

Best Care...Always! Campaign

Global Forum on Bacterial Infection

New Delhi ; October 4, 2011

Dr Gary Kantor



A loose coalition of stakeholders
can initiate / sustain system strengthening for patient safety.

The process began with antibiotic stewardship, and
was driven by a private funder, hospitals and professionals.

We are exploring new ways of **building will**,
generating and sharing **ideas** and
filling the **execution** gap

....changing the system.

Global Epidemic of Harm in Hospitals

Adverse events in 9 – 18% of admissions

~ 50% preventable

2.5 – 7.5% are fatal



NEJM Nov 25, 2010

Qual Safety in Health Care 2008;17:216-223

Preventable Harm: 1 in 3 Hospital Patients

*n=795
3 hospitals*

#1. procedures

#2. medications

#3. infection

Severity of adverse event	IHI Global Trigger Tool	AHRQ Patient Safety Indicators	Hospital voluntary reporting system
Temporary harm, required intervention	204	23	0
Temporary harm, required prolonged hospitalization	124	7	2
Permanent patient harm	8	1	2
Required life-saving intervention	14	0	0
Patient death	4	4	0
Total	354	35	4

Voluntary reports are 1% of events



Health Affairs, 30, no.4 (2011):581-589

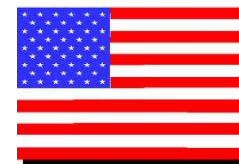
Hospital-Acquired Infection

- World
 - 1.4 million patients affected / day



JAMA 2009;301(12):1285-1287
Lancet 2008;372(9651):1719-1720

- Developed countries
 - Hospital incidence up to 10%
 - USA: 100,000 deaths



- Developing countries
 - 3 x higher
 - S Africa 9.7% prevalence; 28.6% ICU



A Duse. SA-HISC study (unpublished)
Allegranzi B; Lancet 2010:61458

Table 3. Rates of Catheter-Related Bloodstream Infection from Baseline (before Implementation of the Study Intervention) to 18 Months of Follow-up.*

Study Period	No. of ICUs	No. of Bloodstream Infections per 1000 Catheter-Days				
		Overall	Teaching Hospital	Nonteaching Hospital	<200 Beds	≥200 Beds
Baseline	55	2.7 (0.6–4.8)	2.7 (1.3–4.7)	2.6 (0–4.9)	2.1 (0–3.0)	2.7 (1.3–4.8)
During implementation	96	1.6 (0–4.4)†	1.7	<i>median (interquartile range)</i>		
After implementation						
0–3 mo	96	0 (0–3.0)‡	1.3			
4–6 mo	96	0 (0–2.7)‡	1.1			
7–9 mo	95	0 (0–2.1)‡	0.8 (0–2.4)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.2)‡
10–12 mo	90	0 (0–1.9)‡	0 (0–2.3)‡	0 (0–1.5)‡	0 (0–0)†	0.2 (0–2.3)‡
13–15 mo	85	0 (0–1.6)‡	0 (0–2.2)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.0)‡
16–18 mo	70	0 (0–2.4)‡	0 (0–2.7)‡	0 (0–1.2)†	0 (0–0)†	0 (0–2.6)‡

**Median rate of infection:
ZERO!!**

96 ICUs

CLABSI rates ↓ by **66%**
 Better than 90% of US ICUs
1,500 lives and \$\$\$ saved
Sustained > 3 years



EVIDENCE

Ventilator-associated pneumonia prevention		
Ventilator-associated pneumonia	II-2	30% increase in mortality
45° bed tilting	I	70% reduction in ventilator-associated pneumonia
H2 blockers or PPIs	I	50% reduction in upper gastrointestinal bleed
DVT prophylaxis	I	50% reduction in DVT
Sedation vacation	I	2-day reduction in mechanical ventilation

Core measure/safety goal	Level of evidence*	Impact on patient outcomes†
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Central line infection prevention		
Central line infection	II-2	15% mortality increase
Central line bundle [¶]	II-3	Near elimination of line-associated infections

Surgical site infection prevention		
Surgical infection	II-2	Doubling in mortality
Hair shaving	I	Doubling of surgical infections
Poor glucose control	II-2	Doubling of surgical infections
Surgical site infection bundle [§]	II-3	27% reduction in surgical infections

CLABSI Bundle

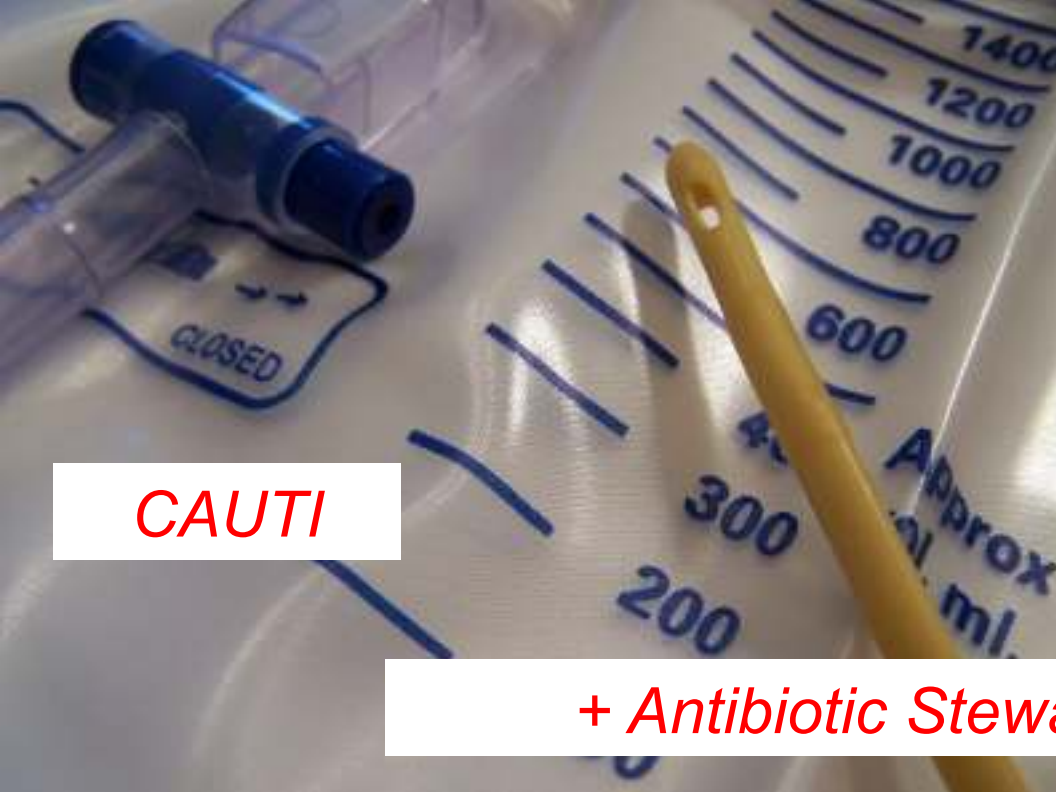
- maximal barrier precautions ✓
- chlorhexidine skin antisepsis ✓
- optimal catheter site selection ✓
- daily review of line necessity ✓

Checklists

+ Daily goals sheet

+ Unit-based safety program

Pronovost P. NEJM Dec 2006



CAUTI



CLABSI

+ Antibiotic Stewardship



SSI

Best care
Always!



