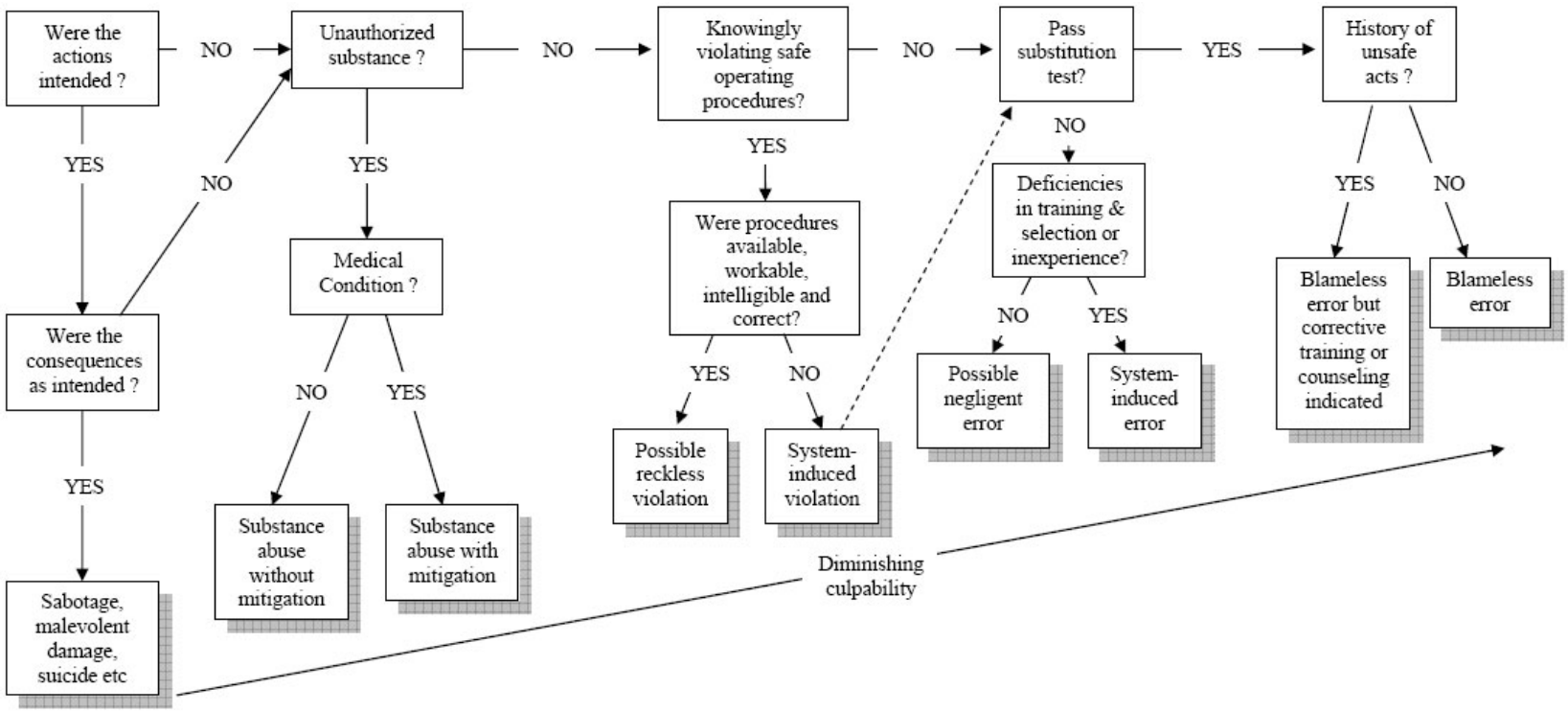
Manage through:

- Role modelling
- Remedial action
- Punitive action

Our Accountability for Our Behaviors

Human Error	At-Risk Behavior	Reckless Behavior
Inadvertent action: Slip, Lapse, Mistake	A choice : risk not recognized or believed justified	Conscious disregard of unreasonable risk
Manage through •Processes •Procedures •Trainaing •System design	**Manage through:** •Removing incentives for At-Risk Behavoirs •Creating incentives for healthy behaviors •Increasing situational awareness	**Manage through:** •Role modelling •Remedial action •Punitive action
Response **Support**	**Response** **Coach**	**Response** **Punish** **Independantly from outcome**

Decision Tree - J. Reason



From Reason (1997) A decision tree for determining the culpability of unsafe acts. p209

The NHS Incident Decision Tree