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Faculty of Medicine and Health Sciences

Patient Safety
Global Ministerial Summit 2018

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Safety-I, Safety-II and the resilience of health care

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Australian Institute of Health Innovation

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Our mission is ***to enhance local, institutional and international health system decision-making through evidence****; and* ***use systems sciences and translational approaches to provide innovative, evidence-based solutions*** *to specified health care delivery problems.*

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After decades of improving the healthcare system, patients still receive care that is highly variable, frequently inappropriate, and too often, unsafe

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60%: Delivery of care in-line with level one evidence

30%: Wasteful health expenditure

10%: Rate of adverse events

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Economic burden

Harm due to medication safety alone costs Australia approx. AUD$1.2 billion (¥98.9 billion) annually

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患者の安全対策

- Root cause analysis
- Hand hygiene
- Medication safety
- Accreditation

Etc etc …

Value based approach

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Improving patient safety using limited resources should adopt a systems approach that considers contextual requirements and the interplay between macro-, meso- and micro-level interventions

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[Slawomirski et al. 2017. Economics of patient safety]

High impact—low cost (n=23)

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Intervention	Avg. impact/cost ratio
VTE prevention protocols	1.88
Central line catheter insertion protocols	1.83
Ventilator-association pneumonia minimization protocols	1.80
Urinary catheter use and insertion protocols	1.77
Peri-operative medication protocols	1.73
Procedural/surgical checklists	1.72
Pressure injury (ulcer) prevention protocols	1.80
Patient hydration and nutrition standards	1.77

[Slawomirski et al. 2017. Economics of patient safety]

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How do we do things?

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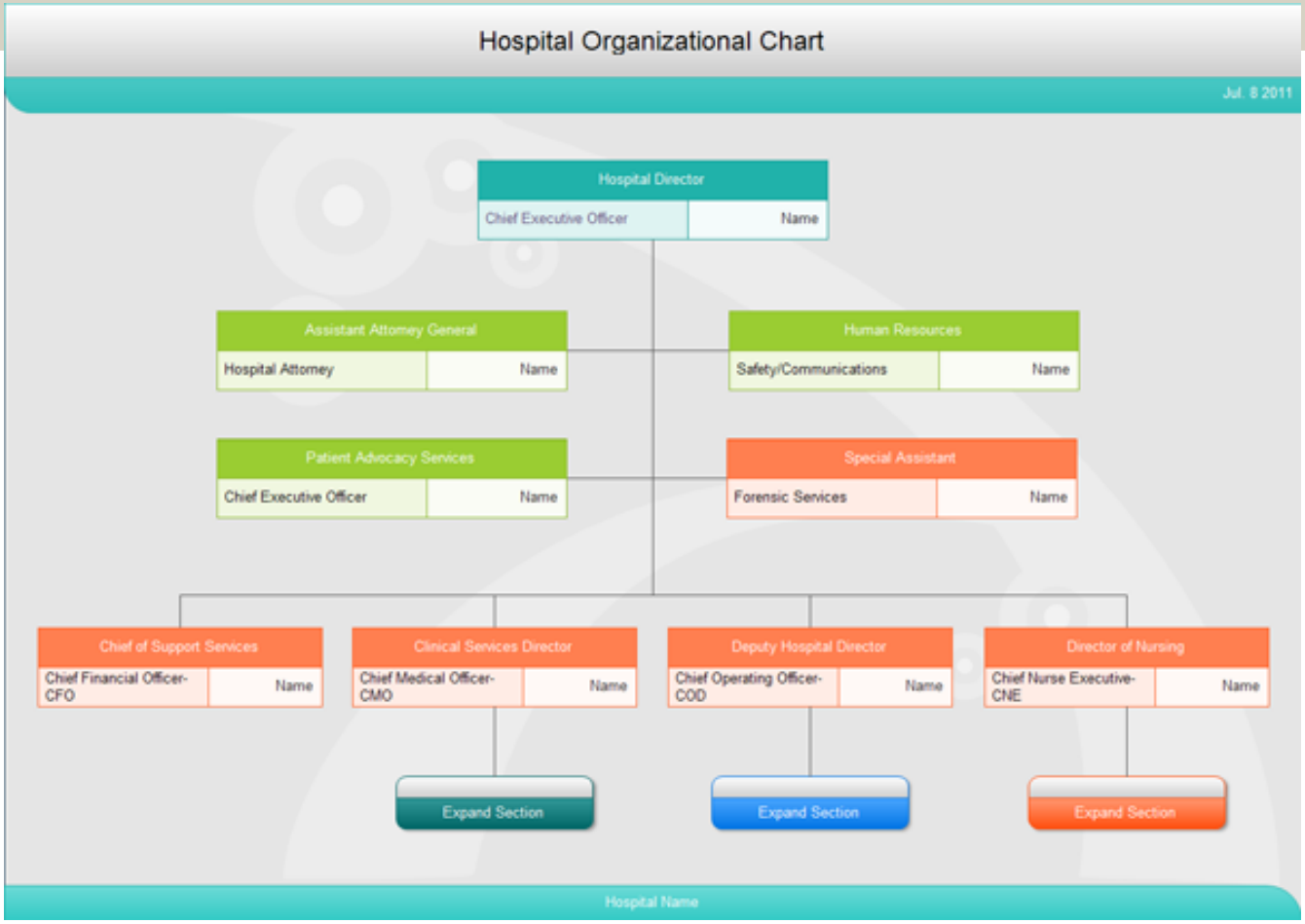
If your mental model looks like this …