VAP



Public Sector

Improvement Scientists

Professionals

Expert Panel



Private Hospitals

Sponsors

BUILDING WILL



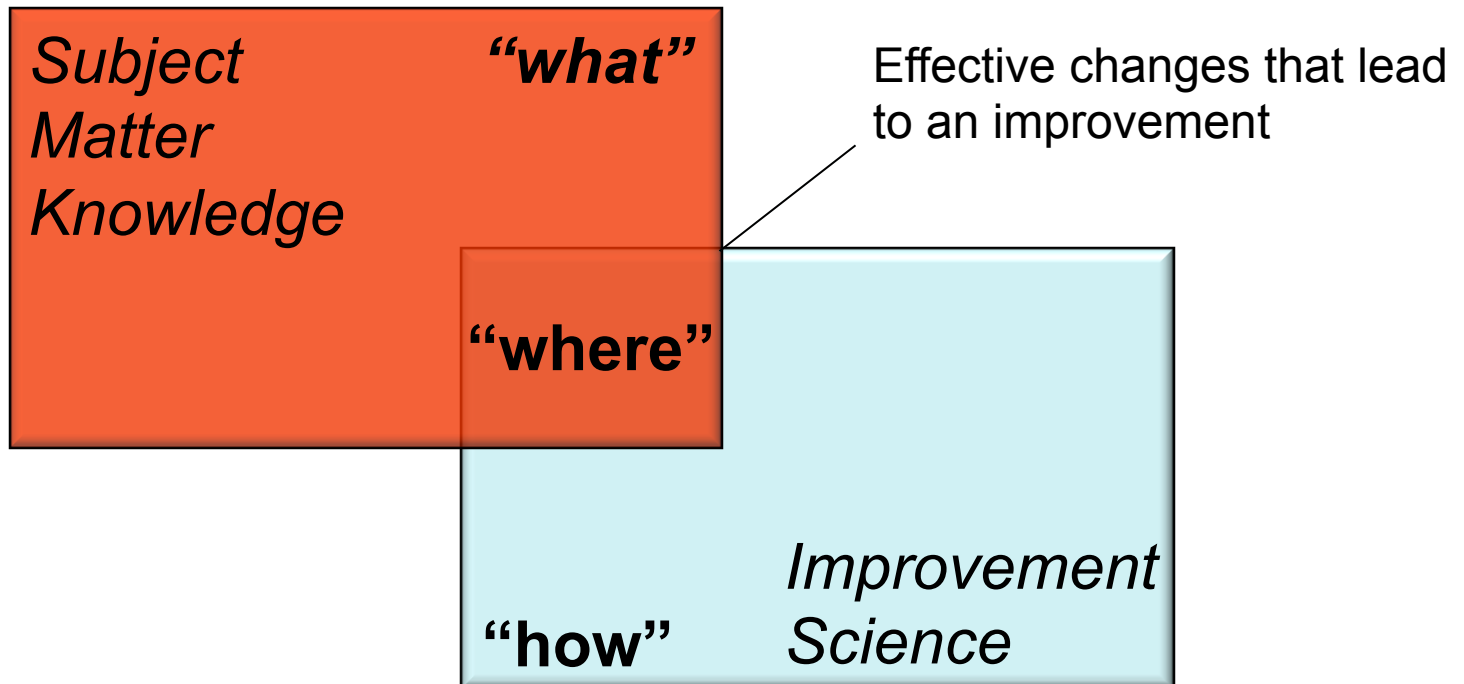
Always! Best care!

