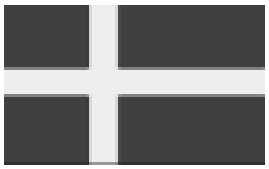
“Leading Value Improvement”

This PPT and other resources from:
http://homepage.mac.com/johnovr/FileSharing2.html



John Øvretveit,

Director of Research, Professor, Karolinska Medical Management Centre Sweden and Professor of Health Management, Faculty of Medicine, Bergen University

Outline

- Key messages
- What is “Value Improvement?”
- Why do it?

PART 2:

- Quality waste
- Solutions
- Savings or losses

PART 3

- Leading Value Improvement

- October 2008 - $6,500Tr - 2 weeks
- US GDP $15Tr
- UK citizen debt $2,200 per year – on the loan interest!
- Recession hits healthcare

Economy conscious

- Budget cuts – how to protect quality?
- US – how to keep making money?

Reduce any costs & waste

Question any spending

What does spending on quality contribute to bottom line?

What is essential for doing business vs discretionary?

Is QA/QI diverting time and money from direct clinical care?

Message:

= quality needs to get “economy-conscious”

= focus on Value Improvements

The new world : quality accountability – for improvers

- Is QI like the bank robbers?
- Complicated schemes we do not understand
- Quality industry fuelling the spending
- Patchy evidence of effectiveness and pay-back
- Emperor's clothes? Credibility crisis?
- More evidence, less trusting – measurement and costing

Review of evidence (Øvretveit 2009)

Does improving quality save money?

Q1 Cost now of poor quality?

Q2 Spend cost?

Q3 When do we save? *(TTPO:1yr or 3 yr?*

What is “improving quality”?

1 Clinical change – antibiotics before surgery

– Implementation strategy to get this change

2 Process improvement

3 Systems and structure changes to reduce latent causes

4 Regulatory and large scale programmes

(eg indicators)

Under-developed “evaluation technology”

- Good for evaluating treatments and discrete changes in clinical practice
- Not good for evaluating
  - Strategies to ensure these changes
  - Systems or structure changes for better SQ
  - Regulatory or large scale changes
- Controls or experimental designs difficult
- Other methods – tomorrows seminar

Key Messages: from review of evidence

Does improving quality save money?

1. Sometimes
2. Mostly we don't know
3. Often the spender does not save – someone else does
4. Saving waste is not releasing cash – 2 steps needed
5. Change financing to reward spending – 5 year
6. Now – choose improvements which return on the investment
7. Use research, experience, implementability-assessment to choose wisely
8. Do simple costings before, during and after QI project

Patient: 84 year old obstructive airways (COPD) and heart disease

- Stable at home on meds, fiercely independent
- Supported with regular visits to GP by son and home cleaner

Health care experience

Friday 10am fall breaks hip

- 14.00 admitted
- 17.00 orthopaedic ward
  - Change of medication

Sat Sun - no ops

Monday – surgeon informed late

Tuesday am operation

Friday - isolated due to MRSA developing on on arm wound

1 week later Discharged with no information to PHC

2 weeks later Readmitted with weight loss, pneumonia and wound infection

In your service, hands up for one of these….

1) None of this could happen

2) One or two of these quality problems may happen

3) Many of these happen

4) Much more – that's not half of it…

Cost to healthcare system
= €4470.

- PHC treatment after discharge €870 (income)
  - (avoidable) but could not manage patient acuity (3 nurse visits, GP time, ambulance))
- Emergency readmission €3,600 (income)
  - (avoidable) and aggressive treatment for pneumonia and wound

Other actual or potential costs

- Family travel and time-off work (€2,800)
- After 4 day wait with fractured hip, lucky no complications after surgery (near miss of €2100)
- Death 17 weeks later due to….

The Medical Management Centre
Karolinska Institutet

84 year old experience, over 6 weeks

Evidence and experience I will share

- Quality economics research, projects in Sweden and Norway, ^ work with IHI 1999-2009
- 2009: 2 systematic reviews of research, and book

The Medical Management Centre
Karolinska Institutet

5 Practical messages for leaders

1) Support the few.
   - …if their improvement will return the investment
   - Not starting projects is an option. Hero leader and context

2) Ensure

   1 clinicians involved and accountable for results, 2 measurement, 3 reporting monthly, 4 skilled project leader (getting this may need external facilitation)

3) Estimate: Cost, Spend, Save?

