The Future of Health Care to 2030
What does this mean for Denmark and for Researchers?

November 28, 2022, 60 minute keynote plus Q&A
DSKS Workshop and Kick Off of a National Network, Aalborg, Denmark

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Australian Institute of Health Innovation

Australian Institute of Health Innovation

AIHI

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NHMRC Partnership Centre for Health System Sustainability

NHMRC Centre of Research Excellence in Implementation Science in Oncology

NHMRC Centre of Research Excellence in Digital Health

AIHI International collaboration

AIHI at a glance

FIGURES ARE FOR AIHI AND MUCHE COMBINED FOR 2021

$53 million
Enterprise value of projects under AIHI management

$109 million
Enterprise value of projects administered elsewhere involving AIHI

179
Number of research projects under AIHI management or in collaboration with others

290
Number of peer-reviewed outputs produced by AIHI annually

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AIHI at a glance

PROVIDING THE EVIDENCE TO IMPROVE HEALTHCARE

Understanding the relationship between system complexity and system performance

Evaluating the impact of interventions on health, workplace and social outcomes

Understanding behaviour as a basis for practice improvement

Use of artificial intelligence as a technique to support evidence-based decision-making

Designing models of care and ways of working which provide improved safety and quality

Applying an economic lens to evaluations and policy development

Disclosure

I have no affiliations with any commercial organisations

But I do hold multiple national and international grants to do research, e.g., NHMRC, Government Agencies, etc.

Details are available from:

https://www.mq.edu.au/research/research-centres-groups-and-facilities/healthy-people/centres/australian-institute-of-health-innovation/our-people/our-people-chris/professor-jeffrey-braithwaite

Prologue

As I see it, the problem in a nutshell

The problem

- It takes an average of 17 years for only 14% of new discoveries to enter practice

- Roughly 60% of care is in line with evidence or consensus-based guidelines

- About 30% of health care is waste of some kind

- Around 10% of patients are harmed when receiving care

[Westfall et al. 2007, JAMA; de Vries et al. 2008, Qual Saf Health Care; Runciman et al. 2012, MJA; Braithwaite et al. 2018, JAMA; Braithwaite et al. 2020, BMC Med]

Are you the solution?

- Every one of you, even though you have a stake in wanting a better health system …

- Are in a different world, have different life experiences, different professional training and different standpoints

- So definitionally, you have different views on what to do about the future of healthcare

So let's see who you are ...

- Gender: Female, Male, Non-binary, Other

- Professional background:

- Hobby when not doing health and medical research:

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So let's see what you think …

- Climate change: Believer, Sceptic, Denier

- Views about the world over the next 50 years: Optimistic, Pessimistic

- Use 1 or 2 words to describe what you would like the health system to be like by 2030

So let's see what you think …

- How much of care today:
  - Is in line with level-1 evidence or consensus-based guidelines
  - Is waste of some form (test results never seen, treatment that doesn't help patients, bureaucratic duplication)
  - Is harmful

So let's see what you think …

- What do you think of the Danish health system

Very good		Neutral		Very poor
5	4	3	2	1

So let's see what you think ...

- What proportion of the Danish population reports that:

  - They experienced serious psychological distress in October 2021?

So let's see what you think …

- What proportion of the Danish population reports that:

  - They were disrespected or discriminated against while receiving care in the last 12 months?

My solutions

Five ways toward a better Danish health system

Solution 1: Shift left, stay left
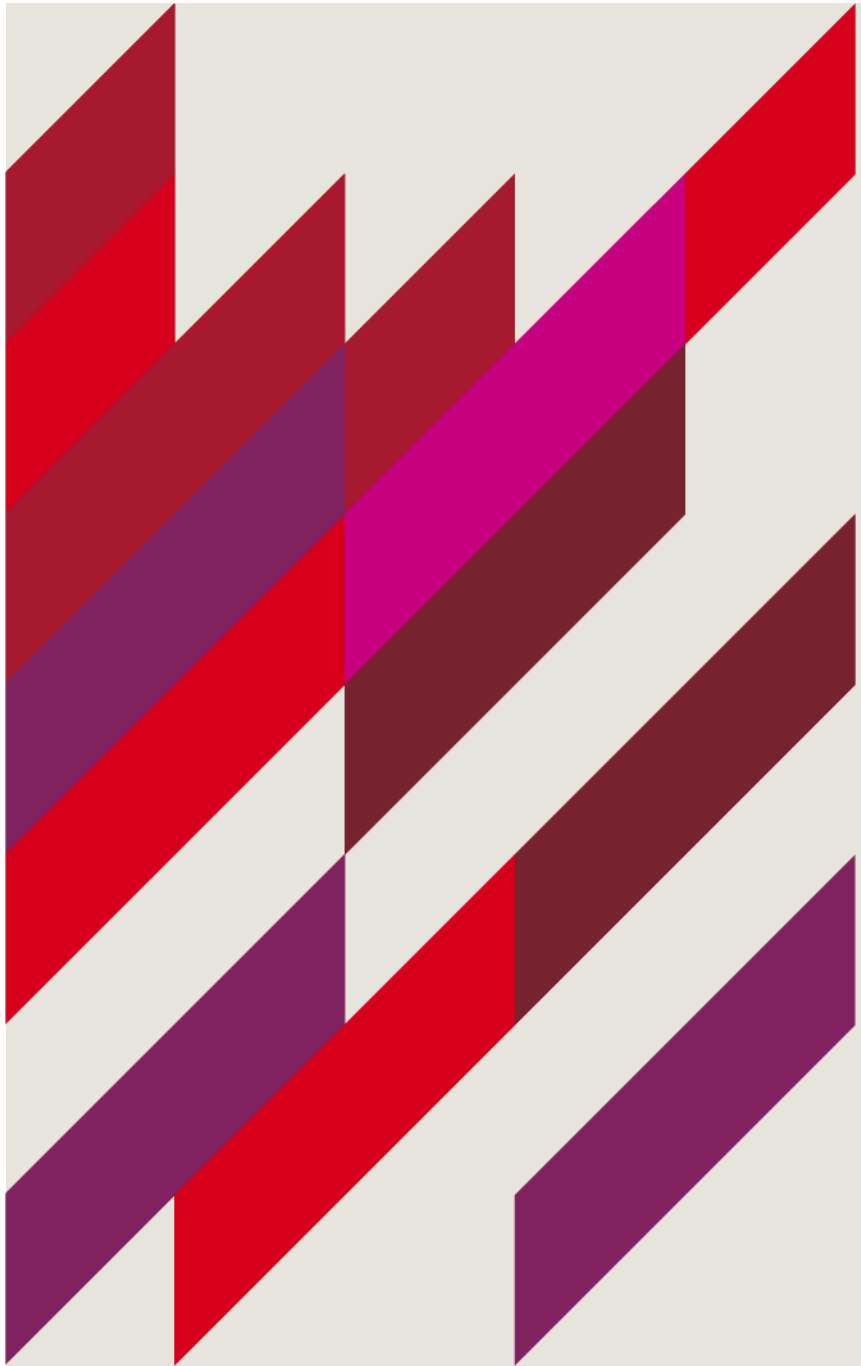
The UN's Digital Health Symposium solution