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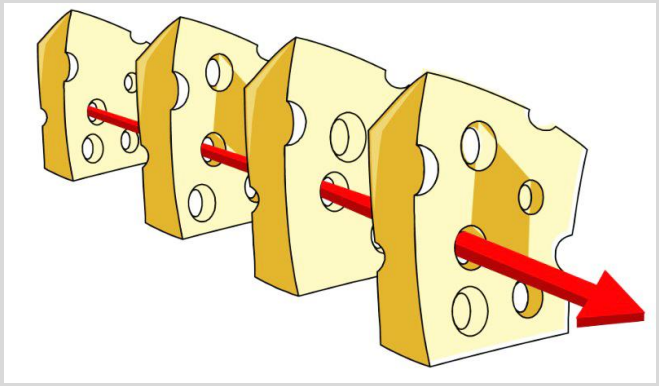
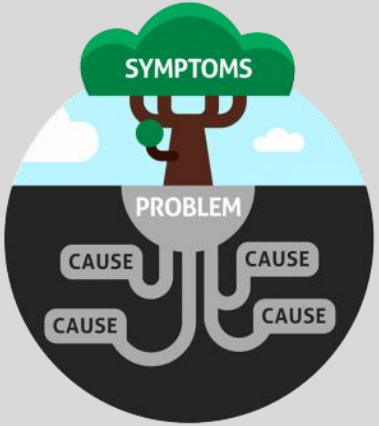
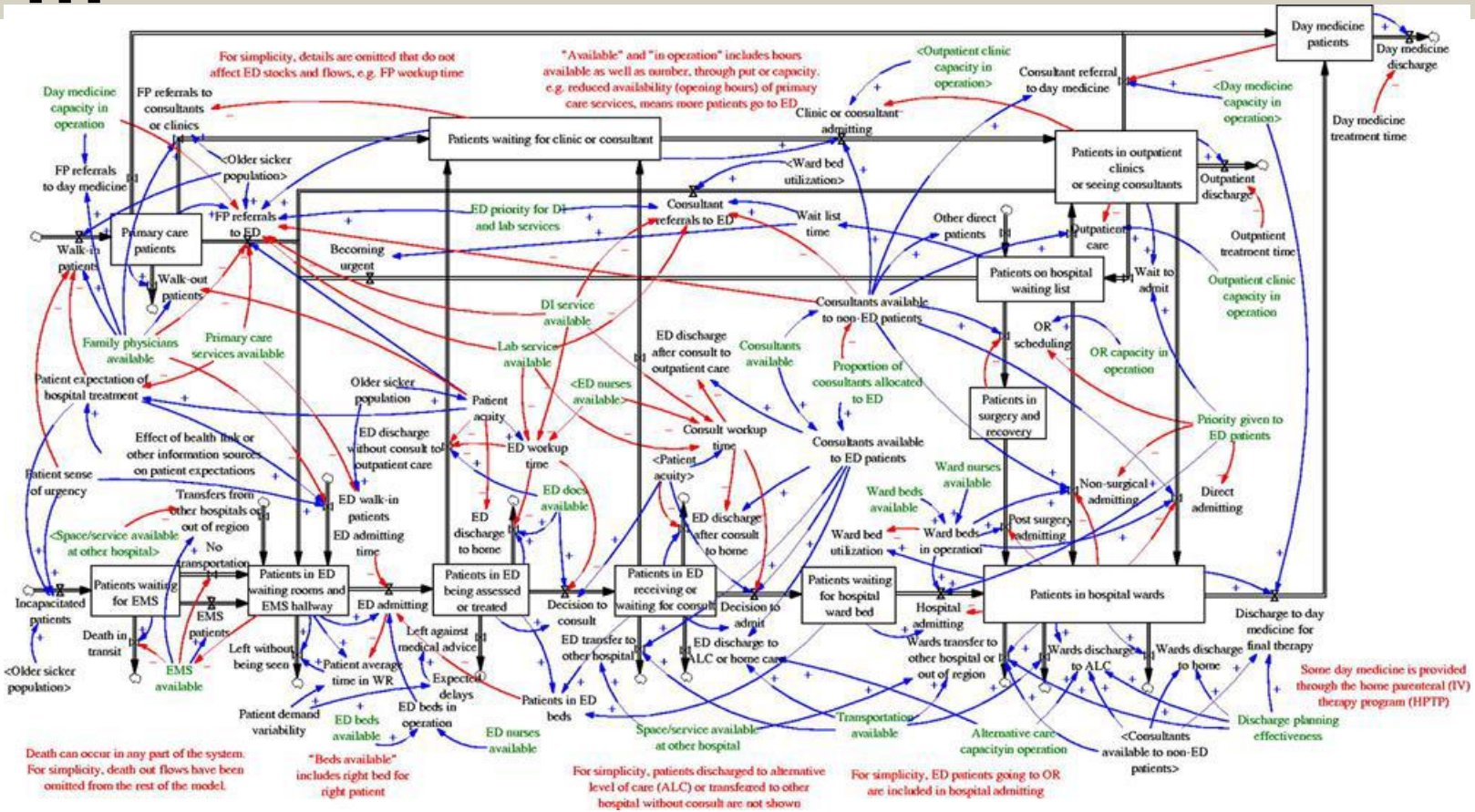
This is how you will deal with error …
これはあなたがエラーに対処する方法です...