4) Value improvements unite parties who need to work together

5) All leaders give same message

   focusing on Value improving using proven methods – formal and informal leaders

The Medical Management Centre
Karolinska Institutet

Hands up

- I am a manager
- I am a leader
- Only followers can answer that

Managing : making best use of resources

Printer waiting for ink, not using a nurses skills when needed, Knowing the waste and removing it

Leading : inspiring and focusing

Leading value improvement:

uniting effort and motivating to make changes which save money and improve patient care

The Medical Management Centre
Karolinska Institutet

What is a “value improvement”

- Examples:
  - “Read back” now used consistently to confirm message received and understood
  - Patient Pathway redesign using less clinician time & fewer delays

A change which saves money and suffering

…caused by poor organisation or lack of support to providers

- (suffering avoidable by better organisation)

Value improvement = higher quality + lower costs
(“spend costs” pay for themselves)

Why do it?

- Someone told us to. Looks bad if we don't. Save the CEO, government

- Reducing suffering got lost in the complexity
- Organise better, to treat better
- We can take control of our organisation

Re-awakens values about what is important about our service.

In a more realistic way - for complex and financially pressured healthcare

..where our professional competence with the patient is not enough – we need a competent system and evidence of returns

The Medical Management Centre
Karolinska Institutet

Some Ingredients
Sustained motivation

- Values concern: what is important and what we value – reducing suffering – often disappears from everyday work,
- Facts:
- from elsewhere about safety and quality problems
  - local data continually showing the problems & progress in our service,
- Belief in a solution
  - for a better service, achievable and financially realistic,
- Belief in a journey
  - which we can all share which will get us to the solution, despite unexpected weather, detours and tough terrain.

PART 2

- Problem poor quality - and costs
- Solutions – and the “spend costs”
- Business case - savings or losses
  - The business case is local – “context specific”
- Implications – practical and for research

The problem – which adverse event is most common in your hospital?

- Pressure ulcers
- Hospital acquired infection (HAI)
- Wrong site surgery
- Adverse drug event (ADE)
- Patient falls

Answer – differs between hospitals but not Wrong site surgery

Q Manage Health Care
Vol. 16, No. 3, pp. 219–225

Financial Impact of Failing to Prevent Surgical Site Infections

Karen W. Sparling, CPA, MBA; Frederick C. Ryckman, MD; Pamela J. Schoettker, MS; Terri L. Byczkowski, PhD; Alma Helpling, CPA; Keith Mandel, MD; Anitha Panchanathan, MBA; Uma R. Kotagal, MBBS, MSc

- *16 pediatric patients with an SSI vs 16 matched control patients, similar operation, no SSI*
- *LOS 10.6 days longer*
- *$27 288 extra cost for each patient with a preventable SSI.*

"data analysis strengthened and focused our efforts to prevent future SSIs"

Evidence of avoidable waste

- 100k hospital acquired infections **(**5k die**)** in England/yr. €1.4bn Costs (UK Hoc rprt 2000)
- €330m medicines returned to pharmacies for disposal each year UK (BMJ 2002)
- 40% of medications unnecessary (Rand USA studies)
- 25% of radiological tests not necessary (UK Royal College of Radiologists)
- 25% of hospital days and clinical procedures inappropriate
- €415bn/yr "wasted on outmoded and inefficient medical procedures in the US" Juran study