Shift left, stay left
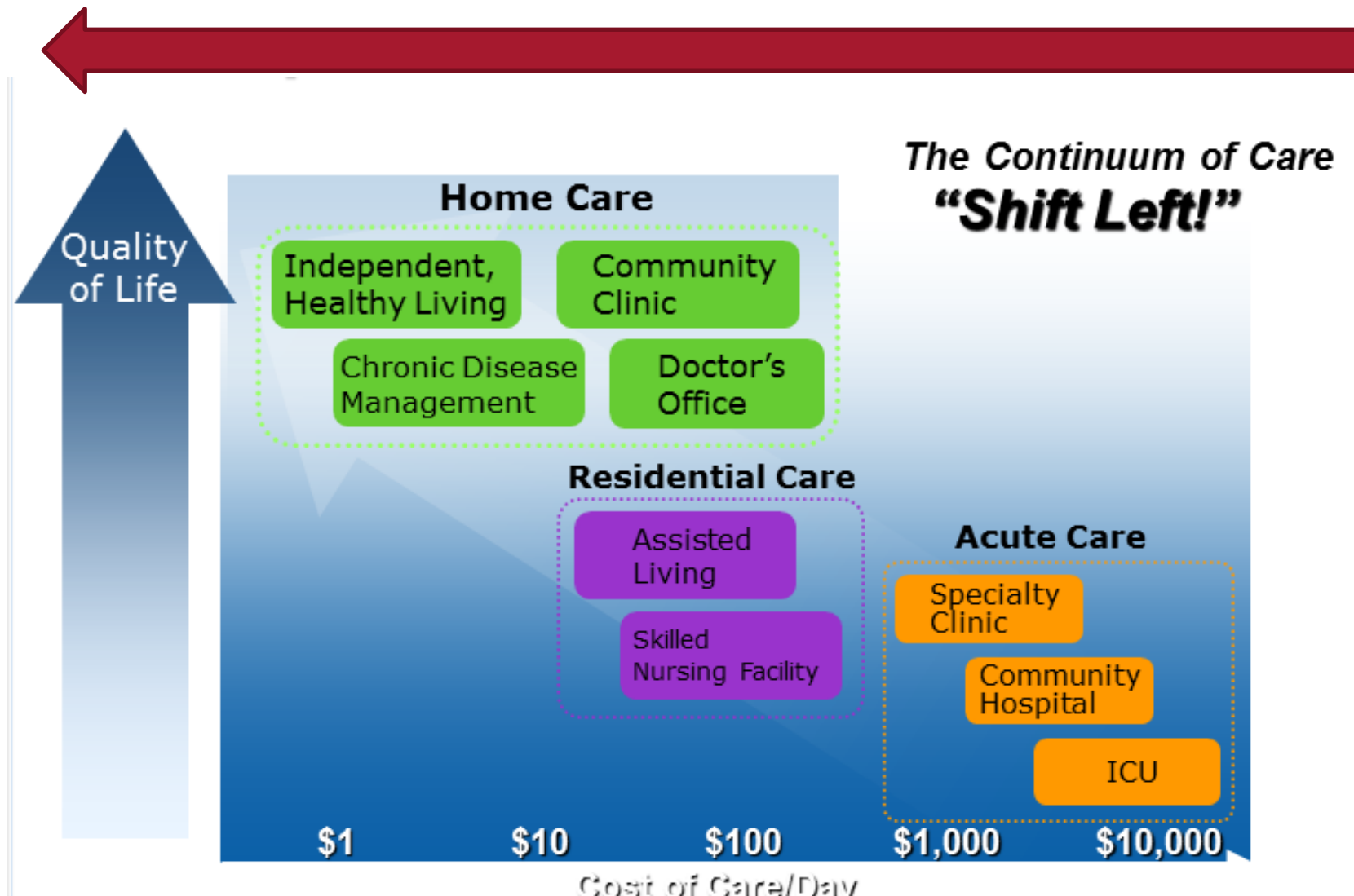
Shift left, stay left

Shift left, stay left

- Yet many patients get on a conveyer belt from the community to the ICU

- With no one deciding on this … it just happens

- So actually, in the Danish health system, we often shift right and stay right

[Hillman, Rubenfeld & Braithwaite, 2015]

