AUSTRALIAN INSTITUTE OF HEALTH INNOVATION Faculty of Medicine and Health Sciences



Patient Safety and Implementation Science: New Developments

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Part 1. OECD Key Messages



1. Patient safety is a critical policy issue.

Patient harm is estimated to be the <u>14th leading cause</u> of the <u>global disease burden</u>.

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.

<u>15% of hospital expenditure and activity</u> in OECD countries can be attributed to <u>treating safety failures</u>.

The cost includes loss of trust in the health systems, in governments and in social institutions.



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 <u>every adult</u> in the US will experience a diagnostic error <u>at least once</u> during their life time.

4. Greater investment in prevention is justified.

Many adverse events can be <u>systematically prevented</u> 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 <u>fundamental system-level initiatives</u>.

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.



7. Innovation at the clinical level is enhanced through national leadership.

<u>Micro-level interventions</u> at the clinical practice level can be implemented to minimise harm.

<u>Vision and leadership at the highest level of government is</u> required.

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

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



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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



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

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- Local opinion leaders
- Local consensus processes
- Small group interactive continuing medical education
- Electronic patient management systems

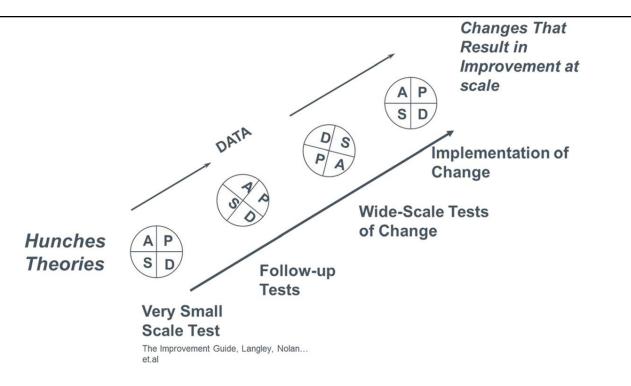
Cochrane Effective Practice and Organisation of Care Group (EPOC) <u>http://epoc.cochrane.org/epoc-reviews</u> Scott I Internal Medicines Journal 2009 Royal Nursing Association of Ontario *Implementation Toolkit* 2002 Brand et al IJQHC 2012



Part 3. Models, studies and theories for implementation science

Model: Improvement cycle

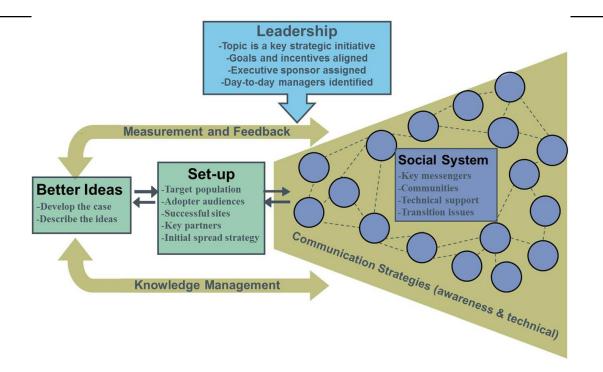




[Source: Baker et al. Implementation Science (2016) 11:12 p 4]

Model: Spread

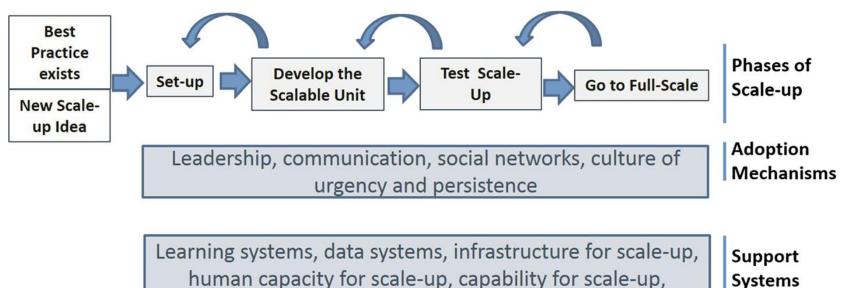




[Source: Baker et al. Implementation Science (2016) 11:12 p 5]