  the cost of poor quality care will likely exceed $1 trillion by 2011

The Medical Management Centre
Karolinska Institutet

Poor quality and safety types

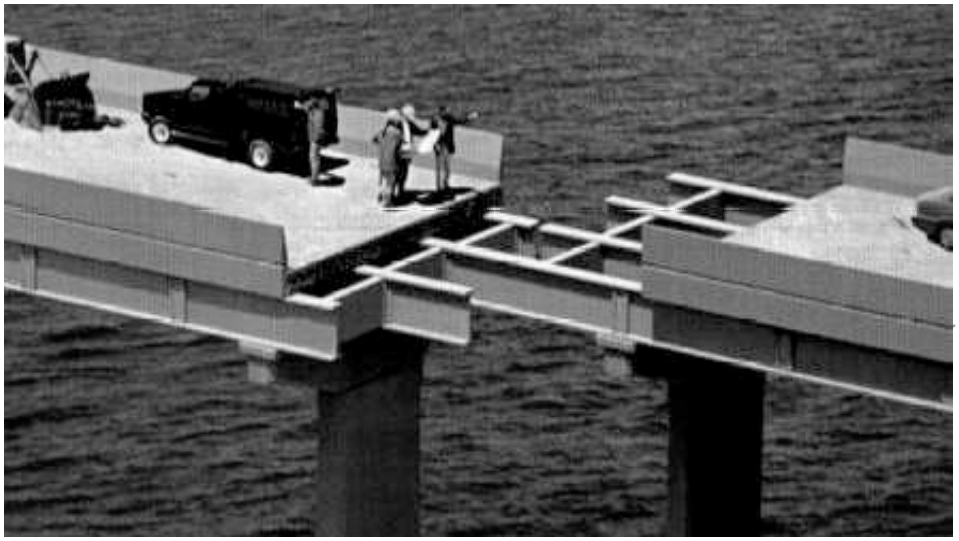
For patients

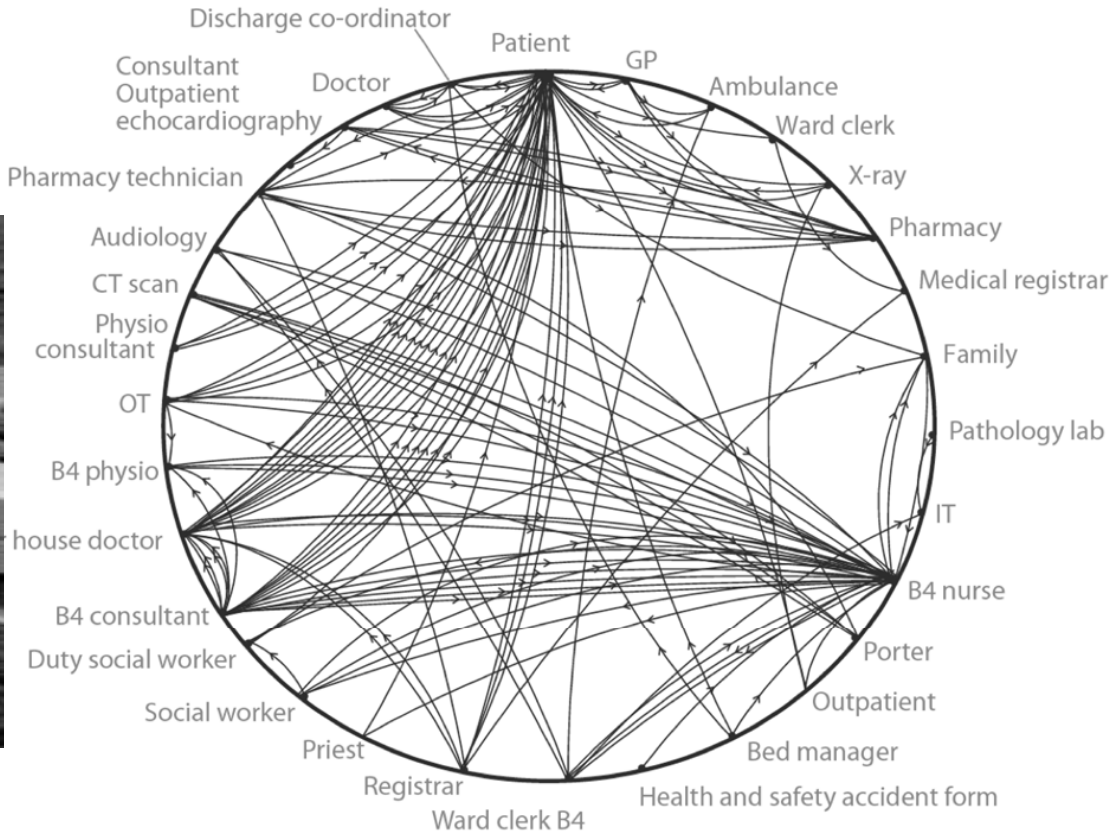
- Over-use (no medical benefit)
  - Tests and antibiotics
- Under-use of effective treatments
  - 79% of eligible heart attack survivors fail to receive beta blockers
  - anticoagulant to prevent thrombi
- Miss-use (esp miss diagnosis 10%-15%)
- Under-coordination
  - 500 GPs - 70% reported late discharge summaries “often” or “very often”, 90% reporting it “compromised clinical care” and 68% “compromised patient safety ”. One summary arrived 11 years late

For Organisations Under, over, and miss-use of QS interventions

The “in-between” problems

- Communication and transfers between shifts, professions, services.
  - Bolton hospital: 250 communications hand-off between personnel to discharge one patient with complex care needs.





