Diffusion of Innovations Theory

2nd National Medicine Reconciliation Workshop - 6 September 2011
Diffusion of Innovations (definition)

- Spread of messages that are perceived as new ideas

- “the process by which an innovation is communicated through certain channels over time among the members of a social system”

Innovation and Quality in Health Care

- Health care is among the best endowed of all industries in the richness of its science base.

- Failing to use available science is costly and harmful: (leads to **overuse** of unhelpful care, **underuse** of effective care, and **errors** in execution).

- So **WHY** is the gap between knowledge and practice so large?

- **Why do clinical care systems not incorporate the finding of clinical science or copy “best known” practices reliably, quickly into their work simply as a matter of course?**
Diffusion of Innovations is a major challenge in all industries, including healthcare

- Healthcare is constantly evolving. Wave after wave of new technologies, funding models, IT/IS, policy, etc. Change can be difficult and uncertain
- The pace at which new ideas about health care is spread through the system is a priority of healthcare professionals; Such changes can have major impacts on cost, quality and patient satisfaction
- Healthcare is rich in evidence-based innovations, yet they often disseminate slowly –if at all
- Though often described as bureaucratic and incrementally changing, healthcare is also a very dynamic and innovative field. Around the globe people are working to create new ways to provide better care, find cures, and improve health.
- So...Why are certain new ideas adopted more quickly than others?
Influencing people can be challenging. . .

If you can’t change the people, change the people.  

Annon.

“There is no kingdom too small for a doctor to be king of.”  

John Green,  
once chief executive of  
The Royal Society of Medicine

“Leaders are designers, teachers and stewards”  

Peter Senge
## Problem Definition 1: System complexity

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Problem Definition 1: Endemic predilection for Chinese whispers

- Level 6: 111.18
- Level 5: 12.13
- Level 4: 4.72
- Level 3: 3
- Level 2: 1
- Level 1: 1

141.7 Staff

WTE Span of Control Ratio

141.7 Staff
Workers 120.12
Supervisors 21.58

5.57:1

21.58 “Supervisors”

Administrative Support FTEs only
The theory

4 main elements:
1. The innovation (idea)
2. Communication channels
3. Time
4. The social system (the context/organisation)
Science behind DoI

Figure 2. Adopter Categorization on the Basis of Innovativeness Reprinted with permission from Rogers.21.

- Innovators: 2.5%
- Early Adopters: 13.5%
- Early Majority: 34%
- Late Majority: 34%
- Laggards: 16%

Time to Adoption (SDs From Mean)


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Any innovation is first adopted by a few people
As more use it, others see it in use, and if the innovation is better than what went before, others begin to use it
Once the diffusion reaches a level of critical mass, it proceeds rapidly
At some point, the innovation reaches a part of the population that is less likely to adopt it, and diffusion slows to a point of saturation

Figure: The Diffusion S-Curve (Source: Institute for the Future)
Managing the anxieties of change

Current State

Anxiety 1

Change process delivers: Insight

A1 > A2

Future State

Anxiety 2

Change process delivers: Confidence

francisgroup
MRSA..THE FORGOTTEN MASSACRE

OUR SQUALID HOSPITALS

The deadly superbug that puts Britain’s hospitals to shame

THE PLAGUE 2004
Filthy NHS wards kill 5,000 a year

www.clean-safe-care.nhs.uk
The three month rolling average has continued to reduce in July 2008, ensuring the achievement of the Q1 target of 321.

The rolling average each month in Q1 achieved the 321 target.
Why are some Trusts still struggling?

- Senior leadership have not completely adopted agenda
- Not part of “strategic direction”
- Not perceived by staff as priority
- No consequences for non-compliance
- Accountability not devolved – still heavy reliance on Infection Control Teams to “sort”
- Action plans without clear outputs, outcomes, timescales, lead
- Benefits of root cause analysis not understood or exploited
- Infection Control Team – not active and visible
Sustaining reductions

• Doing the right things…. every time
• Management systems & processes to support the delivery of clean, safe care
• Culture of the organisation is crucial
  – quality and safety driving efficient effective care
• Relevant sustainability features - “When new ways of working and improved outcomes become the norm….,” are known, understood and embedded
• Board to ward culture
Sustaining reductions – key features

- Senior leadership engagement
- Clinical leadership engagement
- Staff involvement & training
- Staff behaviours towards change

- Benefits beyond helping patients
- Effectiveness of system to monitor progress
- Credibility of evidence
- Adaptability of improved processes

- Fit with organisational aims
- Fit with culture
- Roles & accountability aligned
- Effective communications

Source – Prof D. Gustafson  Dr. L. Maher – The model for sustainability 2007
Reducing infection - A multifaceted approach

- **Choice**
- **Regulation**
- **Commissioning**
- **Monitor**
- **Finance**

**Improvement Science**

- Reducing infection requires cultural, behavioural, technological and organisational change

**Reform levers**

- Fresh pair of eyes
- Help focus effort to get biggest gain

**Targeted Support**

- Targets make subject organisational priority
- Reporting up focuses management attention

**Performance Management**

www.clean-safe-care.nhs.uk
Features of successful organisations

- Absolute priority - zero tolerance philosophy
- Led and championed by CEO and Execs
- Board sees how HCAIs fit with quality, effectiveness and efficiency
- High profile microbiologist and Infection Prevention team
- Real understanding of issues
- Effective use of information and data with action plans
- Every case is used to learn and improve
- Clear accountability with consequences at every level
Journey to clean, safe care

Clear Vision → Leadership → Accountability → Assurance ← Measurement ← Competence

www.clean-safe-care.nhs.uk
Tools and resources

Contributing to this trend has been the introduction and implementation of a variety of tools and resources including:

- Saving Lives
- **Essential steps to safe clean care**
- **Going Further Faster II: Applying the learning to reduce HCAI and improve cleanliness**
- **Board to Ward: How to embed a culture of HCAI prevention in acute trusts**
- **Ambulance Guidelines: Reducing infection through effective practice in the pre-hospital environment**
NHS is ‘winning war on hospital bugs’

Hospitals winning the war on MRSA

Superbug infections fall at last

Battle against superbugs ‘being won’
Summary

- Manage DoI and Improvement like you would any other process: systematically

- Invest in organisational change management

- Align every possible lever – governance, funding, organisational, performance, clinical