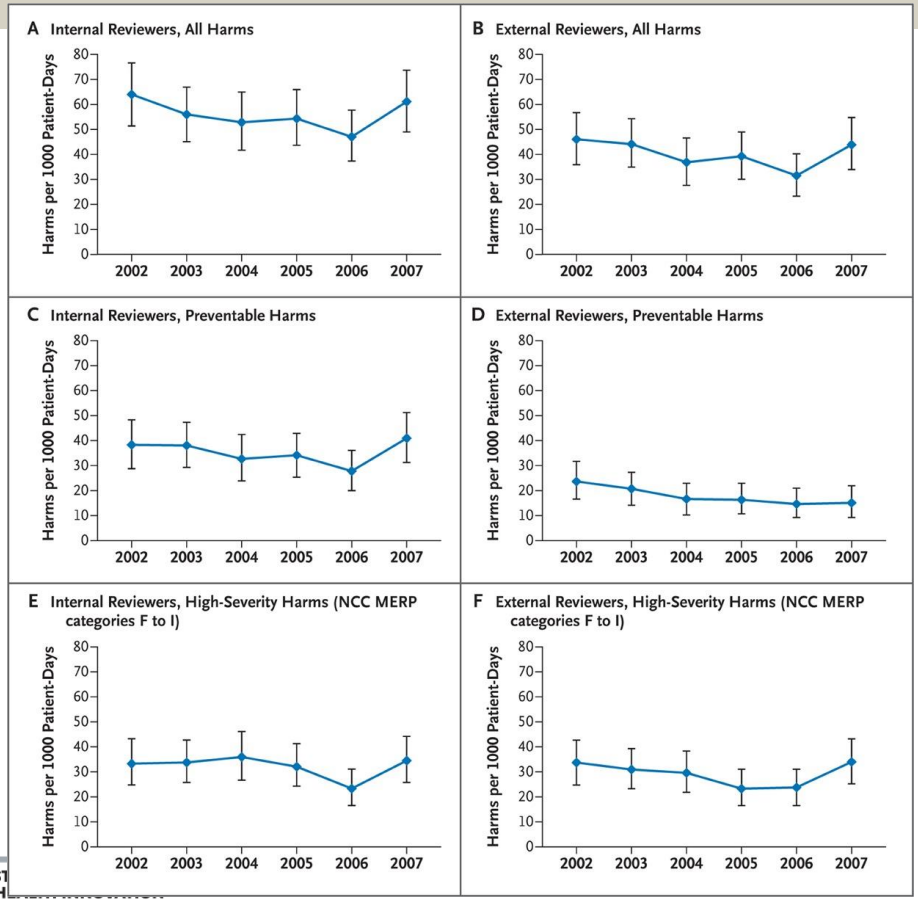
But health care really looks like this …



[Braithwaite, 2015]