Solutions – do they work and do they cost more than the problem?

1)Effectiveness evidence – AHRQ 2001 “Nike list”

- Timely antibiotics before surgery
- Barrier precautions before central line catheters

But

2) little evidence of effective implementation methods

Eg training, computer support, feedback, supervision

3)little evidence of spend cost

- What do we know?

Operation cancellations and delays in Norway
(Øvretveit 2000)

- *Cost of waste of 98 cancellations every three months €50,000?, 300,000 or 900,000?*

Evidence Cost = €320,000 annually

- Spend 1 year = € 98,000.
- Saving = € 62,000 for Yr 1, €160,000 for future if reduction sustained at no cost

VHA - reported experience

Falls resulting in fractures av $30,000

- 30% over 65 with a fall-related fracture die

"An investment of $25,000 in a fall prevention program yielded $115,000 in savings in fracture care"

Nosocomial infections cost a minimum of $5,000 per episode.

"An investment of $1,000 in hand hygiene yielded $60,000 in avoided care costs"

Calculation details not given

(Source: Bagian reports from VHA (in AHRQ 2008)

Summary so far

- Widespread quality and safety problem
- High financial cost
- Some evidence of effective solutions
- Effectiveness locally depends on implementation
  - And infrastructure supports for quality (previous years of investment)
- Solution “spend cost” – little research, local variation
- Save money – some evidence

Your experience – *note*

1) I have been involved in a quality or safety improvement
2) We know how much the improvement cost (spend cost)
3) We know we saved money
4) We know someone else saved money from our spend

- How do we make or save money from improvement?

Point 1) Increasing income is faster than getting cash from reducing waste

What we learned from reducing OPs cancellations & delays

- Paper savings are not cash savings: the “show me the money” issue
- Saving time and materials does not bring cash immediately
- May save on next years purchasing or use fewer staff
- Quicker cash from increasing throughput
  - But purchaser ceilings & other bottlenecks

Point 2: Payment disincentives for improving

- Glaucoma care reimbursement 300€
- Hospital cost to provide it 1,800€
- But Surgery income 2,270€
- Prevent glaucoma = loose 1500€ Do the surgery= gain 2270€

"The current deficit on glaucoma care in the eye hospitals is internally covered through the profits made with cataract surgery"

IJHCQA
22,3

232

Received 19 November 2007
Revised 1 April 2008,
23 June 2008
Accepted 25 June 2008

Creating patient value in glaucoma care: applying quality costing and care delivery value chain approaches

A five-year case study in the Rotterdam Eye Hospital

Dirk F. de Korne, Kees (J.C.A.) Sol, Thomas Custers, Esther van Sprundel, B. Martin van Ineveld, Hans G. Lemij and Niek S. Klazinga

The Mary case: Financing system disincentives

- Discharge early with no information
- Triple incentive for poor quality
  - Save on early discharge (lower LOS, DRG based fixed income)
  - Paid for readmission
  - Save on costs of time to give info to PHC and cost of system for this
  - No finance to invest in improvement
- Paid to treat illness caused by healthcare or poor coordination
  - Eg readmissions due to poor treatment or early discharge
  - BUT DRG based payment does not reward infection or ADEs
  - No quality measures
  - AND P4P never events systems are penalising a few

Implications - Practical

- 5 yr Measure quality and include in financing
- 5 yr Change financing system
- 2 yr Agree cost and savings sharing for improvements
- 1yr Select improvements which save or make money under current system
- Focus on Value improvement = changes which improve quality or save or make money

