The science of large systems change: *Innovation from within*

Rick Iedema  
Professor, Director  
Centre for Health Communication  
University of Technology Sydney
Main points

What is happening

- **Service complexity** shifts organisational centre of gravity from the top to the frontline
- ‘**Frontline’ harbours knowledge** about practice that is most up-to-date and acute
- ‘**Frontline adaptiveness**’ operates through relationships capable of and committed to (rapid) adaptation and response

What this means: priorities

- Relationships [Erskine et al]
- Stability (end rotations and acting roles)
- Continuity of accountability and responsibility (limit audit creep)
- Frontline that understands and is committed to managing local complexity
- Functional change (reduce contextual perturbation)
- **Focus on the realities and affordances of existing practice**
Michigan Keystone project: CLAB prevention checklist into 100 ICUs

Atul Gawande

- Rigorous execution of checklist process
- ‘Dressage’ approach to improvement
  - adoption of prescribed technique
- Compliance

Charles Bosk et al

- Checklist proposal adapted to existing processes, relationships, interests and understandings
- Political view of improvement
  - strategies & tactics
  - compromises, learning
- Social adaptive process

Data

‘the numerical supremacy syndrome’

“Is [this preference for numbers] indicative of the distance that we create [and maintain] between who we are, what we do, and how we talk about these things?”

‘The story-telling problem’

• “If you ask a world class tennis player how he hits a top spin forehand they will always say this, ‘Right at the moment of impact, I roll my wrist’.

• Well, [the coach] took video tapes of world class tennis players hitting top spin forehands and … noticed that no one ever rolled their wrist when they hit the ball.

• Yet all these guys are going around the country giving seminars teaching young kids how to hit a top spin forehand and saying, … you gotta roll your wrist just like that’.

• They had no idea.”


➔ Stories and data may alert us to issues, but they do not explain how to change practice.
Practice observation using video: *What do we see?*

**CONTEXT:** What else is going on

**PAST:** What happened leading up to this

**SYSTEM:** What is pervasive and constraining about this scene

**HABIT:** How are we collectively implicated in what we do

**FUTURE:** What happened next

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**Video reflexivity:** storing improvement impulse ‘in the body’
Towards a pedagogy for complexity

Learning for stability
- Fact & rule memorisation
- Authority resides elsewhere
- Representational knowledge: numbers, reasoning
- Execution routines
- Measurement and monitoring from a distance: fixed benchmarks
- **Cognition**: ‘what I know and how I apply it’

Learning for complexity
- Knowledge design
- Authority resides in us
- Experiential knowledge: visualisation, emotion
- Actors’ inter-dependence
- Evaluation of local, contextualised practice
- **Practice**: ‘what we do and what its effects are’
Video reflexivity - applications

- CPOE
- Clinical team communication
- Service space complexity
- Handovers/ward rounds
- Infection control
- End-of-life care

they're up there instead of down there
Global spread of video feedback

• Australia:
  – UWS (Prof Wendy Hu, medical workplace based assessment)
  – UTS (Prof Carolyn Homer, Birth unit design)
  – Freemantle Hospital (Dr E Stewart-Wynne, ward round evaluation)
  – Flinders University (Dr Aileen Collier)

• Europe:
  – Worthing Hospital (UK, Dr Gordon Caldwell – ward round redesign)
  – Utrecht Hospital and 6 affiliated hospitals (Prof Cor Kalkman – post-operative processes)
  – Maastricht Hospital (Dr Jessica Mesman, NICU sterility processes)

• USA
  – Kaiser Permanente (Dr Estee Neuwirth and colleagues)
  – Indiana University School of Medicine (Department of Paediatrics) and Women’s Deaconness Hospital, Newburgh Indiana, USA (Dr Ken Hermann & Dr Katherine Carroll)
  – Mayo Clinic (from March 2014: Dr Katherine Carroll)
  – eoi: Armstrong Institute, Johns Hopkins
So ... what is the relevance of local reflexivity for large systems change?

• ‘the small embodies the large’
• less structure change; more ‘receptive attentivity’ to
  – here-and-now practice
  – our imbrication in the systems, habits, and identities that define current practice (Dunne 2011)
• maximum adaptive capacity where there is maximum complexity - the frontline
• pre-condition: more stable, more responsive and more responsible relationships -> better systems


“Key large system change success factors”

1. Key people leading the change (strategic or blunt end)
2. Continuity of key personnel
3. Focus on clinical-management relationships
4. Clear goals and priorities
5. A supportive organisational culture and cooperative networks
6. Distributed leadership ‘from board to ward’
7. Engagement of all professions
8. Nurturing of followership as much as of leadership

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