And … it's very hard to make large-scale change

Example: harm per 1000 patients



Ten N. Carolina hospitals

Measures of adverse events using the global trigger tool

Little change in adverse event rates over six years

[Landrigan et al. NEJM 2010]

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New ideas and innovations in patient safety:

- Safety-I and Safety-II
- WAI and WAD

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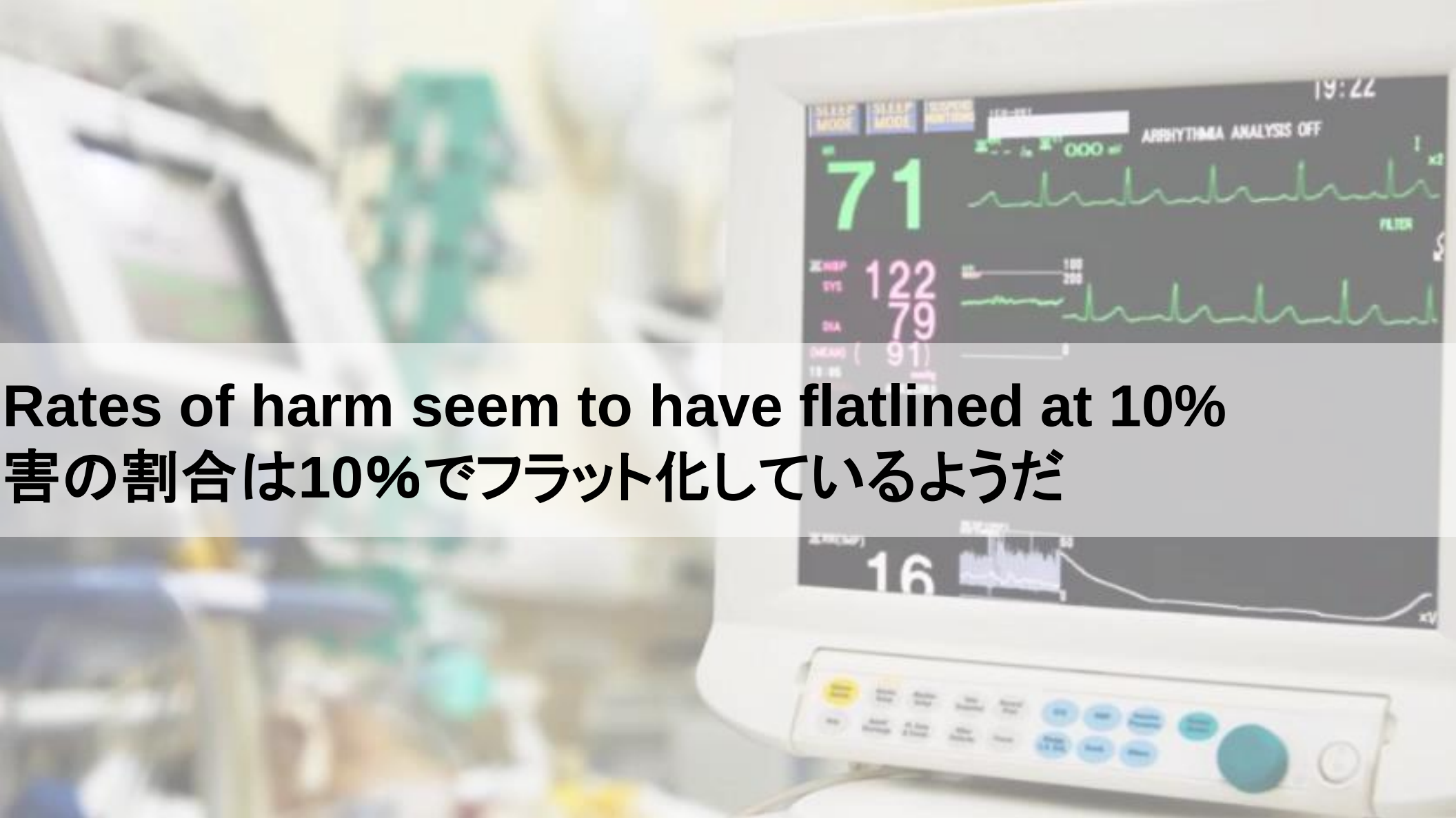

Rates of harm seem to have flatlined at 10%
害の割合は10%でフラット化しているようだ

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So we need new ideas and innovations in thinking about patient safety

だから、患者の安全を考える上で新しい考え方と革新が必要です

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“Resilience is the intrinsic ability of a system to adjust its functioning prior to, during or following changes/ disturbances in order to sustain required operations under expected or unexpected conditions”

Here are some ideas from RHC thinking...

