Towards sustainable, affordable and fit-for-purpose health systems: Visioning health care that works for patients and providers

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• The definition of insanity is doing the same thing over and over and expecting it to come out different.
  
  • Attributed to both Franklin and Einstein.

• In his writings, a wise Italian says that the best is the enemy of the good.
  
  • Voltaire’s moral poem “La Bégueule”.
  • Modern aphorism: perfect is the enemy of the good.
Towards sustainable, affordable and fit-for-purpose health systems

• Problem definition.
• The healthcare innovation paradox.
• The barriers to substantial innovation in healthcare.
• Some successes and failures in health system reform.
The citizens of OECD countries who have a health problem usually receive timely, appropriate and excellent healthcare.

But, ....
But, given the way in which services are configured and delivered, and given the relative ageing of populations and the healthcare workforce, and in the context of uncontrolled introduction of new technologies and models of care, and associated wasteful activity, OECD countries face a growing mismatch between health service demand, supply and affordability.
But, the Commonwealth Fund rankings show that greater investments in healthcare do not necessarily result in improved system performance, and for countries such as Canada and New Zealand, the relative rank has declined significantly since major health reforms – the top ranked System, the UK NHS, is technically insolvent with a forecast deficit this year of £2.1 billion ($3.2 billion).
## The ranking of 11 countries’ health systems by the Commonwealth Fund

<table>
<thead>
<tr>
<th></th>
<th>Canada</th>
<th>UK</th>
<th>US</th>
<th>NZ</th>
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<tbody>
<tr>
<td>Rank 2004 (5)</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>1</td>
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<td>Rank 2006 (6)</td>
<td>5</td>
<td>3</td>
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<td>Rank 2007 (6)</td>
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<td>1</td>
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<td>Rank 2010 (7)</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>5</td>
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<tr>
<td>Rank 2014 (11)</td>
<td>10</td>
<td>1</td>
<td>11</td>
<td>7 =</td>
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<tr>
<td>Per capita USD 2011</td>
<td>4,522</td>
<td>3,405</td>
<td>8,508</td>
<td>3,182</td>
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The ranking of 11 countries’ health systems by the Commonwealth Fund

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Country</th>
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<tbody>
<tr>
<td>1</td>
<td>United Kingdom</td>
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<tr>
<td>2</td>
<td>Switzerland</td>
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<tr>
<td>3</td>
<td>Sweden</td>
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<tr>
<td>4</td>
<td>Australia</td>
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<td>5 =</td>
<td>Germany</td>
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<tr>
<td></td>
<td>Netherlands</td>
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<td>7 =</td>
<td>Norway</td>
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<td></td>
<td>New Zealand</td>
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<tr>
<td>9</td>
<td>France</td>
</tr>
<tr>
<td>10</td>
<td>Canada</td>
</tr>
<tr>
<td>11</td>
<td>United States of America</td>
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</table>
But, inequality is still a feature of OECD countries’ health systems.
• Ethnic and racial disparities in health access, outcomes and life expectancies.
• Geographical and demographical differences in healthcare quality.
• Inequality in domains of healthcare.
• Poorer health outcomes for low income and high health needs people.
But, healthcare workforces are highly mal-distributed against need from a disciplinary, demographic and geographic, and ethnicity/racial basis.

Factors contributing to the mal-distributions include:

- Workforce funding (only about 1% of Vote Health);
- Professional factors (culture and status);
- Societal factors (e.g., spouse jobs and schools);
- Lifestyle factors; and
- Business models and funding.
Highly mal-distributed healthcare workforces

• Most OECD countries have mistaken these mal-distributions for net shortages.

• Flooding labour markets in isolation has not solved mal-distributions.

• The current over-supply of nurses is highly likely to become an under-supply as global economic conditions improve.
Highly mal-distributed healthcare workforces

The current over-supply of doctors is an opportunity to: 1) change recognition, reward and remuneration schema from a focus on recruitment and retention to a quality and productivity bias; 2) to reduce reliance on overseas trained doctors; and 3) to facilitate a redistribution of the medical workforce to better meet health need.
The healthcare paradox

- Planning of healthcare workforces, IT and capital is notoriously unreliable because the future health milieu is intrinsically uncertain.

- And yet, healthcare is resistant to major reform; if a physician from the Edinburgh Infirmary of 1850 was time-transported to a major hospital of today, what changes would he notice?
If OECD nations’ health systems need to “innovate or die” (Corrigan, Exeter and Smith BMJ 2013), and if healthcare workers are intrinsically innovative, then health systems must be generically counter innovative.
The healthcare paradox

Given that the natural history of industry is for disruptive innovation – e.g., computers and IT, automobiles, steel – what is it about healthcare that makes it different and are there any other similar industries that might help in this analysis?
OECD nations face a challenge in terms of health system sustainability, affordability and fitness-for-purpose, but, a cohort of formidable and inter-related barriers exist in regard to successful innovative reform. Given that the status quo is not a tenable response to future health needs, just what are the barriers to an innovative reform of healthcare and how can these barriers be overcome?
The barriers to substantial healthcare innovation

1. Provider-centric models of care in which most consumers of healthcare are passive.
2. Shortfalls in clinician and health system leadership.
3. Inadequate health system intelligence.
4. Restrictive business models and (often perverse) funding and remuneration systems.
5. Restrictive regulatory practice.
6. The threat of litigation.
7. Territorial behaviour by potentially disrupted craft groups and professions.
8. Intrinsically flawed health systems by design.
Some successes and failures in health system reform

Successes
- Passive consumers
  - Disabled people purchasing their own support services.
  - Citizen ‘owned’ e-health records and patient portals.
  - Training of health professionals to undertake advanced care planning.