Solution 2: 60:30:10

Just three numbers

Just three numbers – 60:30:10

Moving the indicators of health system performance in the right direction

Innovative system disruption will increase quality and decrease waste and harm

Quality — 60
Waste — 30
Harm — 10
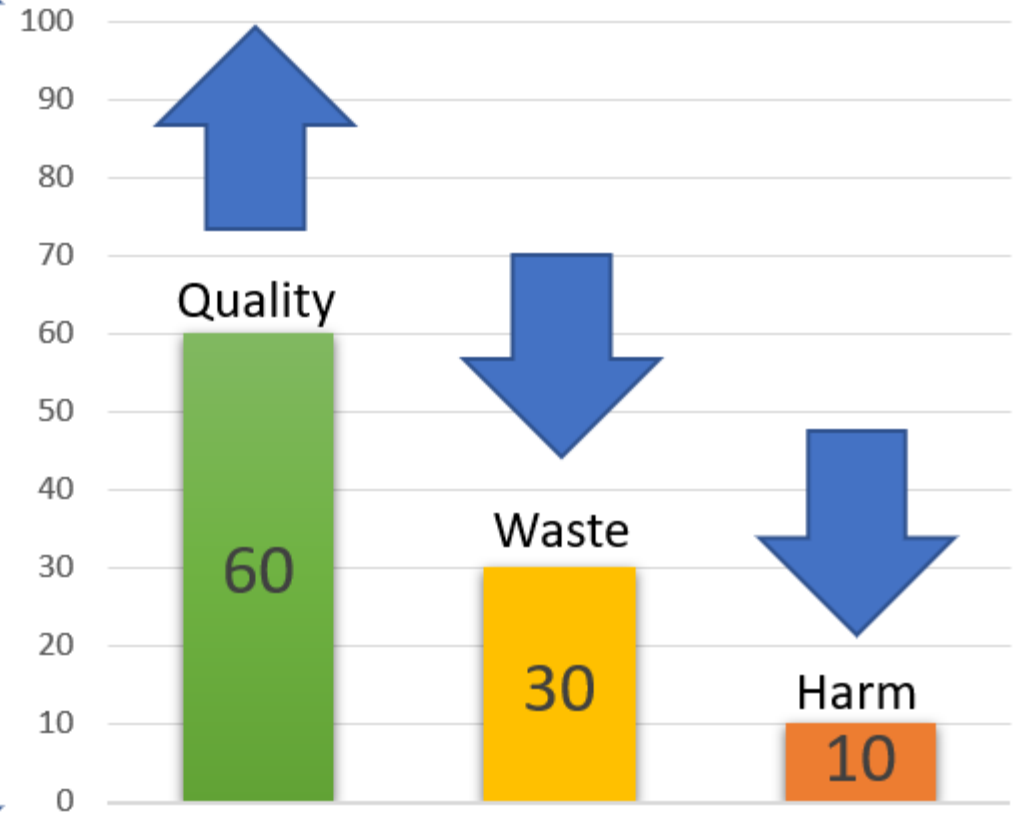
60:30:10 has been static for 25 years

In 6 out of 10 encounters, patients receive care according to best practice guidelines

In 3 out of 10 encounters, patients receive ineffective or low-value care

In 1 out of 10 encounters, patients are harmed

[Braithwaite, J., Glasziou, P. & Westbrook, J. The three numbers you need to know about healthcare: the 60-30-10 Challenge. *BMC Med* 18, 102 (2020). https://doi.org/10.1186/s12916-020-01563-4]
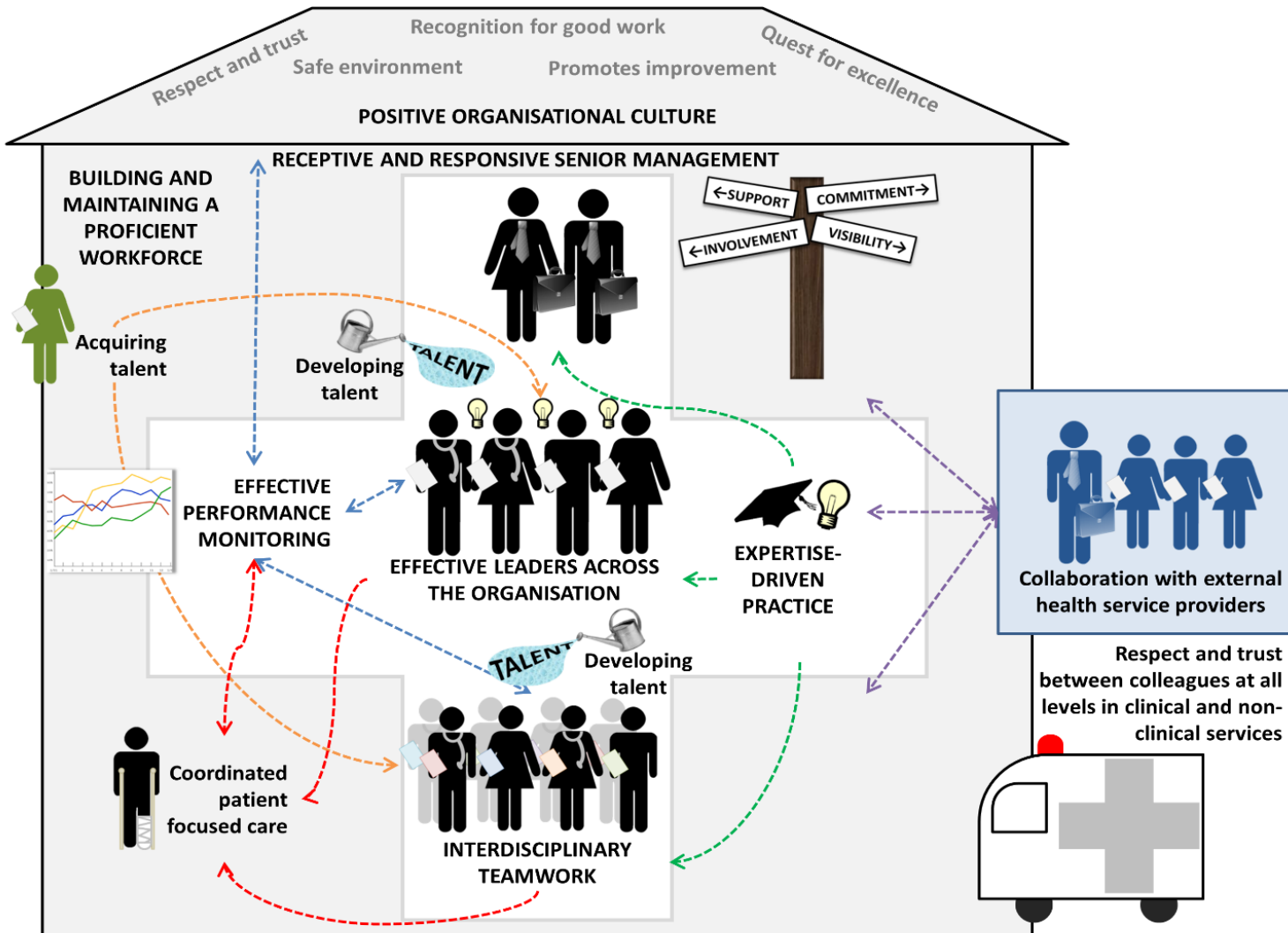
High Performing Hospitals

[Taylor et al, 2015]

High Performing Hospitals

- So can we help hospitals to be more high-performing, constantly-improving workplaces
- That are evidence-based
- And technologically-savvy