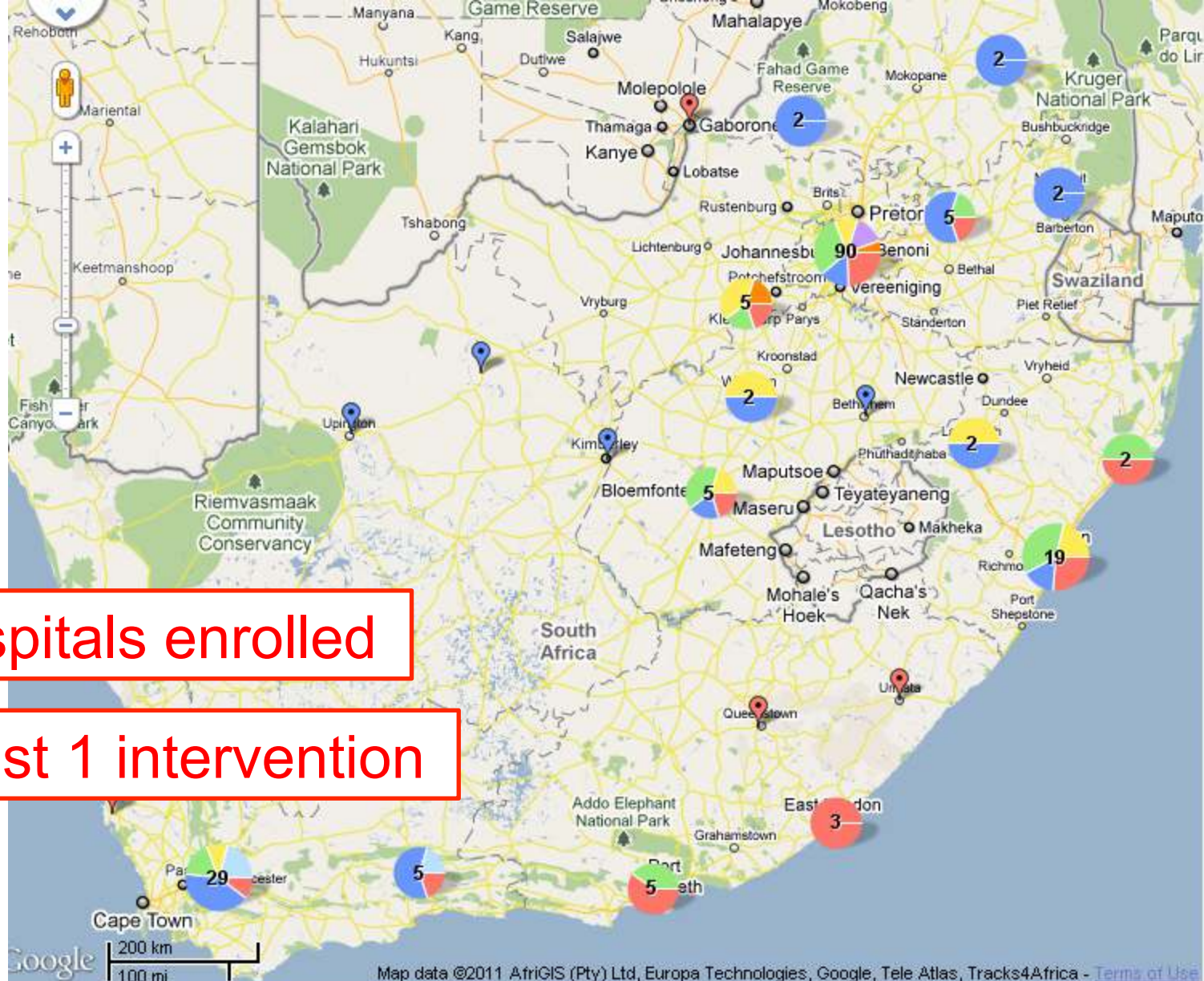
from

evidence-based medicine

to

Evidence-based IMPLEMENTATION





202 Hospitals enrolled

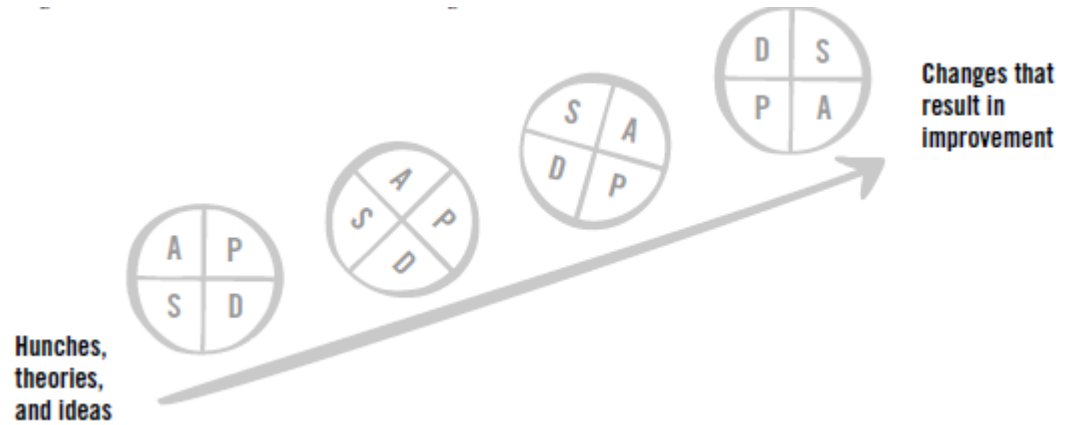
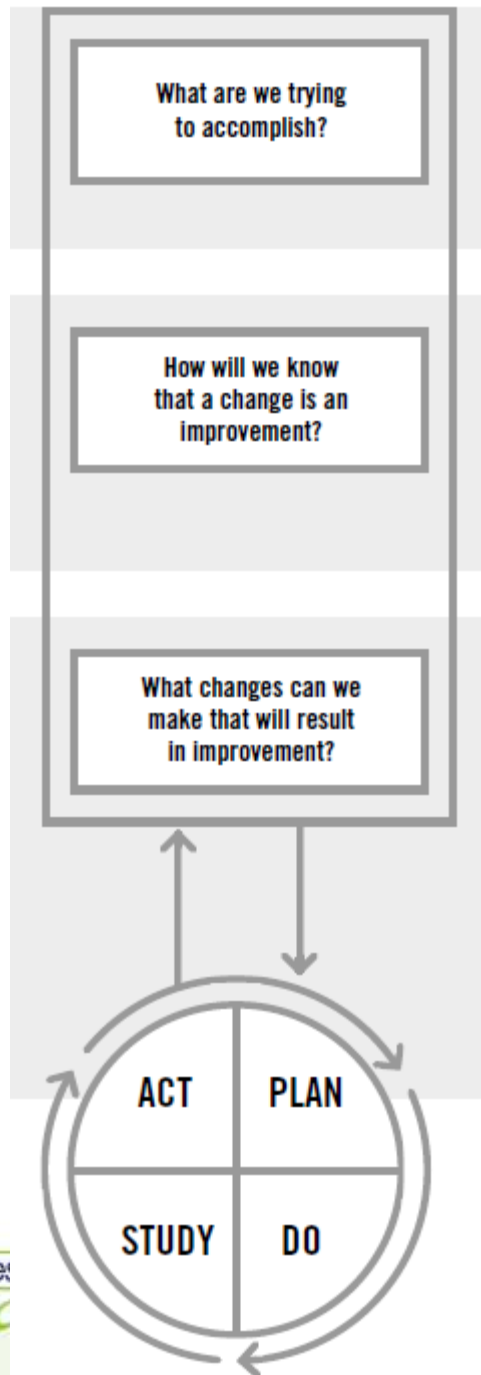
at least 1 intervention



Map data ©2011 AfrIGIS (Pty) Ltd, Europa Technologies, Google, Tele Atlas, Tracks4Africa - [Terms of Use](#)

● Life
 ● Medi-Clinic
 ● Netcare
 ● NHN
 ● Gauteng DoH
 ● W Cape DoH
 ● Others

Hospitals that have enrolled in the Best Care...Always! campaign



“The Method for Improvement”
= the Scientific Method

Not protocols

Not “recipes”

AIMS

1⁰ DRIVERS

2⁰ DRIVERS

Decrease CLABSI to 0 or 300 patient days between by June 2010

Reliable identification of a CLABSI

Reliable implementation of the insertion bundle

Reliable implementation of the maintenance bundle

Improve safety culture through multidisciplinary team working and communication

Reliable Definition – CLABSI

Reliable data collection process – infections & device days

Insertion bundle (HII)

Line insertion documented in notes

Reliable data collection

Maintenance bundle (HII)

Reliable data collection

Clinical leadership rounding to view lines

Bundles known by staff

HAI surveillance data and bundle compliance shared with staff



95% compliance with insertion bundle and each element of bundle
95% compliance with maintenance bundle and each element of bundle

AIMS

1⁰ DRIVERS

CHANGE CONCEPTS

INTERVENTIONS

Optimal antibiotic use in 80% of patients

30% reduction in antibiotic overuse

Stable / decreased antibiotic resistance

Prompt initiation, for defined reasons

Periodic review for cessation, route, reason for treatment

Prescriber access to knowledge and data

Prevention of hospital-acquired infection

↑ availability of first dose

Separate AB prescribing from other Rx

Day 3 and Day 7 review

Info on how to Rx

Info on what it costs

*Prevent SSI, CLABSI, VAP and CAUTI

Antibiotic ward stock

Antibiotic form

AB Bundles

Clinical pharmacist review

Path lab hotline

Resistance reports

Cost reports

SSI bundle

CAUTI bundle

CLABSI bundle

VAP bundle

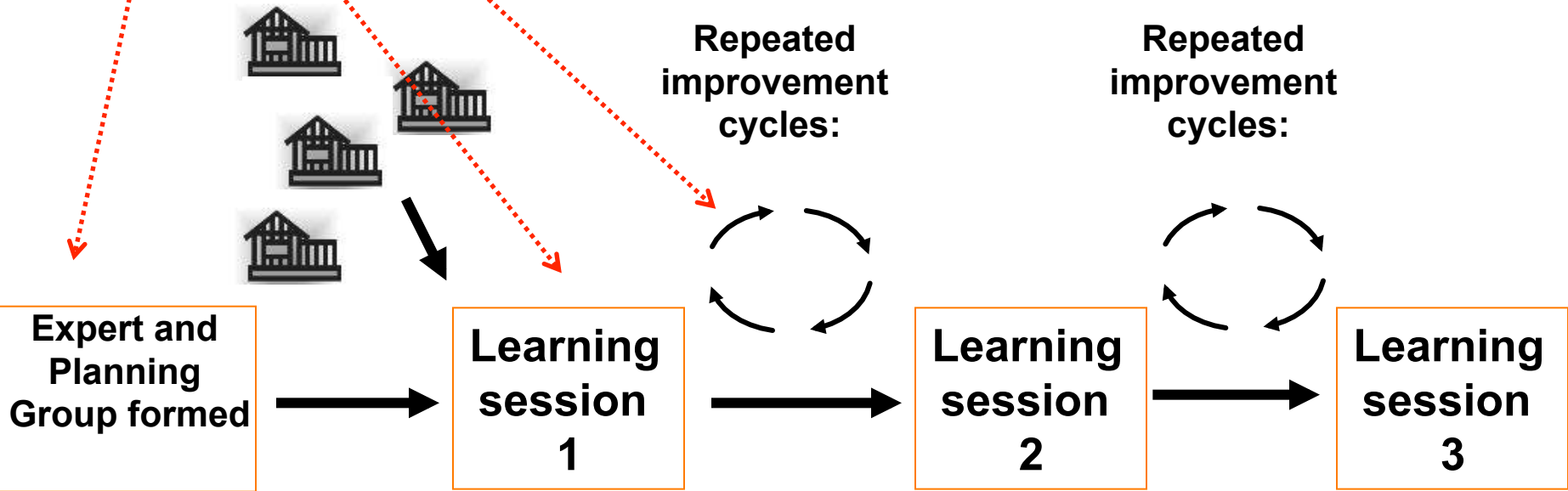
*Interventions already associated with the BCA campaign



