Patient Safety and Implementation Science: New Developments

Jeffrey Braithwaite, PhD
Professor and Director
Australian Institute of Health Innovation

Virginia Mumford, PhD
Post-doctoral Research Fellow
Australian Institute of Health Innovation

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Part 1. OECD Key Messages
1. Patient safety is a critical policy issue. 
   Patient harm is estimated to be the 14th leading cause of the global disease burden.
   In some OECD countries, the burden is similar to that of chronic diseases, e.g. multiple sclerosis and some types of cancer.

2. The cost to patients, healthcare systems and societies is considerable.
   15% of hospital expenditure and activity in OECD countries can be attributed to treating safety failures.
   The cost includes loss of trust in the health systems, in governments and in social institutions.
OECD Key Messages

3. **Most of the burden is associated with a few common adverse events.**
   
   *These include hospital-associated infections, VTE, pressure ulcers, medical errors, and wrong or delayed diagnosis.*
   
   *It is estimated that every adult in the US will experience a diagnostic error at least once during their life time.*

4. **Greater investment in prevention is justified.**

   *Many adverse events can be systematically prevented through better policy and practice.*
   
   *It is estimated that in the US (2010-2015), USD 28 Billion has been saved by systematically improving safety.*
5. **Solid foundations for patient safety need to be in place.**
   A national value-based approach should begin with investing in fundamental system-level initiatives.

6. **Active engagement of providers and patients is critical.**
   Organisational-level initiatives form an important part of an integrated patient safety strategy;
   E.g. clinical governance frameworks, patient-engagement and building a positive safety culture.
OECD Key Messages

7. Innovation at the clinical level is enhanced through national leadership.
   
   Micro-level interventions at the clinical practice level can be implemented to minimise harm.
   
   Vision and leadership at the highest level of government is required.

8. Practical approaches exist to identify national priorities for action.

   A system-wide priority setting exercise with broad range of stakeholders can build consensus and inform safety strategies to reduce patient harm, releasing scare resources to improve population health and wellbeing.
OECD Key Messages

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2. The cost to patients, healthcare systems and societies is considerable.
3. Most of the burden is associated with a few common adverse events.
4. Greater investment in prevention is justified.
5. Solid foundations for patient safety need to be in place.
6. Active engagement of providers and patients is critical.
7. Innovation at the clinical level is enhanced through national leadership.
8. Practical approaches exist to identify national priorities for action.
Part 2. Defining implementation science
Implementation science

• Promotes the systematic uptake of clinical research findings [on **effectiveness**, **reliability**, **safety** and **appropriateness** in health care] and puts these into practice

• Includes the study of influences on **healthcare professional** and **organisational behaviour**
Implementation science

- Helps explains why, within complex adaptive systems like health services, interventions that work in one setting may not spread to other settings.

- Seeks to explain variance in translational outcomes based on the impact of local context.
So, what works at a local level?

Interventions “generally effective” to reduce patient harm, improve process reliability or patient outcomes

- Clinical pathways; standardised protocols
- Audit and feedback
- Local opinion leaders
- Local consensus processes
- Small group interactive continuing medical education
- Electronic patient management systems

Cochrane Effective Practice and Organisation of Care Group (EPOC) [http://epoc.cochrane.org/epoc-reviews](http://epoc.cochrane.org/epoc-reviews)
Scott I Internal Medicines Journal 2009
Royal Nursing Association of Ontario *Implementation Toolkit* 2002
Brand et al IJQHC 2012
Part 3.
Models, studies and theories for implementation science
Model: Improvement cycle

Model: Spread

Model: Going full scale

Leadership, communication, social networks, culture of urgency and persistence

Learning systems, data systems, infrastructure for scale-up, human capacity for scale-up, capability for scale-up, sustainability

Model: implementation stages

PHASE 1
Preparing for change

PHASE 2
Capacity for implementation
A) People
B) Organisational

PHASE 3
Types of implementation

PHASE 4
Resources; Leverage

PHASE 5
Sustainability

Desirable implementation enabling features (eg. communication, incentives, feedback)

[Source: Braithwaite et al, IJQHC 2014 p 325]
Studies
Study: CareTrack, eligible encounters at which appropriate care was received, 2009–2010

Condition
- Coronary Artery Disease
- Dyspepsia
- Chronic Heart Failure
- Hypertension
- Low Back Pain
- Panic Disorder
- Chronic Obstructive Pulmonary Disease
- Diabetes
- Venous thromboembolism
- Osteoporosis
- Depression
- Atrial Fibrillation
- Cerebrovascular Accident
- Community Acquired Pneumonia
- Osteoarthritis
- Preventive Care
- Surgical Site Infection
- Asthma
- Hyperlipidemia
- Obesity
- Antibiotic use
- Alcohol Dependence

[Percentage of appropriate care received]

[Runciman WB et al. MJA 2012.]
Translational Cancer Research Network - 2012

Each dot represents a TCRN member; each line a collaborative tie.
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Theories and ideas
Theory: PARIHS Framework

- The Promoting Action on Research Implementation in Health Services framework

\[ SI = f (e,c,f) \]

Source: Stetler et al., 2011
Theory: Systems inertia

One system’s journey across the fitness landscape

Local fitness maximum

System fitness

Local fitness minimum

Possible system attributes (phenotype)

Source: Coiera BMJ 2011;342:bmj.d3693
And healthcare really looks like this ...
Idea: The 10% or the 90%?
Part 4. The future
The future—taking on the translational challenge

- Look for what you do well—and where
- Spillover effects—raise the bar on one thing, and you secure other benefits
- Beware systems inertia
- Leverage resources at the frontline
• Implementation and diffusion
• Levering eHealth
• Consumer engagement
• Writing a policy is not implementation
Part 5. Conclusions
Selected references


Recent Published Books

- Culture and Climate in Health Care Organizations
- Resilient Health Care
- The Resilience of Everyday Clinical Work
- Healthcare Reform, Quality and Safety
- Reconciling Work-as-imagined and Work-as-done
- The Sociology of Healthcare Safety and Quality
Jeffrey Braithwaite, PhD

**Foundation Director**
Australian Institute of Health Innovation

**Director**
Centre for Healthcare Resilience and Implementation Science

**Professor, Faculty of Medicine and Health Sciences**
Macquarie University
NORTH RYDE NSW 2109

Email: jeffrey.braithwaite@mq.edu.au
Web: jeffrey.braithwaite.com
http://aihi.mq.edu.au