Solution 4: Learning health systems

Suggestions and advice

Learning Health Systems:
Our reviews

RESEARCH REPORT

Learning Health Systems

Learning health systems: A review of key topic areas and bibliometric trends

Chiara Pomare[1] | Zeyad Mahmoud[1] | Alex Vedovi[1,2] | Louise A. Ellis[1,2] |
Gilbert Knaggs[1,2] | Carolynn L. Smith[1,2] | Yvonne Zurynski[1,2] |
Jeffrey Braithwaite[1,2]

JMIR MEDICAL INFORMATICS

Ellis et al

Review

The Science of Learning Health Systems: Scoping Review of Empirical Research

Louise A Ellis, PhD; Mitchell Sarkies, PhD; Kate Churruca, PhD; Genevieve Dammery, BSc (Hons); Isabelle Meulenbroeks, MRes; Carolynn L Smith, PhD; Chiara Pomare, PhD; Zeyad Mahmoud, PhD; Yvonne Zurynski, PhD; Jeffrey Braithwaite, PhD

Australian Institute of Health Innovation, Macquarie University, Sydney, Australia

Mapping the Learning Health System: Our scoping review of the evidence

Zurynski Y, Smith CL, Vedovi A, Ellis LA, Knaggs G, Meulenbroeks I, Warwick M, Gul H, Pomare C, Braithwaite J. Mapping the Learning Health System: A Scoping Review of Current Evidence. Australian Institute of Health Innovation, and the NHRMC Partnership Centre for Health System Sustainability, Sydney, Australia, 2020
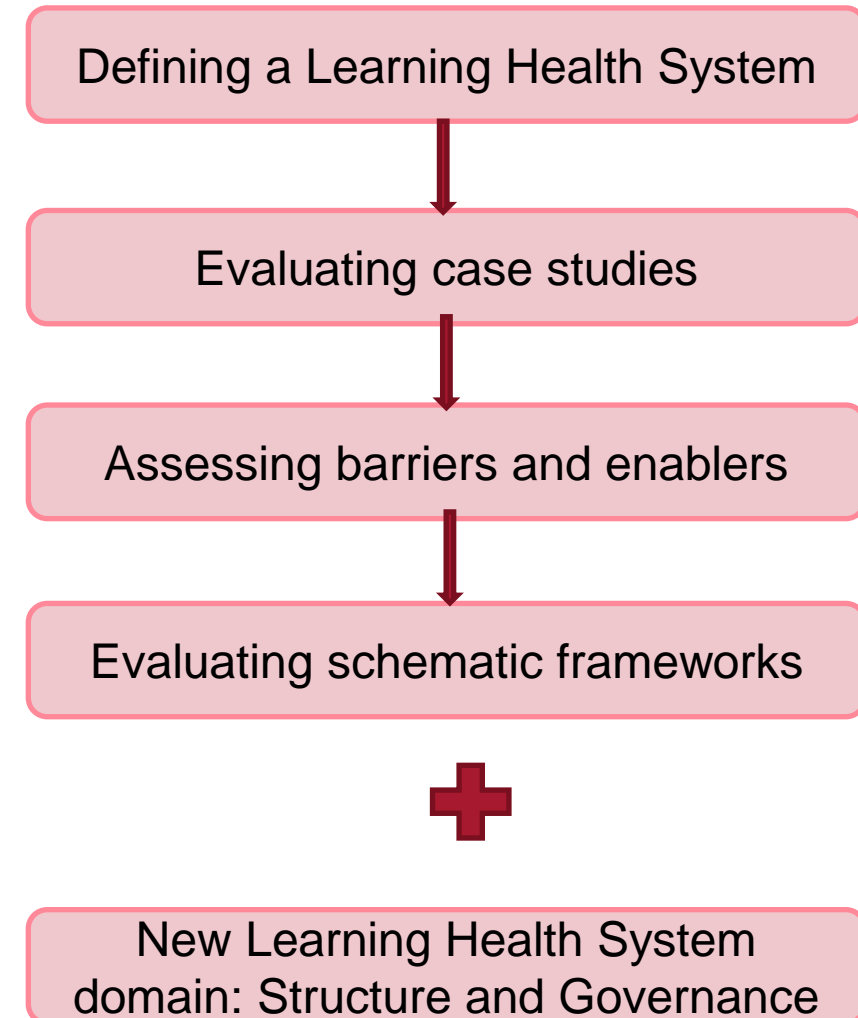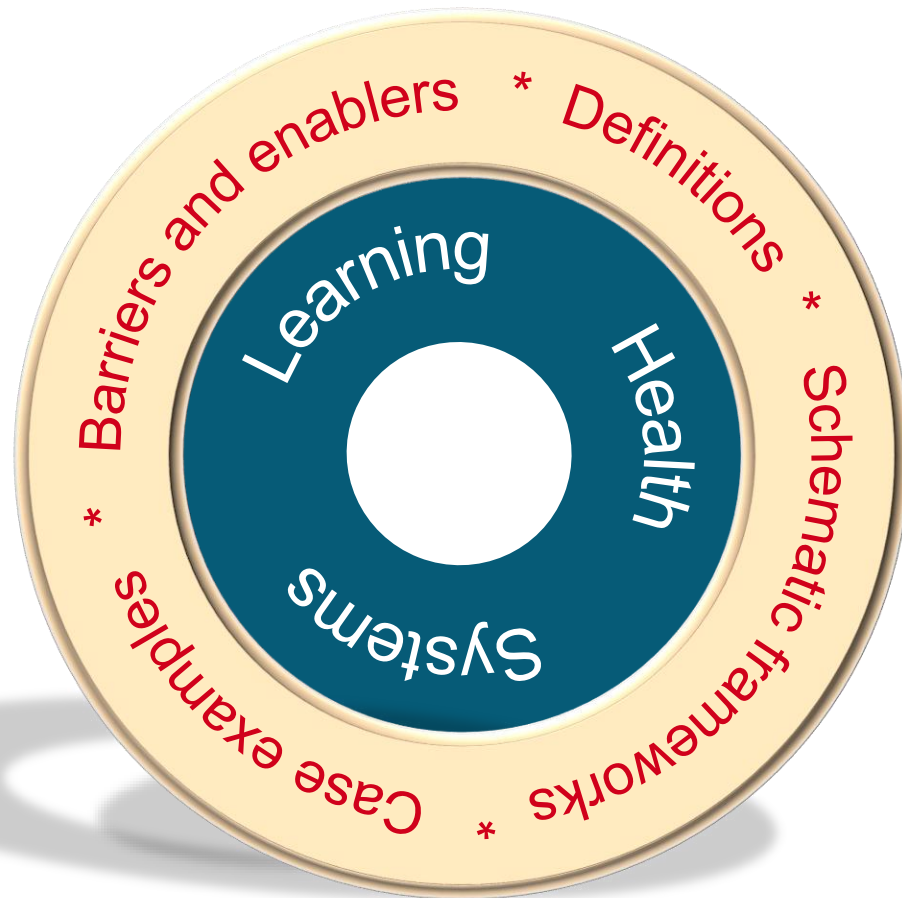
Learning Health Systems Infrastructure
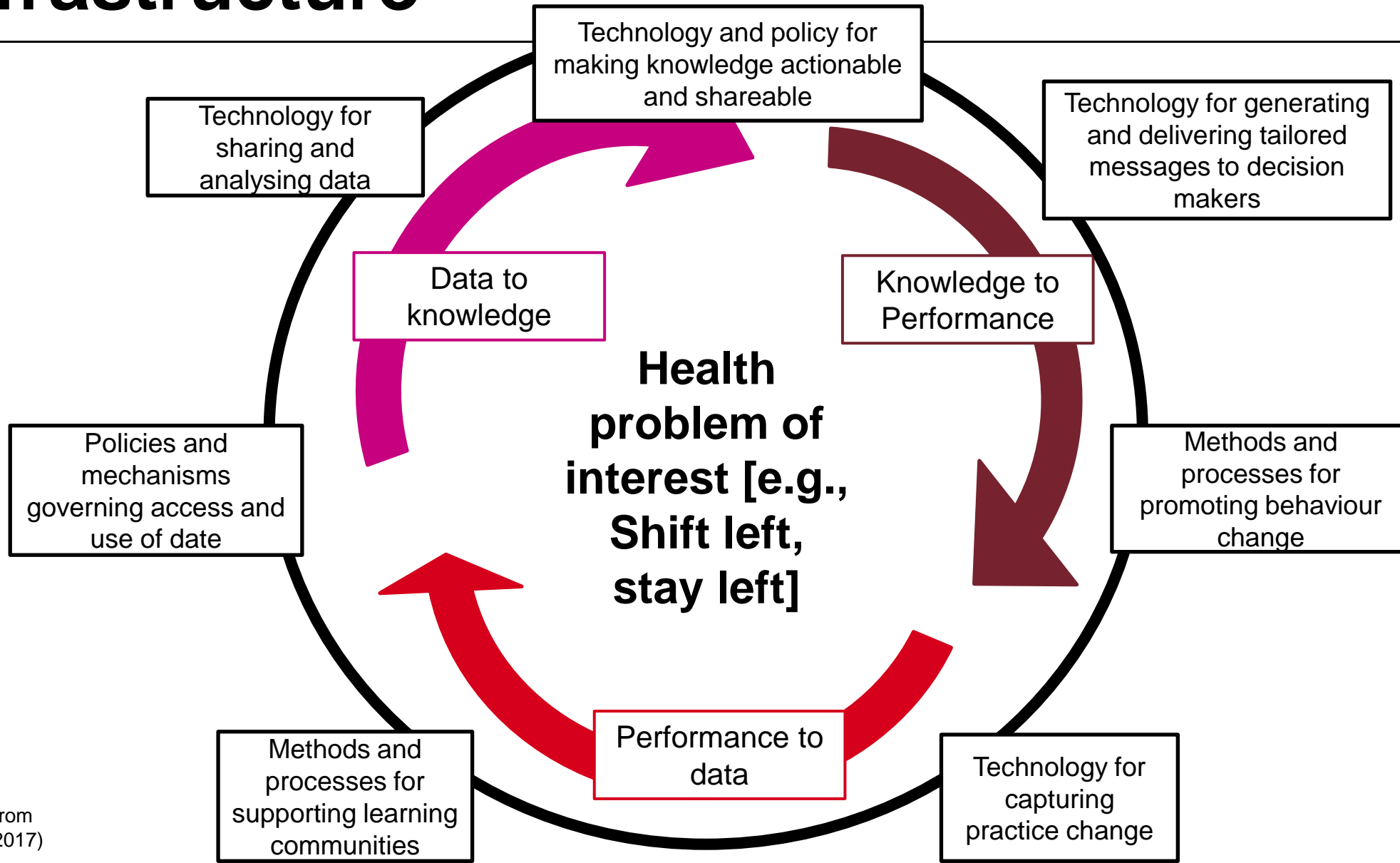
Figure adapted from Friedman et al (2017)