Implications - practical

- Choose which improvements by considering the financial case as well
- Choose those clinicians and managers want, and which purchasers and providers can agree on
- Use research to help choose - gives indication of
  - Problems likely in your service – but you need local data
  - Effective solutions – but it you need to assess your implementation capability for each
  - Possible savings – but it you need to do the business case for your payment system, and increasing income is faster than getting cash from reducing waste
  - Cats end

PART3 : Leading change
Hands up

- *Our change is faster and more effective than I expected*

- *Limited progress is my fault – we need to work harder to make the change*

Good news from research

- Research found slow change is typical
- It might not be you, but your surroundings, which constrains change
  - Change and innovation depends less on your leadership and implementation strategy, than whether you have “a supportive context”:
    - History and culture of experimentation in your organisation – risk and failure allowed
    - Change management expertise for advice
    - Higher levels allow time to design and test changes
    - Incentives

Why John did not grow up in Norway

John's Dad: *I liked the gardener and I couldn't change the climate!*

Mrs Øvretveit:

I could not grow

roses there

all the year round

You can change

the soil

but not the climate

Roses year round – what does it take?

Seed

Gardener/planting & nurture

Climate / soil

Your change?

Change idea + Implementation actions + Context

Evidence + *Implementation* + *Environment*

Collective multi-level leadership needed

- Leaders at higher levels
  - Create conditions which help or hinder

  .. lower level leaders to make value improvement

Example Johns Hopkins ICU safety programme

56. What leading improvement is really like

Original initiative at Johns Hopkins

- ***Recovering from burns at the Johns Hopkins Children's Center,***
- ***Josie, 18-month-old***
- ***Staff missed warning signs of dehydration – cardiac arrest***
- ***Ms. Sorrel King - not revenge - works to prevent this again***
- ***"Apologize. Tell the truth. And take steps to fix the problem."***

The Medical Management Centre
Karolinska Institutet

Response

- *Josie's nurses, Drs Paidas and McKee with mourners*

Second Sunday after Josie's death,

- *Dr. George Dover head of the Center, visited*

"This is my hospital. This happened on my watch. This is my responsibility. I'll get to the bottom of it,"

“A committee will review, as required, what happened and recommend ways to correct any problems…

the hospital will not cover anything up”

9:30 and 10 every Friday morning talk with Sorrel.

The Medical Management Centre
Karolinska Institutet

Case Review

- *After three weeks in recovery - weight loss, severe diarrhea, intense thirst and lethargy.*
- *Warning signs of severe dehydration not acted on*

– shortcomings in communication, between the surgeons and pain team, between doctors and nurses.

- *Agency nurse - more assertive in alerting physicians to symptoms.*
- *After doctors removed Josie's central line - should have placed another intravenous line.*
- *Resuscitation efforts after arrest hindered without one.*

Caregivers should have listened more closely to Sorrel, repeatedly expressed worries

"Nobody knows a child better than the parents,"

The Medical Management Centre
Karolinska Institutet

Local clinical champion

- *After legal settlement, Sorrel met Dr Peter Pronovost*

  Anesthesiologist & critical care specialist
- *When medical student at Hopkins, father died from a error made at a Connecticut hospital*
  - *Lymphoma misdiagnosed as another cancer*
  - *Did not receive proper treatment.*
  - *Died at home in pain, weighing only 38kg.*

"Sorrel and I both felt this very strong commitment that patients deserve more…

…We felt like kindred spirits, that we were on a mission together."

The Medical Management Centre
Karolinska Institutet

Other local leaders

- ***Dr. Charles Paidas - pediatric surgeon in Josie's care part of the safety initiative.***
- ***“There are certain people in this world that are mentors, that spark enthusiasm, new energies in people," "And Sorrel's that kind of person."***

There's magic that's going to come out of this,"

"And I don't think anyone here would disagree: It's because of the family."

2002 Josie King Patient Safety Program.

- *Funded in part by Sorrel's $50,000 contribution,*
- *Two teams at the Children's Center: find safety problems and devise ways to prevent them.*

Pronovost introduced Sorrel at a pediatric grand rounds.