[Hollnagel et al. Resilient Health Care, 2013]

Safety-I and Safety-II

The amazing thing about health care isn't that it produces adverse events in 10% of all cases but that it produces safe care in 90% of cases

安全性-I

エラーが発生するのを最小限に抑え、損傷が発生しないようにする方法

個々の罪悪感：人為的ミスに起因するエラーと有害事象 リスク管理：定期的に回避するためにエラーから学ぶ 標準化、合理化、必須プロセスへの投資

安全性-II

どのように正常な適応活動が安全かつ効果的なケアに貢献していますか？

ほとんどの場合臨床作業に適していることを認識しています このような複雑な適応システムでは、さまざまな健康状態で実際に作業がどのように行われるかをよりよく理解する必要があります

Safety-I

Where the number of adverse outcomes is as low as possible

不利な結果の数が可能な限り少ない場合

Trying to make sure things don't go wrong

Safety-II

Where the number of acceptable outcomes is as high as possible

許容される結果の数が可能な限り高い場合

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Trying to make sure things go right

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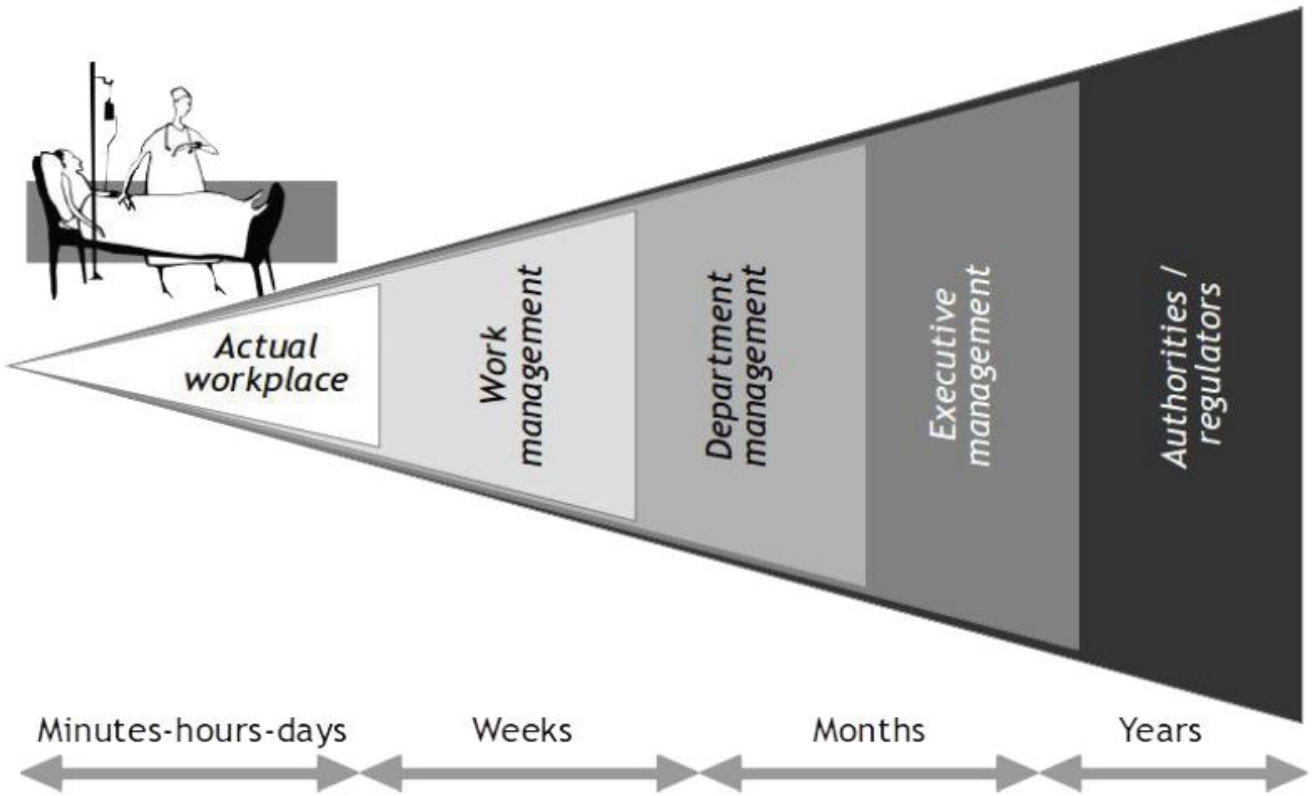
Few people have looked at why things go right so often

WAI / WAD



[Hollnagel, 2015]

WAD—workarounds

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Healthcare is a complex adaptive system delivered by people on the front line who flex and adjust to the circumstances