Failures
- Passive consumers
  - Primary care capitation enrolments in the absence of publicly available quality and performance data.
  - Aged care facility referrals in the absence of publicly available quality and performance data.
Some successes and failures in health system reform

**Successes**
- Passive consumers

**Failures**
- Passive consumers
  - Insurance schemes that promote healthcare consumption as compared to citizen-compliance with best practice guidelines.
Some successes and failures in health system reform

Successes
• Leadership
  • Ophthalmologist-led reform of eye health services.
  • Clinician- and aged care advocacy group-led introduction of training for advanced care planning.

Failures
• Leadership
Some successes and failures in health system reform

Successes
• Leadership
  • Multi-scenario-based service aggregate forecasting approach to health system planning.
  • Uptake of psychiatry training positions in Australia (and New Zealand) in response to recruitment program and training scheme reform.

Failures
• Leadership
Some successes and failures in health system reform

Successes
• Health system intelligence
  • Multi-scenario-based service aggregate forecasting approach to health system planning.
  • Five-fold increase in general medical practice training scheme enrolments.

Failures
• Health system intelligence
  • Negligible uptake of training for prescribing role by pharmacists in integrated primary care model.
  • Activity-based annual health planning for long-term health conditions (c.f., insurance investment approach).
### Some successes and failures in health system reform

#### Successes
- Funding and remuneration
  - Shared-risk regional approach to increasing elective surgical outputs.
  - Action-research funding approach to increasing elective surgical outputs.
  - Paired outcome targets.

#### Failures
- Funding and remuneration
  - *Loose Loose Loose examples*: 1) formulaic approach to population-based health service funding; 2) medical trainee subsidies to provider employers; and 3) outcome-free capitation of primary care (i.e., family and community health) services.
Figure 6: Average hours worked per week by work role at main work site

- Other
- House officer
- Primary care (other than GP)
- Specialist
- General practitioner
- Medical officer
- Registrar

Year:
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011

Average hours worked per week:
- 60
- 55
- 50
- 45
- 40
- 35
- 30
- 25
Figure 8: Average on-call\(^1\) hours, by work role at main work site

On-call hours are defined as hours when the doctor was on call, but not actually working.
Some successes and failures in health system reform

Successes

• Funding and remuneration

  • Voluntary bonding scheme (i.e., student debt write-off for health graduate enrolment in high needs disciplines and regions).

  • Advanced trainee fellowships in partnership with future health graduate employers.

Failures

• Funding and remuneration

  • Loose Tight Loose examples: fee-for-service funding of primary care in Australia; and the UK HSE Quality Outcomes Framework (QOF).
Relationship between GP numbers and services in the Australian fee-for-service health system

GP Numbers and GP Services 1984-85 to 2005-06

Number of GPs

Services (million)


10000 12000 14000 16000 18000 20000 22000 24000 26000

10 20 30 40 50 60 70 80 90 100 110

GPs Services (million)
Figure 2. Mean Scores for Clinical Quality at the Practice Level for Aspects of Care for Coronary Heart Disease, Asthma, and Type 2 Diabetes That Were Linked with Incentives and Aspects of Care That Were Not Linked with Incentives, 1998–2007.

Quality scores range from 0% (no quality indicator was met for any patient) to 100% (all quality indicators were met for all patients).
Some successes and failures in health system reform

**Successes**
- Restrictive regulation
  - Midwife-led maternity services.
  - Diabetes registered nurse prescribers (cf., other innovation investments that have not been sustained).

**Failures**
- Restrictive regulation
  - Uptake of nurse practitioner-training and employment of nurse practitioners.
Some successes and failures in health system reform

**Successes**
- Threat of litigation
  - New Zealand’s no-fault compensation system (ACC) and an insurance investment (actuarially and outcome based) approach to long-term health conditions.

**Failures**
- Threat of litigation
  - New Zealand’s no-fault compensation system (ACC): observed provider-protective behaviour c.f., tort-rich countries; and, rising treatment injury costs.
Successes

• Territorial guilds
  • College of anaesthetists response to over-supply of anaesthetists in Australia (and perceived threat of technicians, physician-assistants and nurse anaesthetists) and Australasian college of ophthalmologists response to diversified service model for eye health in New Zealand.

Failures

• Territorial guilds
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<td>• Health system design</td>
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<td></td>
<td>• Devolved and distributed governance model in the absence of a competency framework and unsophisticated central agency purchasing.</td>
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<tr>
<td></td>
<td>• Conflicts of interest arising from common governance of funders and providers.</td>
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Towards sustainable, affordable and fit-for-purpose health systems

Given that the status quo is not a tenable response to future health needs, the barriers to an innovative reform of healthcare must be both systematically identified and overcome.