OUTCOME MEASURE	1 ^o PROCESS MEASURE	2 ^o PROCESS MEASURE
<p>% with compliance to all bundles (“optimal use”)</p>	<p>% receiving timely antibiotics for prevention or treatment – first antibiotic prescribed during hospital course</p>	<p>% compliance with each Inception bundle element:</p> <ol style="list-style-type: none"> 1. <2 hrs from order → admin (treatment) 2. Prophylaxis within 1 hr of incision
	<p>% overall compliance with Day 3 Bundle for the first antibiotic prescribed during hospital course</p>	<p>% compliance with each Maintenance bundle element:</p> <ol style="list-style-type: none"> 1. Treatment not prophylaxis 2. State antibiotic indication or stop 3. Culture(s) ordered or done 4. Reassess drug choice
	<p>% overall compliance with Day 7 Bundle for the first antibiotic prescribed during hospital course</p>	<p>% compliance with each Maintenance bundle element:</p> <ol style="list-style-type: none"> 1. Stopped or re-ordered 2. Conversion from IV to oral or N/A

IDEAS

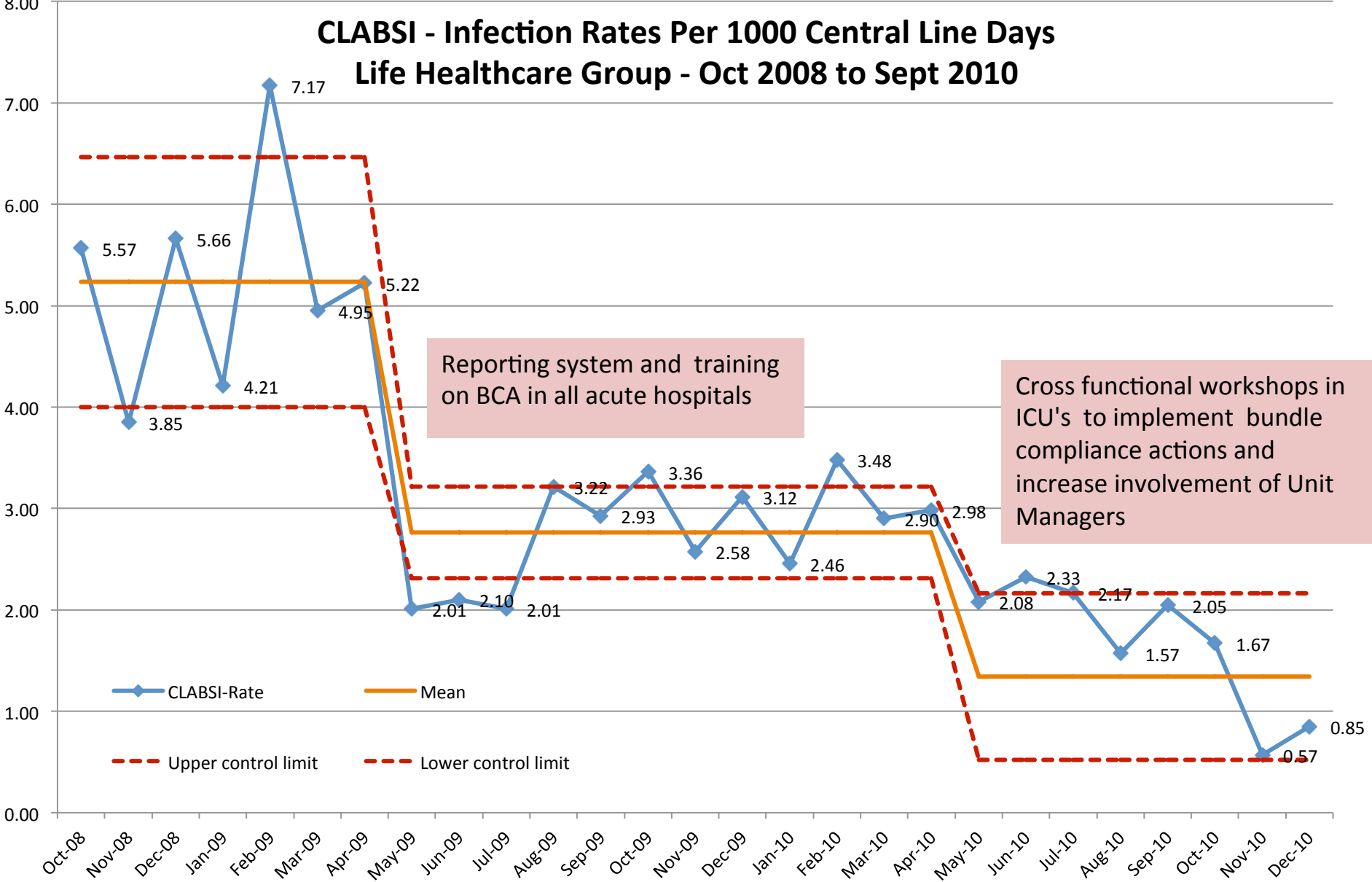
18 -24 months



Mentoring and support



CLABSI - Infection Rates Per 1000 Central Line Days Life Healthcare Group - Oct 2008 to Sept 2010