Model: Going full scale





sustainability

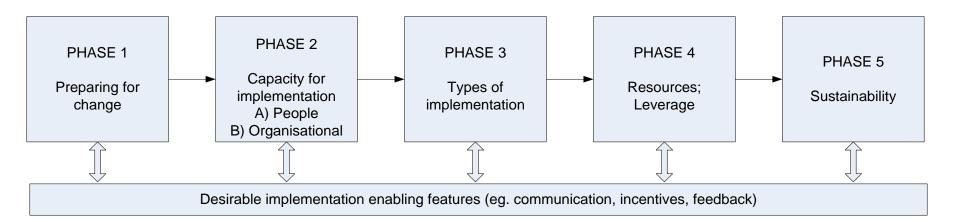
Systems

[Source: Baker et al. Implementation Science (2016) 11:12 p 5]

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Model: implementation stages





[Source: Braithwaite et al, IJQHC 2014 p 325]



Studies

Study: CareTrack, eligible encounters at which appropriate care was received, 2009-2010



Condition Coronary Artery Dis Dyspepsia		ł						,		 	
Chronic Heart Failu	re								•	•	
Hypertension							—	•			
Low Back Pain							-				
Panic Disorder				-							•
Chronic Obstructive	e Puln	nonary	Diseas	е				⊢ •−	•		
Diabetes								-			
Venous thromboem	bolis	m				-					
Osteoporosis			-				•			-	
Depression											
Atrial Fibrillation						—	<u> </u>				
Cerebrovascular Ac	cider	nt			—						
Community Acquire	d Pn	eumoni	а	—					-		
Osteoarthritis					—						
Preventive Care				-							
Surgical Site Infecti	on										
Asthma		1			-			-			
Hyperlipidemia				—							
Obesity			H	-							
Antibiotic use	_			_					-		
Alcohol Dependenc									-		
/ loonor Dependence											
				1							
	0	10	20	30	40	50	60	70	80	90	100

Percentage of appropriate care received

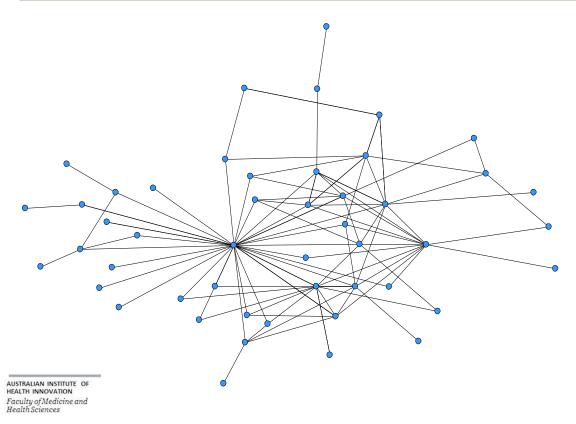
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[Runciman WB et al. MJA 2012.]

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Translational Cancer Research Network - 2012

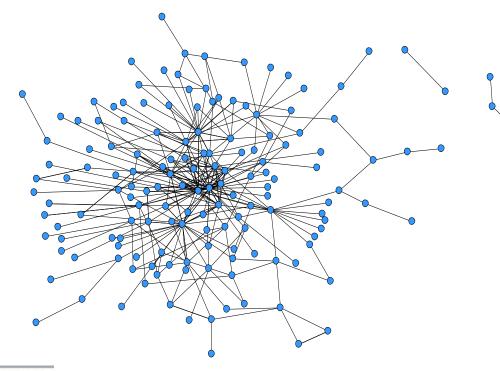




Each dot represents a TCRN member; each line a collaborative tie.

Translational Cancer Research Network - 2013

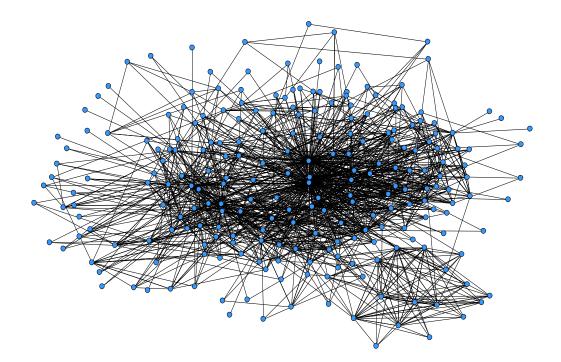




Each dot represents a TCRN member; each line a collaborative tie.