Solution 5: The future of health care to 2030

A model and a plan

A series on international health reform
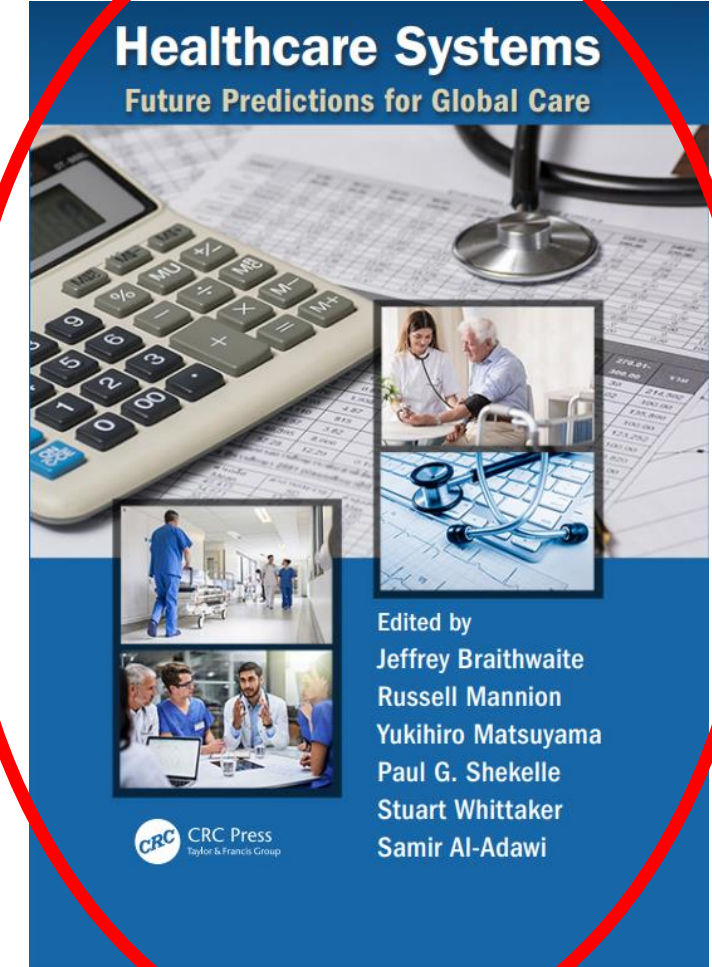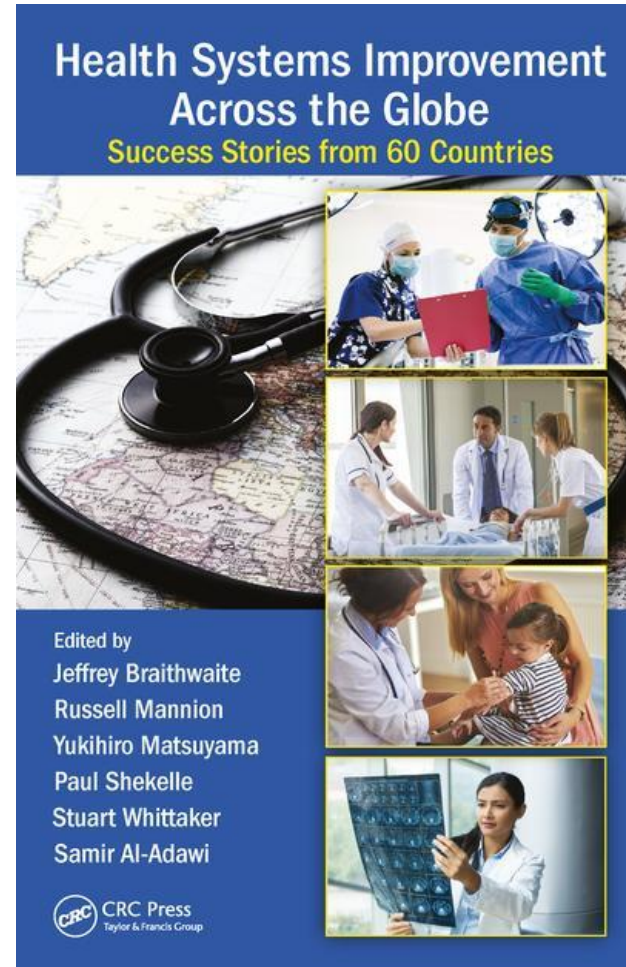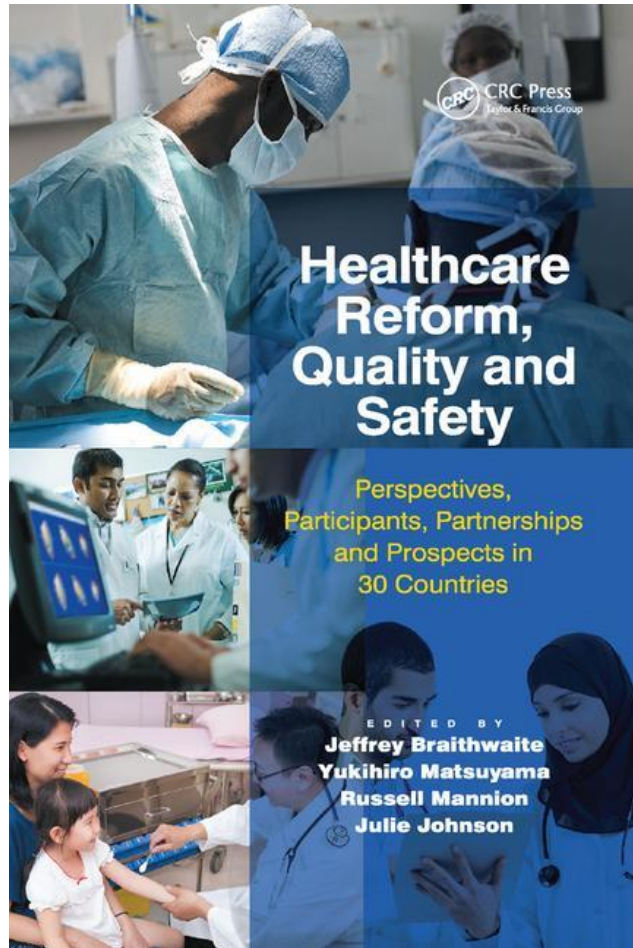
Healthcare Systems: Future Predictions for Global Care

MACQUARIE University

Healthcare Systems
Future Predictions for Global Care

146 authors covering 152 countries

Mannion
Yukihiro Matsuyama
Paul G. Shekelle
Stuart Whittaker
Samir Al-Adawi

CRC Press
Taylor & Francis Group

Perspectives on Quality

The future of health systems to 2030: a roadmap for global progress and sustainability

JEFFREY BRAITHWAITE[1,2,3,4], RUSSELL MANNION[1,2], YUKIHIRO MATSUYAMA[1,3,5], PAUL G. SHEKELLE[6], STUART WHITTAKER[7], SAMIR AL-ADAWI[1,8], KRISTIANA LUDLOW[1], WENDY JAMES[1], HSUEN P. TING[1], JESSICA HERKES[1], ELISE MCPHERSON[1], KATE CHURRUCA[1], GINA LAMPRELL[1], LOUISE A. ELLIS[1], CLAIRE BOYLING[1], MEAGAN WARWICK[1], CHIARA POMARE[1], WENDY NICKLIN[4], and CLIFFORD F. HUGHES[1,4]