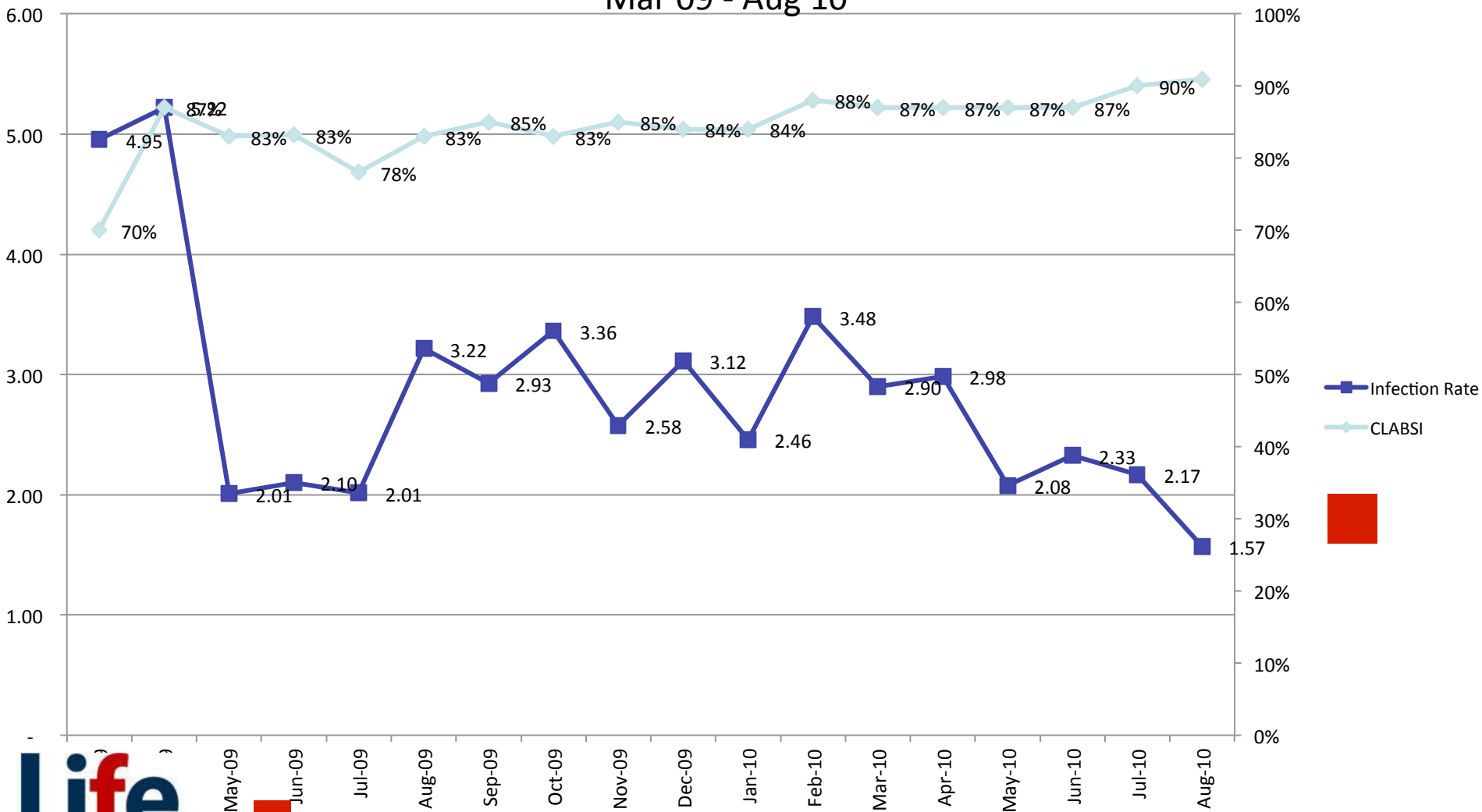


n=41 hospitals

Central Line Associated Blood Stream Infections - CLABSI

Central Line Associated Blood Stream Infections - Bundle Compliance and Infection Rate