- *Auditorium packed with doctors, nurses, pharmacists, & the hospital president, Dr. Miller:*

"Doctors and nurses make mistakes, and lives are being lost. These human errors need a human solution. You are the only ones that can solve this problem,"

Role of hospital leaders

"This is my hospital. This happened on my watch. This is my responsibility. I'll get to the bottom of it,"

- *Understood punishing individuals would not remedy the system causes*

Death review – "we are not looking for someone to blame…

- *We are looking for deficiencies in the hospital's system that has allowed failures to come together with these tragic results"*

William Brody, president Johns Hopkins University echoed this

- *"We really need to redesign the whole system from the inside out," - "This is a revolution."*

The Medical Management Centre
Karolinska Institutet

Supported the evolving program at Hopkins

- ***Planned and carried out a pilot 8 step programme to improve safety in 2 surgical ICUs***
- ***Spread to rest of JH***
- ***One step – find staff safety concerns.***
  - ***In ICU: medication errors in transfers, ventilator care, communications.***
  - ***And reducing catheter related blood stream infections (CR_BSIs)***
- ***CDC guidelines not followed – esp residents not using barrier precautions***
- ***Intervention: Checklist, correction by nurses, feedback data.***
- ***96% drop, no CR-BSI in 9m***

The Medical Management Centre
Karolinska Institutet

VHA leaders

- ***VHA ICU improvement programme led by Pronovost***
- ***Used Hopkins approach to reduce Ventilator care and CR BSIs***
- ***VAP down by 50% (7.5 to 5.3/1000 pvds)***
- ***State leaders***

The Medical Management Centre
Karolinska Institutet

Michigan Hospital Association (MHA) Keystone programme

- *Nearly all ICUs participated – apply CR BSI bundle*
- *Overall CR BI rate per 1000 catheter days after*
- *3 months Median fell from 2.7 to 0*
- *18 months mean 7.7 to 1.4*
- *Cost of each $12k-$54k*
- *Pronovost et al 2006 NEJM*

The Medical Management Centre
Karolinska Institutet

National leaders

- ***Established NNIS measurement and staff for hospital based infection control (National Nosocomial Infections Surveillance System)***
- ***AHRQ funded Michigan programme***
- ***Federal-level context factor hindering implementation - enforcement of patient privacy regulations by a federal authority.***
- ***The reaction of individuals and organisations at different levels then influenced change to this national context factor.***

Conclusions

- ***Leaders ST: instinctive symbolic action from sincerity***
- ***Create context of systems, culture, resources, procedures***
- ***Passion, persistence and procedures***

"3Ps" of the science and politics of improvement

- **"1P"=People**
  - The core project team & associates,
  - the players,
  - and the psychology, power and politics of change.

Principle 1: involve the right people in the right way in a structure and process for implementation.

“2P”: Principles

- Involve the right people in the right way (Co-creation)
- Aims, milestones and outcomes.
- Define the actions
  - to reach each of the milestones and agree who does what in practice, and when
- Start small, test and spread
- Communicate
    - what needs to be done and why, to the other 70-90% of the service who are affected by the change.
- Feedback presented visually and continually
- Reviews and adjustments:

The Medical Management Centre
Karolinska Institutet

“3P”: Process - the steps and tasks

1. Form the structure: Form the core project team, ensure aims, milestone and outcomes are agreed and understood,
2. Agree the measures, tasks and actions: Project team assesses helpers and hinders to the change at the same time as they define the detailed actions they and others need to carry out to achieve the change.
3. Arrange ways to get feedback information
4. Start the actions
5. Review progress
6. Adjust the actions
7. Senior management review and decisions about actions till the next review

Summary

- We all have personal experience of the cost of poor quality
- Evidence that the problem is widespread
- Some preventable and evidence of effective solutions
- Some evidence of savings
- Your local business case
  - needs to estimate your implementation capability
  - Take account of payment system and time till pay-back
- Focus on Value improvement
- Unite stakeholders to work with current system and change it

What leading improvement is really like

Implications – for you?

- Any surprises?
- Have you done costings?
- Do you now need to?
- What needs to change?
- What you you need to know more about?

Where to find out more

Øvretveit, J (2009) Does improving quality save money? Health Foundation, London

Øvretveit, J (2009) Leading evidence informed value improvement in health care, Kingsham Press, Chichester, UK

Others case experiences reported on

Health foundation: http://www.health.org.uk/current_work/case_studies/

IHI: http://www.ihi.org/ihi/topics

AHRQ innovations exchange: http://www.innovations.ahrq.gov/index.aspx

Your experience making improvements

- What have you seen a leader do which affected an improvement change?
- What can only leaders do to get improvement?
- Why don’t more do it?