ヘルスケアは、状況に柔軟に適応する最前線の人々によって提供される複雑な適応システムです

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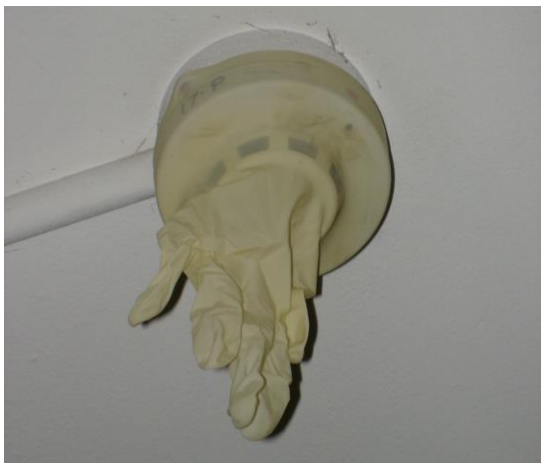
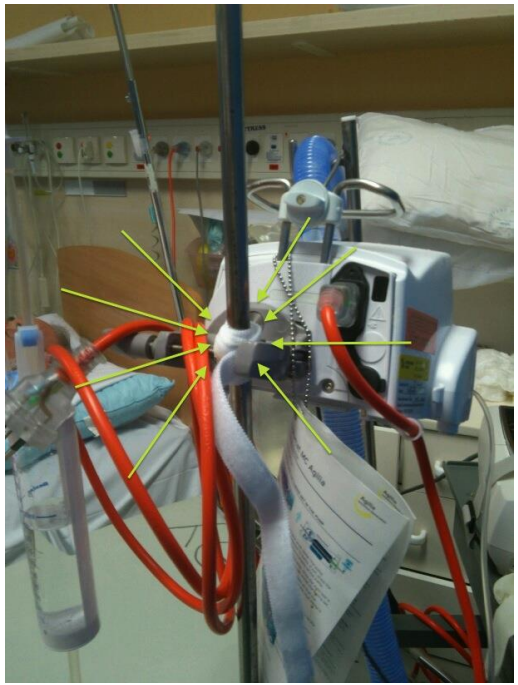
[Braithwaite et al. 2013. Health care as a CAS. In. Resilient Health Care]

WAD—workarounds

Glove placed over a smoke alarm, as it kept going off due to nebulisers in patients' rooms





A leg strap holding an IV to a pole, as the holding clasp had broken

Plastic bags placed over shoes to workaround the problem a of gumboot (welly) shortage