[1]Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation, Level 6, 75 Talavera Road, Macquarie University, Sydney, NSW 2109, Australia, [2]Health Services Management Centre (HSMC), University of Birmingham Park House 40 Edgbaston Park Road, Birmingham, B15 2RT UK, [3]The Canon Institute for Global Studies, 11th Floor, ShinMarunouchi Building 5-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6511, Japan, [4]International Society for Quality in Health Care (ISQua), 4th Floor, Huguenot House 35-38 St Stephens Green Dublin 2, Ireland, D02 NY63, [5]Chiba University of Commerce, 1-3-1 Konodai, Ichikawa-shi, Chiba 272-8512, Japan, [6]VA Greater Los Angeles Healthcare System, 1301 Wilshire Blvd, Los Angeles, CA 90073, USA, [7]School of Public Health and Family Medicine, Faculty of Health Sciences, University of Cape Town Observatory Rondebosch, Cape Town, 7700, South Africa, and [8]College of Medicine and Health Sciences, Sultan Qaboos University, PO Box 35, Alkoudh.123 Sultanate of Oman Seeb, Muscat, Oman

Address reprint requests to: Jessica Herkes, Centre for Healthcare Resilience and Implementation Science, Australian Institute of Health Innovation, Level 6, 75 Talavera Road, Macquarie University, Sydney, NSW 2109, Australia. Tel: +61 2 9850 2401; Fax: +61-298-502-499; E-mail: jeffrey.braithwaite@mq.edu.au

Abstract

The result:

Countries Covered: Mapped by WHO Region
- The Americas
- Africa
- Europe
- Eastern Mediterranean
- South-East Asia and the Western Pacific
- Not covered
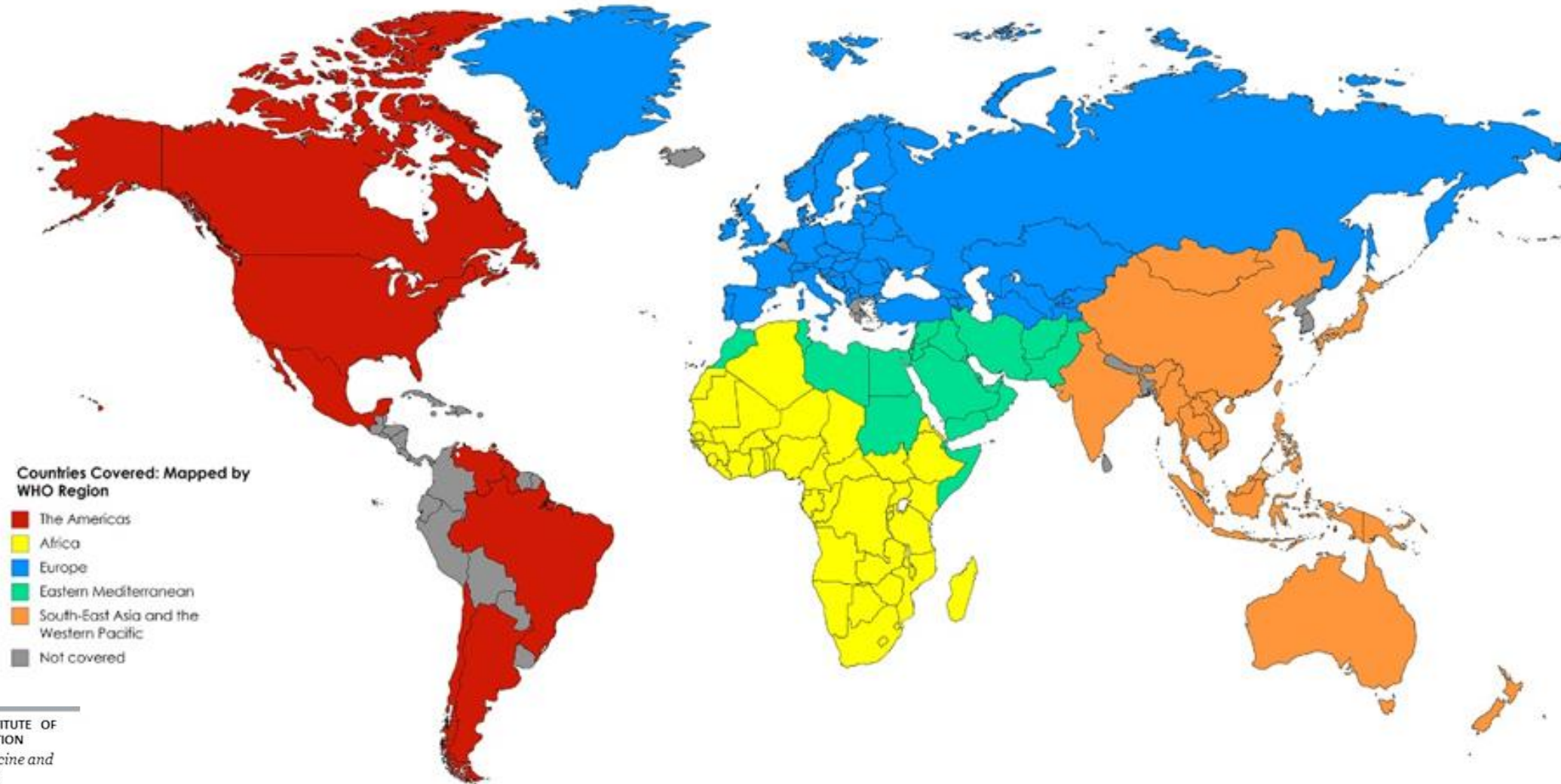
Five main trends

The trends shaping health systems of the future:

- Sustainable health systems
- The genomics revolution
- Emerging technologies
- Global demographic dynamics
- New models of care

These are happening now, in any case

[Braithwaite et al 2018]

The system as we know it	THE ROAD TO 2030	The ideal healthcare system of the future
Fragmented and siloed	**1 INTEGRATED CARE**	Cohesive, joined up
Volume-based care	**2 VALUE-FOR-MONEY SERVICES**	Value-based care
Provider-oriented	**3 PATIENT-BASED CARE**	Person-centred
Barriers to access and affordability	**4 UNIVERSAL COVERAGE**	Wide access without financial hardship
Static, legacy-based systems; not data driven	**5 INFORMATION TECHNOLOGY**	Machine learning and AI enabled: Data-driven clinical decision making
Unhealthiness amongst the population: Poor health literacy	**6 HEALTHY, HEALTH-LITERATE POPULATIONS**	Well-being, healthy ageing and health aware
Focus on acute care	**7 PREVENTATIVE CARE**	Shift to primary-orientated, health promoting, preventative care
Entrenched levels of poor quality, unsafe care	**8 HIGH-QUALITY, SAFE, STANDARD-BASED CARE**	Less harmful, more effective services
Uneven workforce, training, knowledge and development	**9 WORKFORCE DEVELOPMENT**	A fit-for-purpose, highly trained and sustainable workforce