- DETAILS

In italics, are examples of roles which may lead improvement	**General Manager or Board member**	**Profession Leader**	**Quality Manager /Coordinator**	**Informal Leader** without formal authority in the organisation
National leaders	*Executive director of national association, organisation, or board member*	*President / chairperson of national professional association or speciality*	*Director of quality in a national association*	*Senior respected advisor or member of a national organisation*
Purchasing leaders	*CEO/Executive director of organisation purchasing health services, or board member*	*Professional advisor to purchasing organisation*	*Director of quality in a purchasing organisation*	*Senior respected opinion leader in the organisation*
Providers Top management	*CEO Executive director or board member*	*Professional advisor (e.g. CMO, CNO)*	*Director of quality in a provider organisation; Quality project leader*	*Senior clinician opinion leader*
Operations – middle management	*Head of department, Director of surgery etc*	*Head physician for physicians in one department Head of nursing for a department or division*	*Quality coordinator for a department; Quality project leader*	*Senior clinician opinion leader*
Operations – first level/front line	*Unit head manager*	*Unit leading physician or nurse*	*Quality coordinator for a team or small unit; Quality project leader*	*Senior clinician opinion leader*
Patient contact or service	*Nurse, Physician, medical secretary, pharmacist, lab technician, transport worker, cleaner.*			

Hopkins known for clinical research and centre of excellence.

- ***Environment conducive to trying different patient safety practices.***
- ***Pronovost and other colleagues influenced the hospital to provide different infrastructure supports***
- ***Helped their test and development of ICU safety practices, and then their spread throughout the hospital.***
- ***eg if physicians did not follow every step on the checklist, the nurses were supported to intervene by higher management.***
- ***Through conferences and other media (which are 'supportive con- texts'), Pronovost spread the ideas and evidence,***
- ***Influenced VHA and the Michigan Hospital Association (MHA) to start a formal programme.***
- ***MHA and Michigan state created some context factors which influenced implementation.***
- ***One federal-level context factor hindering implementation - enforcement of patient privacy regulations by a federal authority.***
- ***The reaction of individuals and organisations at different levels then influenced change to this national context factor.***

The Medical Management Centre
Karolinska Institutet

Local context factors

Found in the research to be important to getting this change were:

- ***characteristics of the unit and of the hospital,***
- ***leadership,***
- ***knowledge,***
- ***culture,***
- ***communication, and***
- ***pre-existing performance***

(Pronovost et al. 2006).

The Medical Management Centre
Karolinska Institutet

Typically

'environmental features' are: financial, political, regulatory, profession-related, and change readiness.

For the chosen improvement,

- ***a leader and their implementation team may find research into a similar change***
- ***which has investigated context or barriers to implementation.***

Can give a starting point for an assessment.

Failing this, it is possible to use general theories of environmental factors supporting change which may be relevant.

The Medical Management Centre
Karolinska Institutet

Environment for improvement

Everything which is not the change, implementation or outcome'.

- *Many aspects play no role in helping or hindering implementation but some are critical.*
- *The context factors important for implementing*
- *a computer physician order entry system (CPOE) are likely to be different to those for*
- *prophylactic antibiotics before surgery to reduce post surgical infection.*

Different context factors

Influence implementation in different ways. These can be grouped into background, necessary, and direct context factors:

***Background** condition*

- *helpful for implementation action and generally supportive of the improvement*
- *(e.g. good safety culture, adequate staff- ing, posters asking patients to ask if the staff member washed their hands [the absence of this condition may increase risk of harm]).*
- *These conditions reduce 'latent failure' factors.*

***Necessary** but not sufficient context factor for implementation*

- *Implementation far less likely without this factor*
- *e.g. hand washing facili- ties and alcohol rubs available (a necessary factor may also be a direct influence).*

***Direct** influence:*

- *on implementation actions, or on the change intended,*
  - *e.g. disciplinary action for failure to follow hand hygiene pro- cedures (individual/behaviour change level), or accreditation standard requiring a procedure for this.*

Conclusions

1. This was new or surprising, for me…

2. The most useful idea for my work was…

3. What I would like to find out more about…