Translational Cancer Research Network - 2015





Each dot represents a TCRN member; each line a collaborative tie.



Theories and ideas

Theory: PARIHS Framework

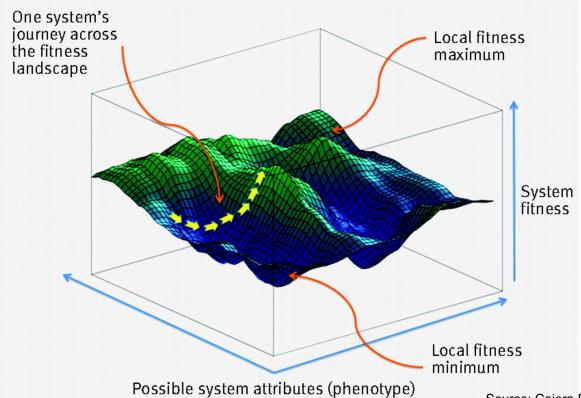


 The Promoting Action on Research Implementation in Health Services framework

SI = *f*(e,c,f)

Theory: Systems inertia

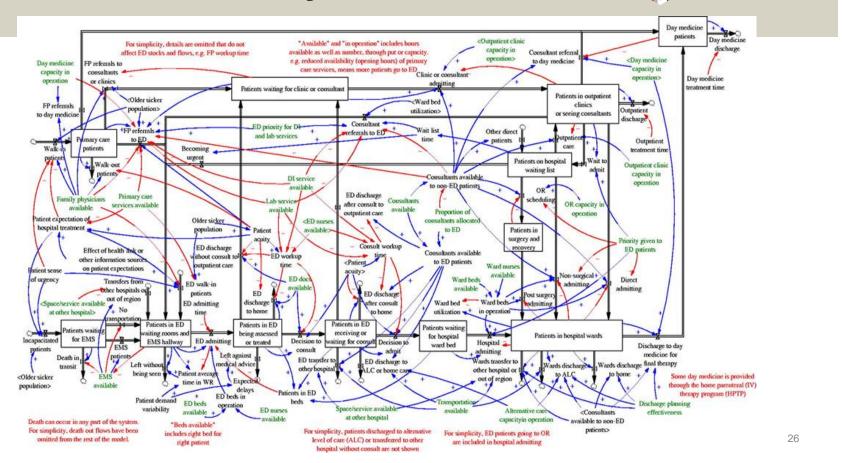




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Source: Coiera BMJ 2011;342:bmj.d3693

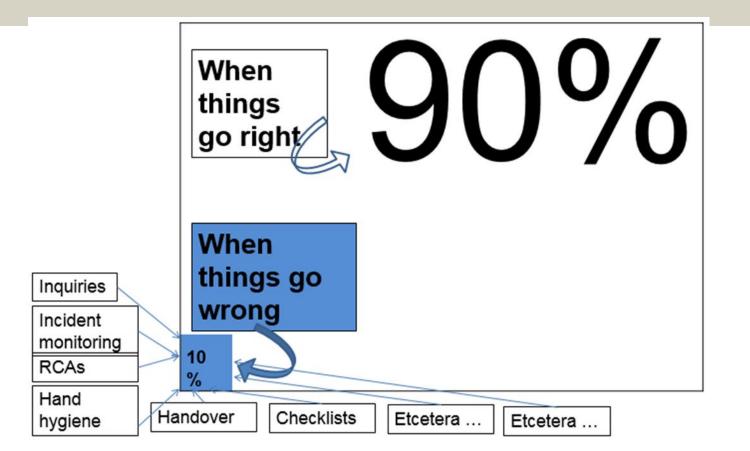
And healthcare really looks like this ...



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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

..... Continued



- Implementation and diffusion
- Levering eHealth
- Consumer engagement
- Writing a policy is not implementation



Part 5. Conclusions



Selected references



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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

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Wikipedia: http://en.wikipedia.org/wiki/Jeffrey_Braithwaite