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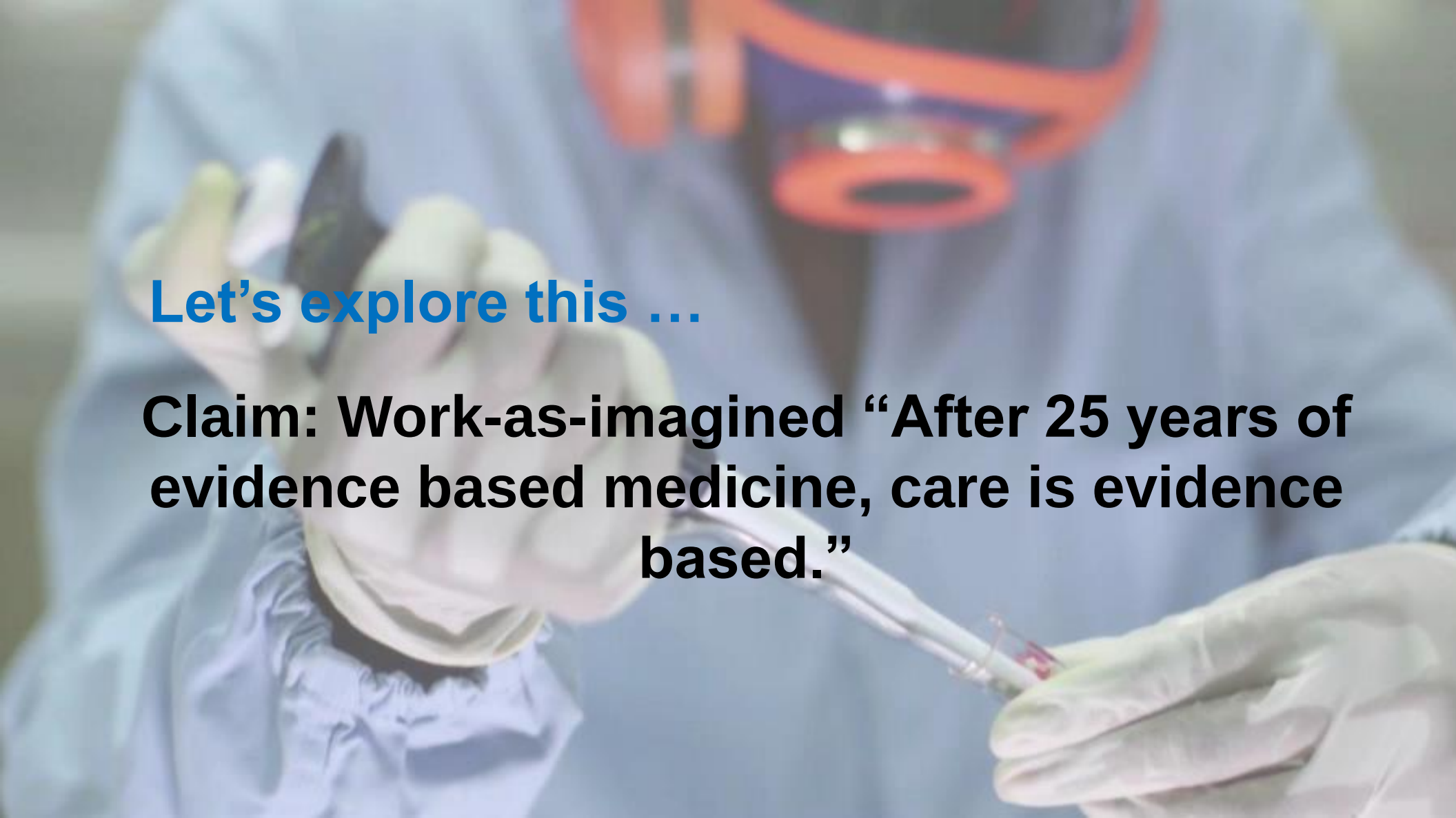
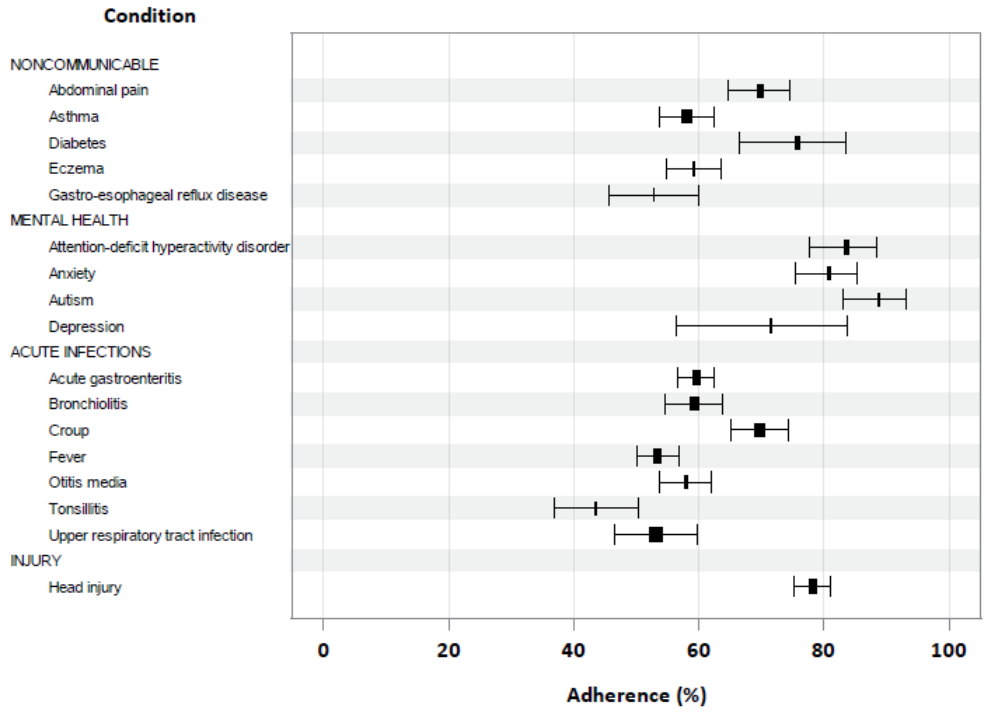


Let’s explore this …

Claim: Work-as-imagined “After 25 years of evidence based medicine, care is evidence based.”

Study: Work-as-done CareTrack Kids



Adherence to quality of care indicators was estimated at 59.8% across the 17 conditions, ranging from a high of 88.8 for autism, to a low of 43.5% for tonsillitis.