Transformational improvement in quality care and health systems: the next decade

Jeffrey Braithwaite[1*], Charles Vincent[2], Ezequiel Garcia-Elorrio[3], Yuichi Imanaka[4], Wendy Nicklin[5],
Sodzi Sodzi-Tettey[6] and David W. Bates[7]

Abstract

Background: Healthcare is amongst the most complex of human systems. Coordinating activities and integrating newer with older ways of treating patients while delivering high-quality, safe care, is challenging. Three landmark reports in 2018 led by (1) the Lancet Global Health Commission, (2) a coalition of the World Health Organization, the Organisation for Economic Co-operation and Development and the World Bank, and (3) the National Academies of Sciences, Engineering and Medicine of the United States propose that health systems need to tackle care quality, create less harm and provide universal health coverage in all nations, but especially low- and middle-income countries. The objective of this study is to review these reports with the aim of advancing the discussion beyond a conceptual diagnosis of quality gaps into identification of practical opportunities for transforming health systems by 2030.

Main body: We analysed the reports via text-mining techniques and content analyses to derive their key themes and concepts. Initiatives to make progress include better measurement, using the capacities of information and communications technologies, taking a systems view of change, supporting systems to be constantly improving, creating learning health systems and undergirding progress with effective research and evaluation. Our analysis suggests that the world needs to move from 2018, the year of reports, to the 2020s, the decade of action. We propose three initiatives to support this move: first, developing a blueprint for change, modifiable to each country's circumstances, to give effect to the reports' recommendations; second, to make tangible steps to reduce inequities within and across health

Moving to 2030

- Means shifting from a decade of reports to a decade of action

- Need a blueprint for change

- Need tangible steps to reduce inequities within and across health systems

- Need to learn from what goes right as well as what goes wrong

Penultimately

...

A recap

1.Shift left, stay left
2. 60:30:10
3. High performance
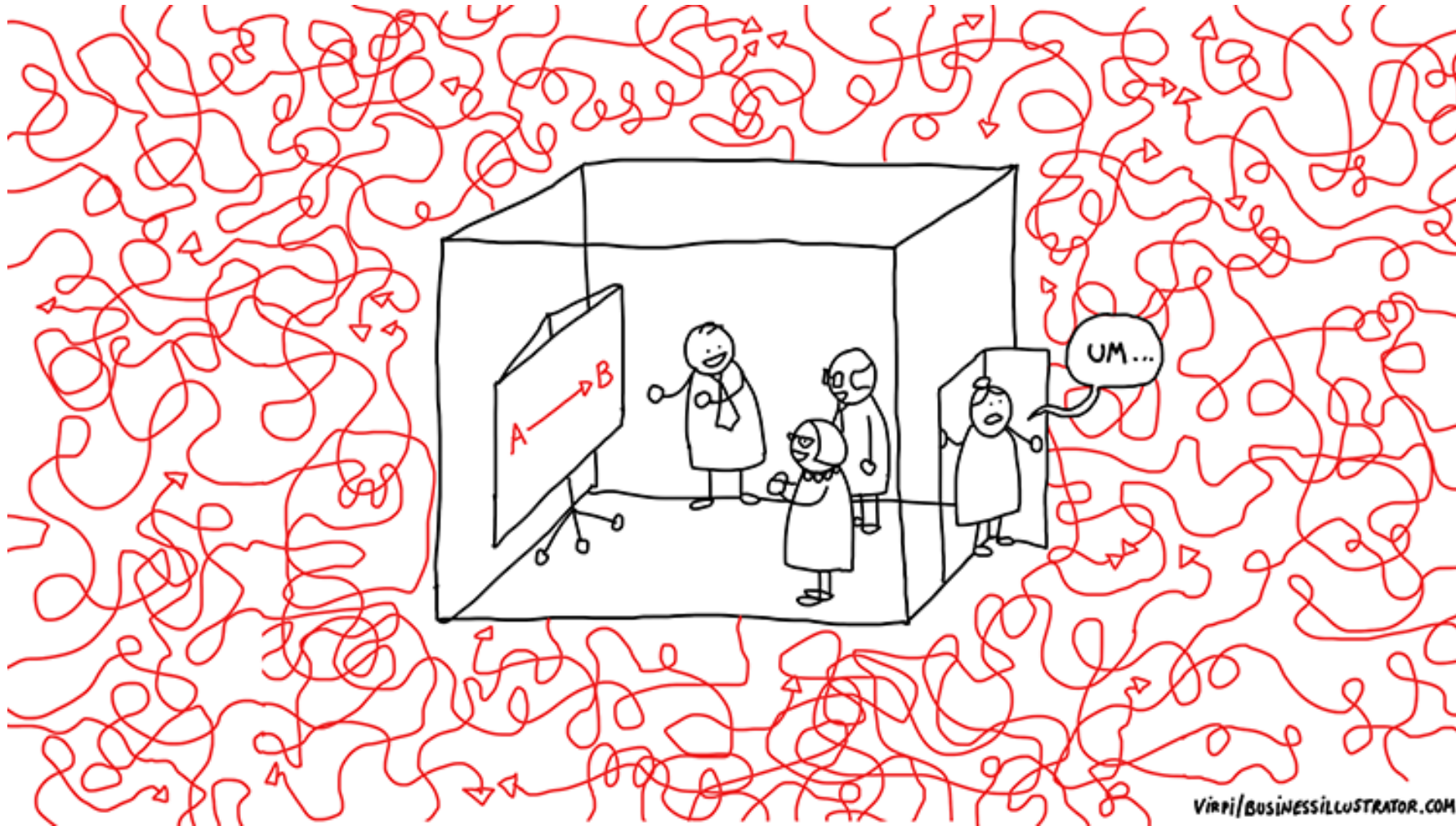4. Learning health systems
5. The 5+9 model

Finally …

Back to you … what do you think now

Implications …

* For Denmark?
* For Researchers?

Discussion: comments, questions, observations?

Finally, this needs to be personal

So get out of your box, embrace the complexity, and lead your bit of the needed transformation

Jeffrey Braithwaite PhD

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

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