Mar 09 - Aug 10

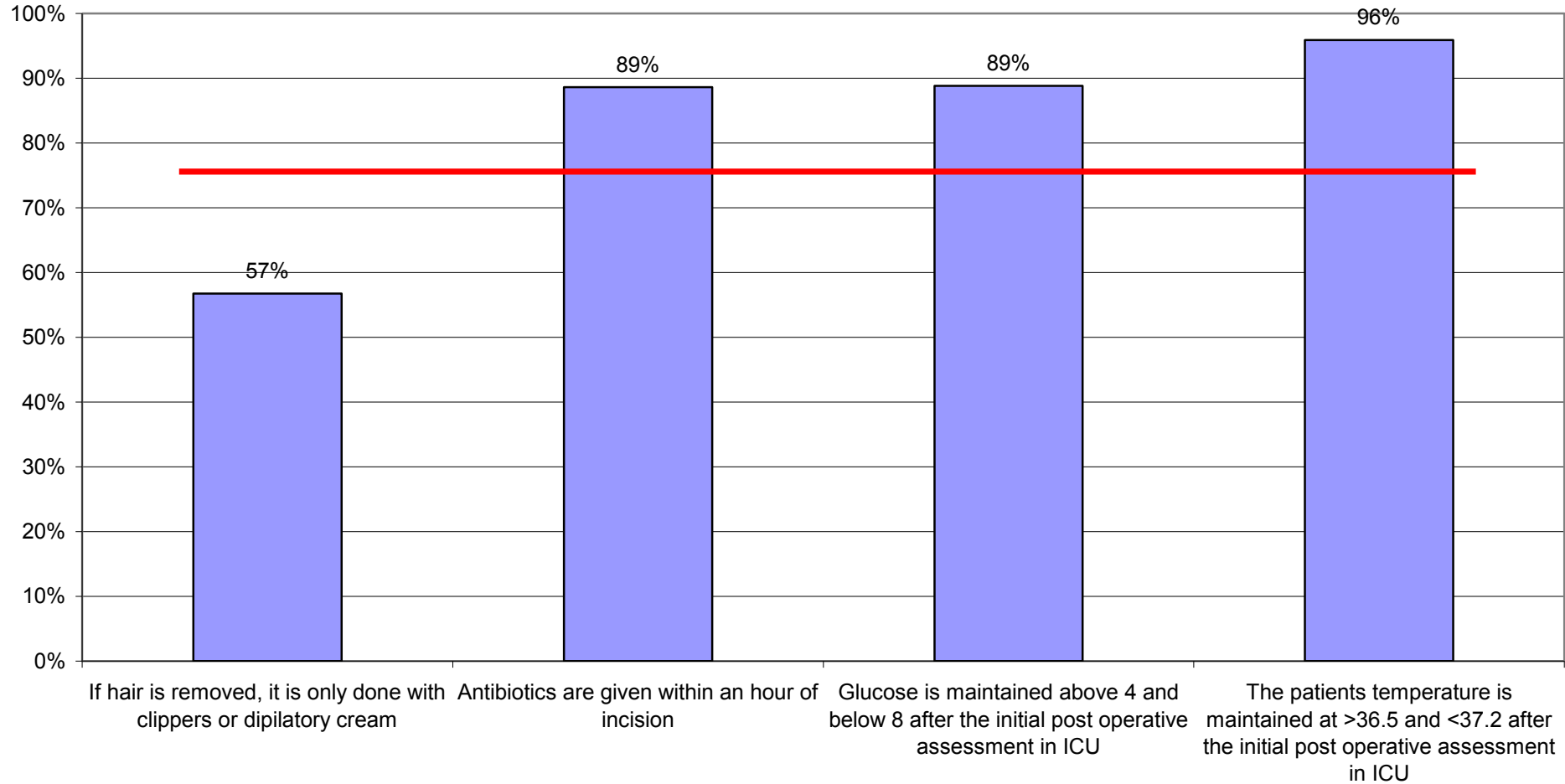


n=41 hospitals



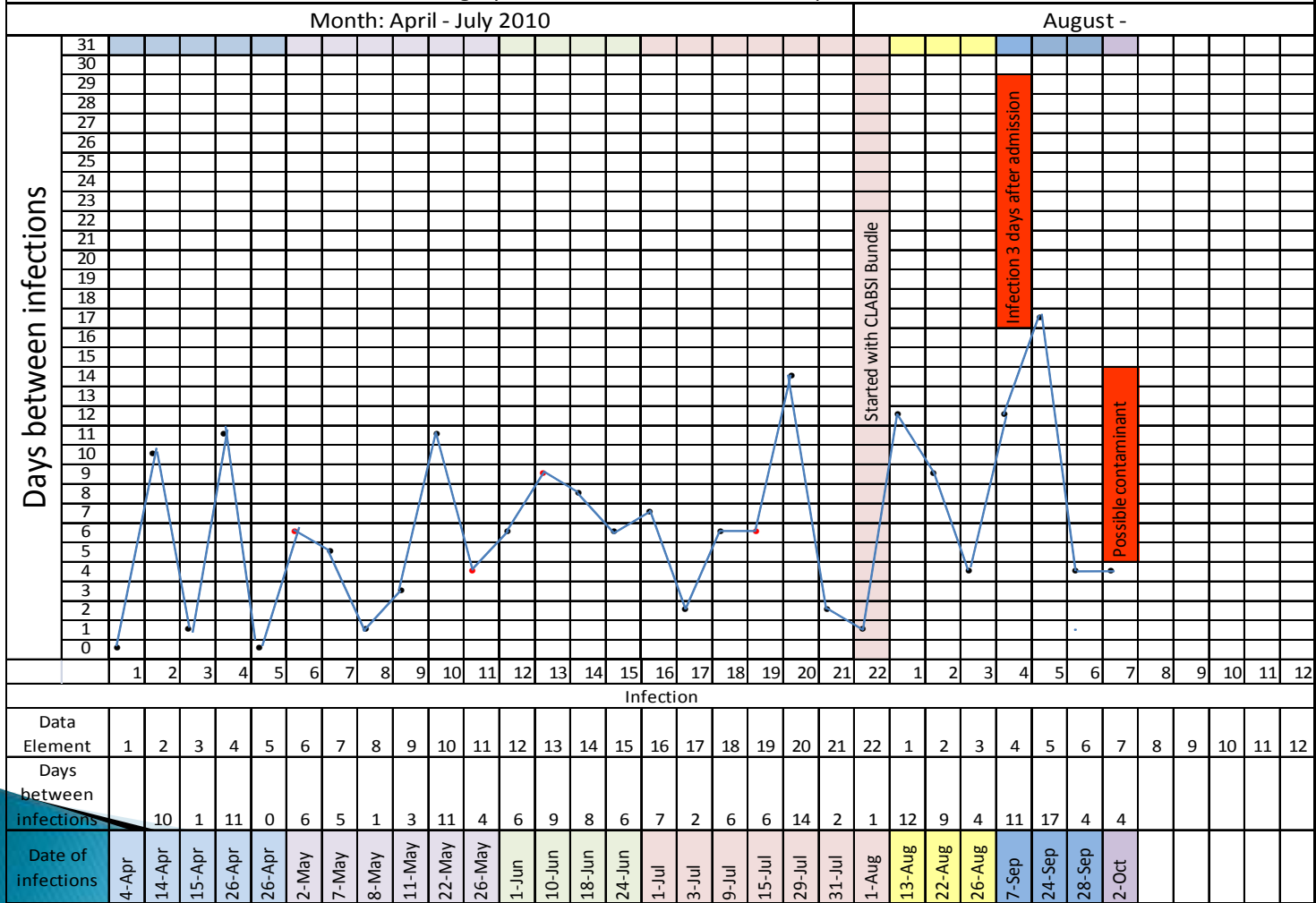
BCA : COMPLIANCE : SSI

Bundle Compliance to SSI
Period: JUNE-10



Central Line Associated Bloodstream Infections

Neurosurgery ICU - Steve Biko Academic Hospital - Pretoria



Days Between Infection



SAFETY CALENDAR					
C27 Respiratory ICU					
MONTH: Feb-11					
		1	2		
		3	4		
		5	6		
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
		25	26		
		27	28		
		29	30	31	

SAFETY CALENDAR					
C27 Respiratory ICU					
MONTH: Jul-11					
		1	2		
		3	4		
		5	6		
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
		25	26		
		27	28		
		29	30	31	

SAFETY CALENDAR					
C27 Respiratory ICU					
MONTH: Aug-11					
		1	2		
		3	4		
		5	6		
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
		25	26		
		27	28		
		29	30	31	



- No incident
- New incident
- More than 1 incident
- Poor data

Visual Measurement



At the same time every day the Unit manager counts devices in use in the ward

MEDICLINIC 

Ward: Intensive Care Unit
Month: October
Year: 2017

Day	No. of pt's with urine catheters	No. of pt's on ventilators	No. of pt's with central lines
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
TOTAL	335	65	219

Solving the Denominator Problem



A collaborative quality initiative for consistent best practice and patient safety

www.bestcare.org.za

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Interventions:

- Antibiotic stewardship
- CAUTI (catheter-associated UTI)
- CLABSI (central line-associated bloodstream infection)
- SSI (surgical site infection)
- VAP (ventilator-associated pneumonia)

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The **Best Care...Always!** (BCA) campaign is an initiative supporting South(ern) African healthcare organisations as they implement specific, internationally recognised, evidence-based interventions that enhance patient safety and constitute current best practice in hospital care.

BCA is inclusive and seeks to enroll hospitals from both private and public sectors. There is no fee to [join](#). Participating hospitals are willing to make evidence-based changes at a faster pace, share ideas with others, measure results and report on progress.

We are currently led by a representative [national task panel](#) of academic and clinical experts, including members with significant advisory capacity.

- [Guiding principles](#).
- [Brochure](#) describing the overall campaign.
- [Map](#) of our 192 enrolled hospitals, which now account for over 80% of all hospitals in Gauteng and W Cape.
- Articles in the [Medical Chronicle](#) provide more background on the work we do.
- Our latest newsletter is [here](#). You can [subscribe](#).

Not just infections

Not just bundles

NEW



garyk@discovery.co.za

Everyone in healthcare has 2 jobs



1. Doing the work

2. Improving the work!

All improvement requires change
(though not all change is an improvement)

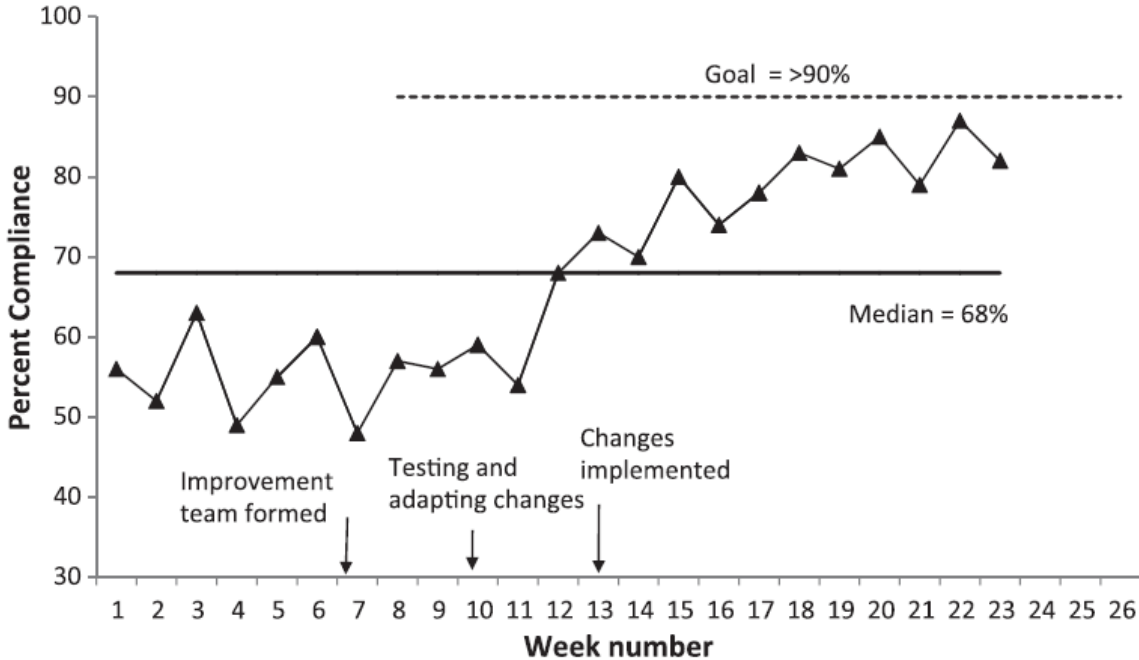
Changing:

- How and why we measure
- Methods (of improvement)
- Our sense of responsibility
- Leadership
- Organisations and culture
- The Health industry

How and why we measure

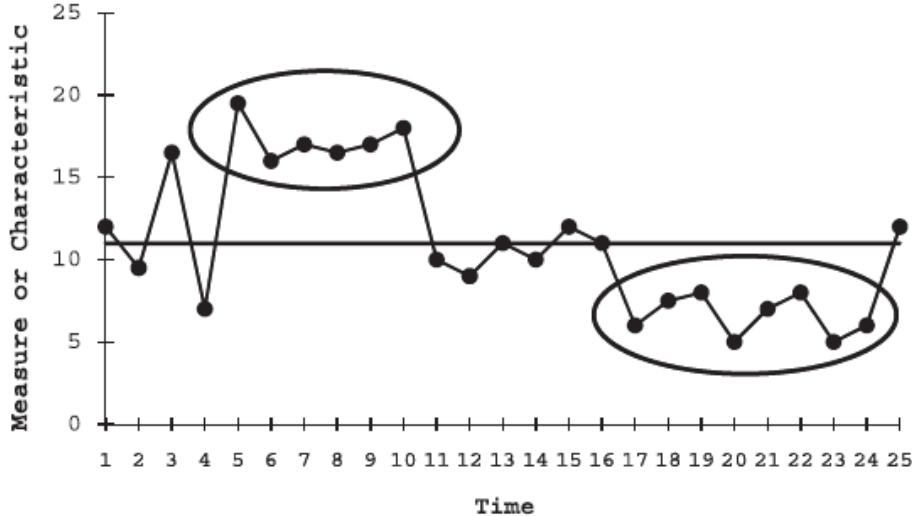
OLD	NEW
International data	Our data
Counts	Rates
Bar graphs	Run charts (over time)
Data for head office / ministry	Measurement for frontline staff
Individual measures	Measures across systems

“Run Chart”

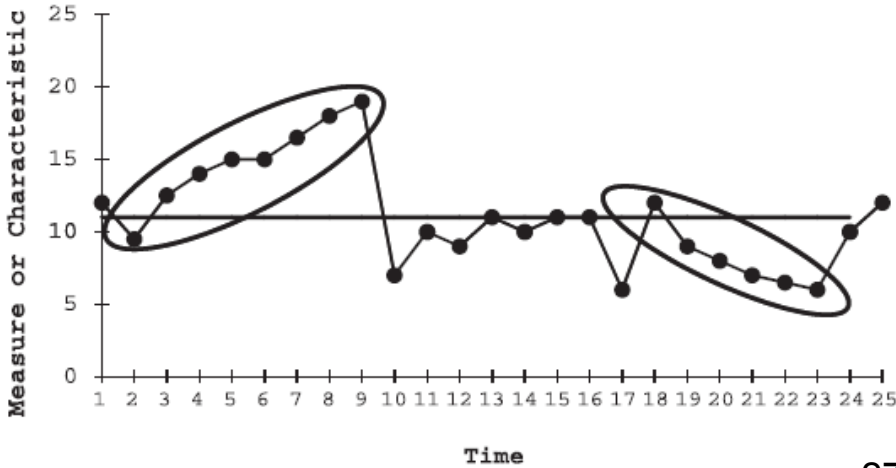


Rules for identifying non-random signals

Rule 1: Shift



Rule 2: Trend



How we improve

OLD	NEW
Audit and inspection (QA)	PDSA cycles
Checklists for checking	Checklists as aids
Writing more protocols	Focused interventions
“Spray and pray”	Improving critical elements one a time

Taking Responsibility

OLD	NEW
“it doesn’t happen here”	Knowing the facts
“we already do that”	Acknowledging we may not
Can’t do	“if they can so can we”
Accept the inevitable	Persistence
Victim of limitations	Building skills

Clinicians

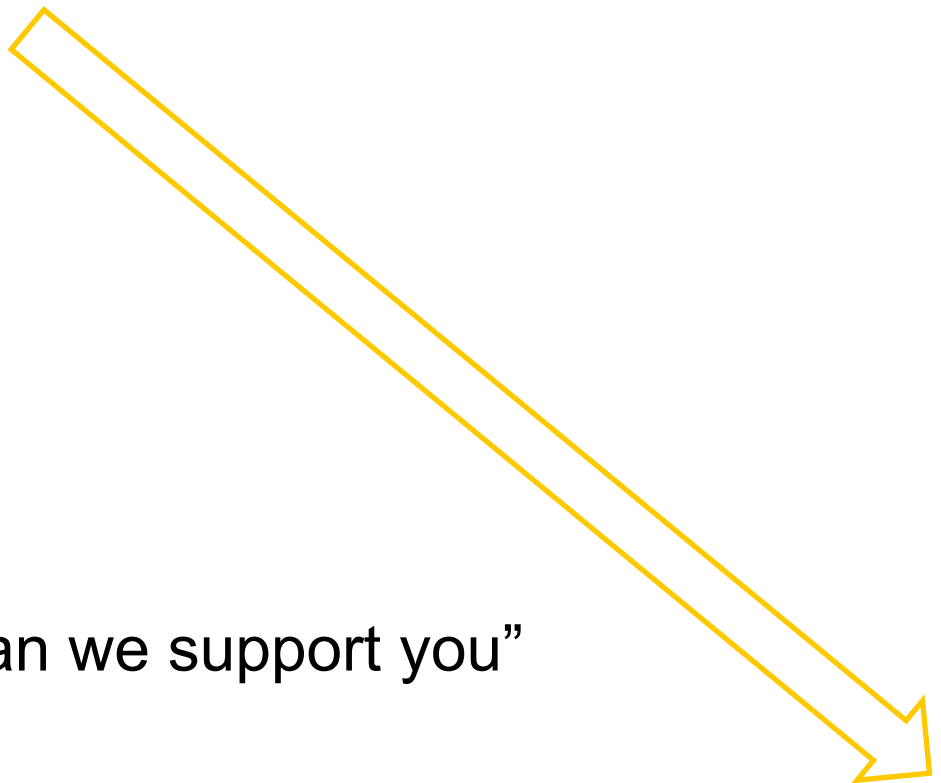
Skeptical and critical

“this might work”

“worth trying”

“how can we support you”

“I would like to initiate”



Leadership

OLD
It's up to the doctors
It's up to the nurses
It's up to the Infection Prevention Practitioners
It's up to the Infection Control Committee

NEW
Active involvement of senior leadership
“Exco”

The Culture

OLD	NEW
Blaming and punishing	Learning and curious
Who (people)	Why (system)
Helping	Capacitating (mentors)

Health Sector

OLD	NEW
Competition	Collaboration
Secrets	Sharing
Private vs public	Interconnected systems
	Public learns from Private
	Private learns from Public
	Public-private partnership

Antibiotic Stewardship

OLD

Passive observers

No interventions

No measures

Defensiveness

Pilots

NEW

Actively seeking solutions

Identifying opportunities

First level utilisation data

Working together to deal with it

Multiple sites testing change



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NEW



The Changing View of Quality



We are perfect!