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[Braithwaite et al. 2018. CareTrack Kids. JAMA]

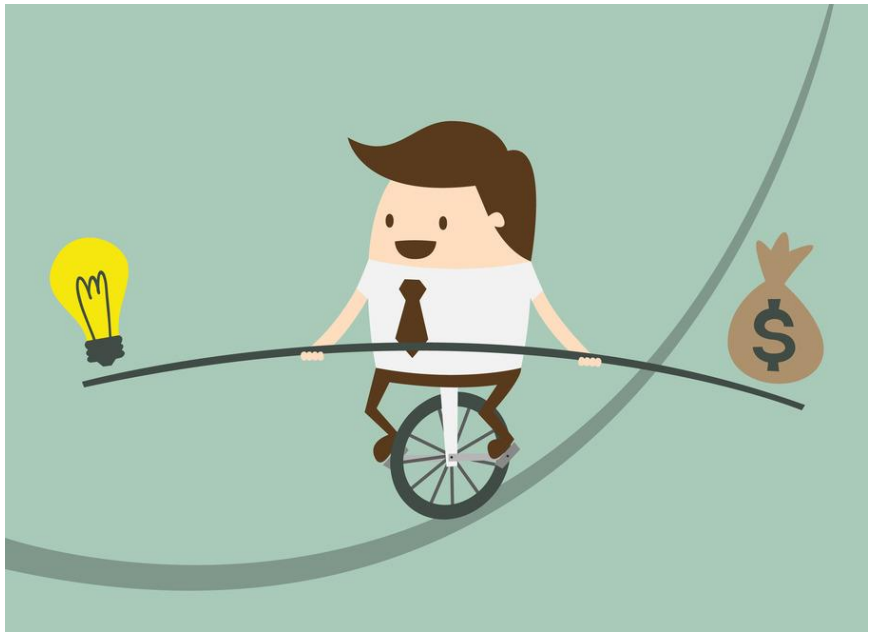
Conclusions 結論

Encourage resilience

1. Look at what goes right, not just what goes wrong. When something goes wrong begin by understanding how it (otherwise) usually goes right

Encourage resilience

2. Focus on frequent events, rather than just severe ones. Be proactive about safety - try to anticipate developments and events. Be thorough, as well as efficient (the ETTO principle)



Reconcile work-as-imagined and work-as-done

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3. Learn about work-in-practice, including “intelligent adjustments” i.e., workarounds

4. Encourage diversity of perspectives, including patients and families

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Reconcile work-as-imagined and work-as-done

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5. Develop trust, reciprocity and knowledge-sharing. Encourage self-reflection and self-determination; do not unduly emphasise ideal, mandated work. Develop flexible and effective procedures, systems with “slack”

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Recent Published Books

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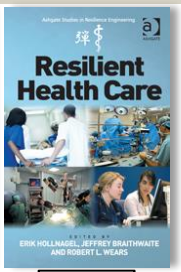
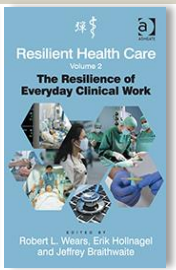
Published

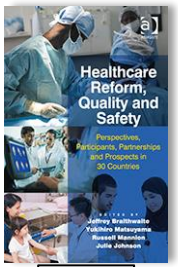
2010



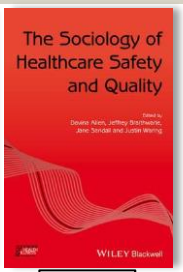
2013



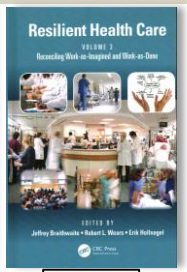
2015



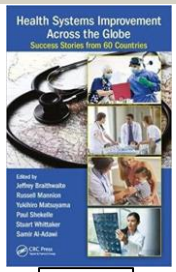
2015



2016



2017



2017

2018

- **Culture and Climate in Health Care Organizations**
- **Resilient Health Care**
- **The Resilience of Everyday Clinical Work**
- **Healthcare Reform, Quality and Safety: Perspectives, Participants, Partnerships and Prospects in 30 Countries**
- **The Sociology of Healthcare Safety and Quality**
- **Reconciling Work-as-imagined and Work-as-done**
- **Health Systems Improvement Across the Globe: Success Stories from 60 Countries**
- **Healthcare Systems: Future Predictions for Global Care**

Forthcoming Books

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In Production

- Gaps: the Surprising Truth Hiding in the In-between
- Surviving the Anthropocene
- Field Guide to Resilient Health Care
- Counterintuitivity: How your brain defies logic

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

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