Get rid of the bad apples

NO ACTION

REACTION

Quality Assurance

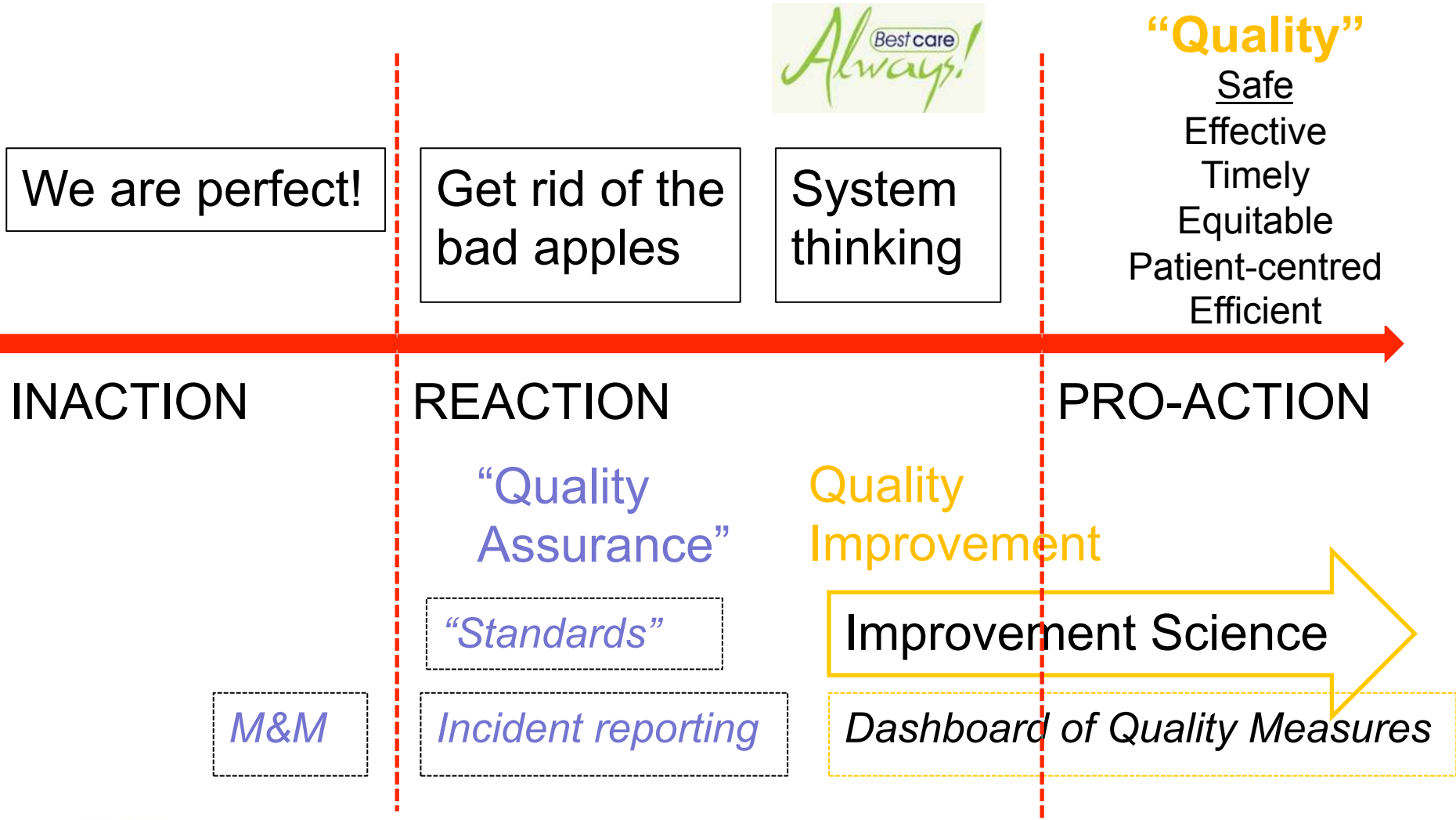
“Standards”

M&M

Incident reporting



The Changing View of Quality



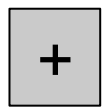
Improvement Science and Knowledge Systems Combine to Produce Improvement

Generalisable scientific evidence

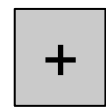
“control context”

Patients get “recommended care” ~ 50% of the time
standardisation, forcing functions, education, etc

Qual Saf Health Care
2007;16:2–3

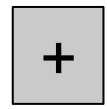


Plans for change



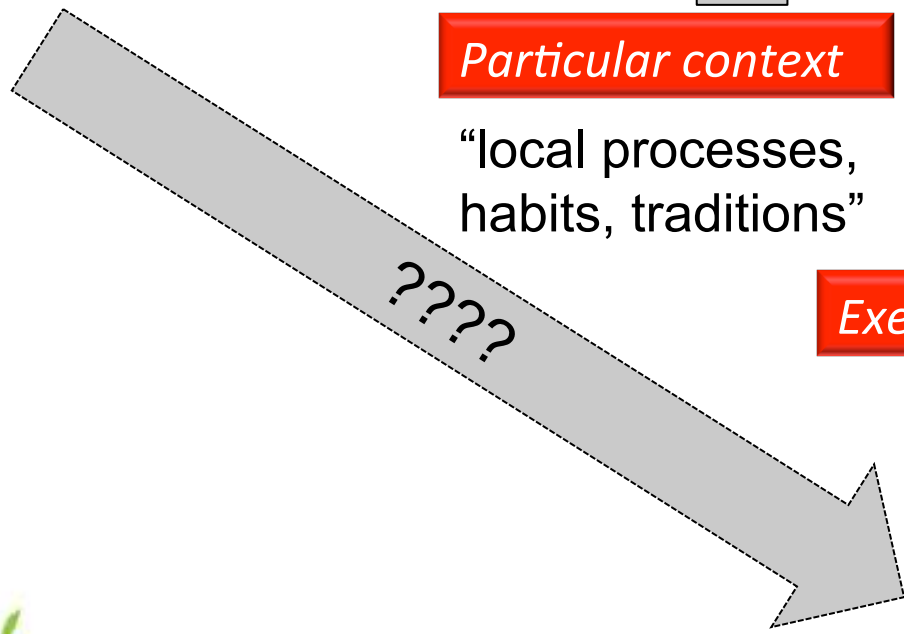
Particular context

“local processes, habits, traditions”



Execution

“drivers of change”



High performance (measured)

“include time”

