



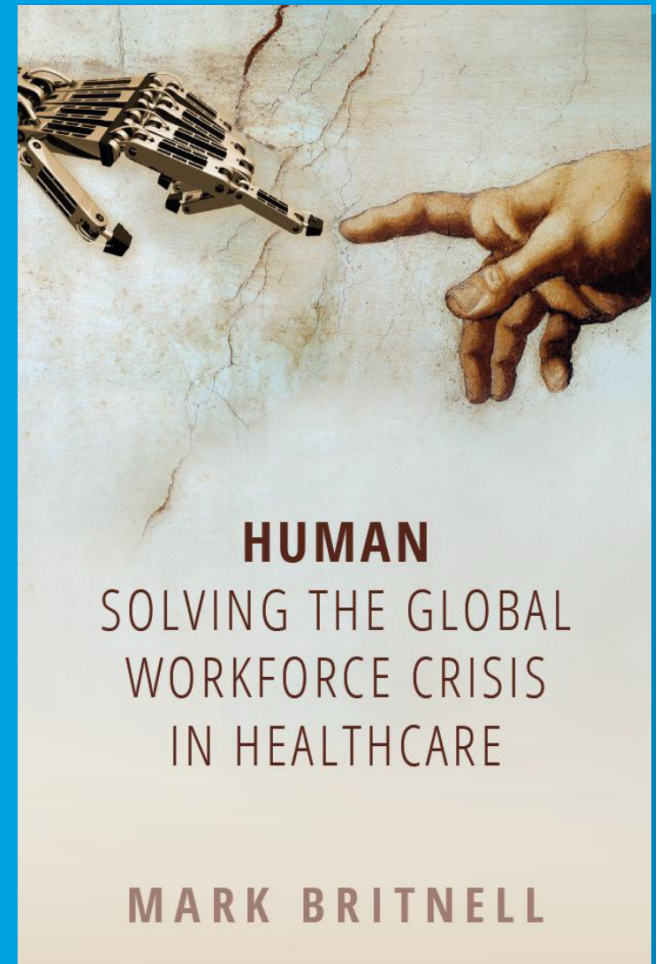
“The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it.”

Michelangelo

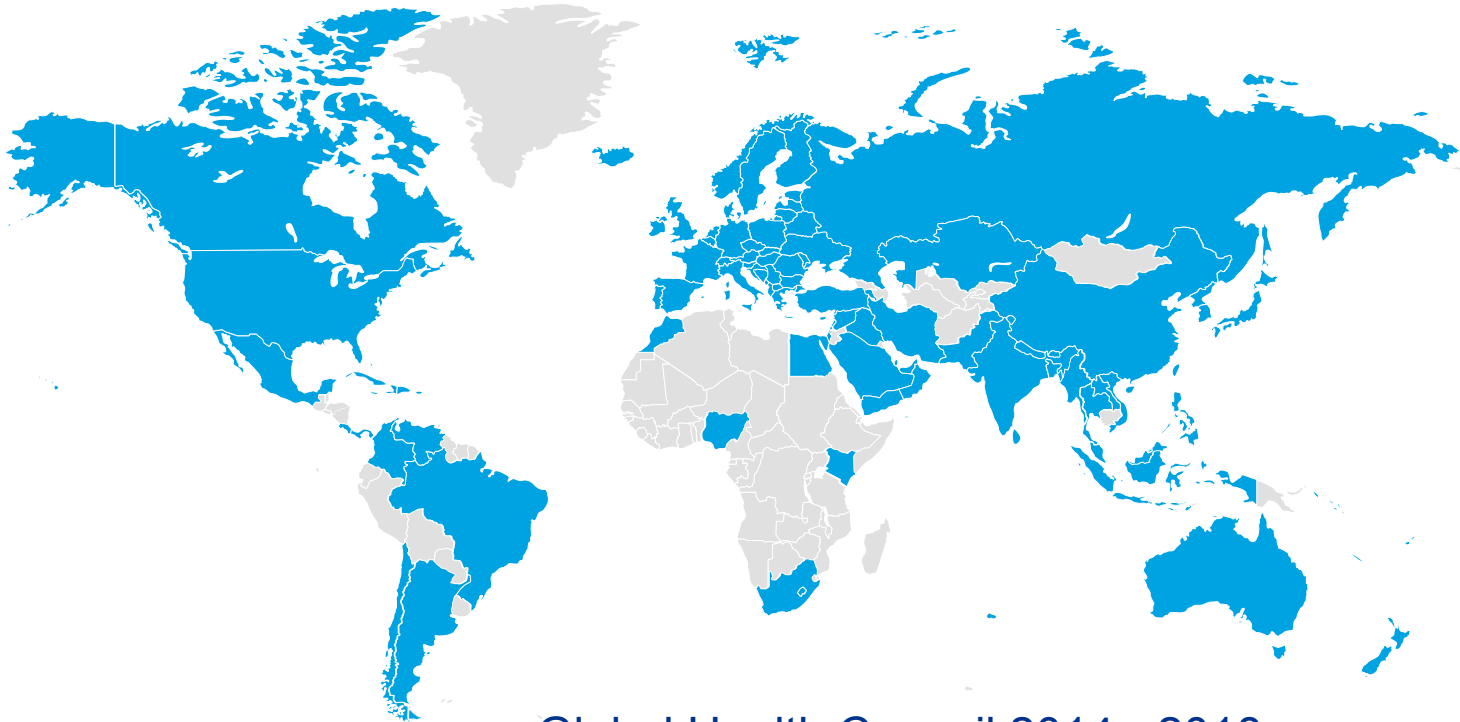
Mark Britnell

Global Chairman & Senior Partner
Healthcare, Government & Infrastructure
KPMG International

  @markbritnell



10 years, 77 countries, 330+ occasions...



Global Health Council 2014 - 2018



“In search of the perfect health system”

The image displays four book covers for the book "In Search of the Perfect Health System" by Mark Britnell, arranged horizontally. Each cover features a stylized globe with a network of glowing lines and nodes. The covers are: 1. English: "In Search of the Perfect Health System" by Mark Britnell. 2. Portuguese: "Em busca do sistema de saúde perfeito" by Mark Britnell. 3. Korean: "인생의 완벽한 건강시스템을 찾아서" (Finding the Perfect Health System of Life). 4. Chinese: "寻找完美医疗卫生体系" (Finding the Perfect Medical and Health System). Below the first cover is a circular award medal from the BMA (British Medical Association) Medical Book Awards 2016, First prize in the Health & Social Care category. Below the fourth cover is a circular award medal from the Chinese Medical Association (CMA) for the best medical book.

Sold in 109 countries
Translated into Mandarin, Korean and Portuguese

The global healthcare workforce crisis

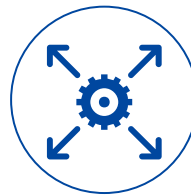
We face a future of too much work with too few workers

18 million

The global shortfall of health workers by 2030

20%

Of the total capacity to care



UK

9.2%

of all NHS posts vacant



USA

1m+ nurses and 120,000 doctors by 2030



India

Needs

3.9m

doctors and nurses



China

Needs

180,000

Obstetricians by 2022



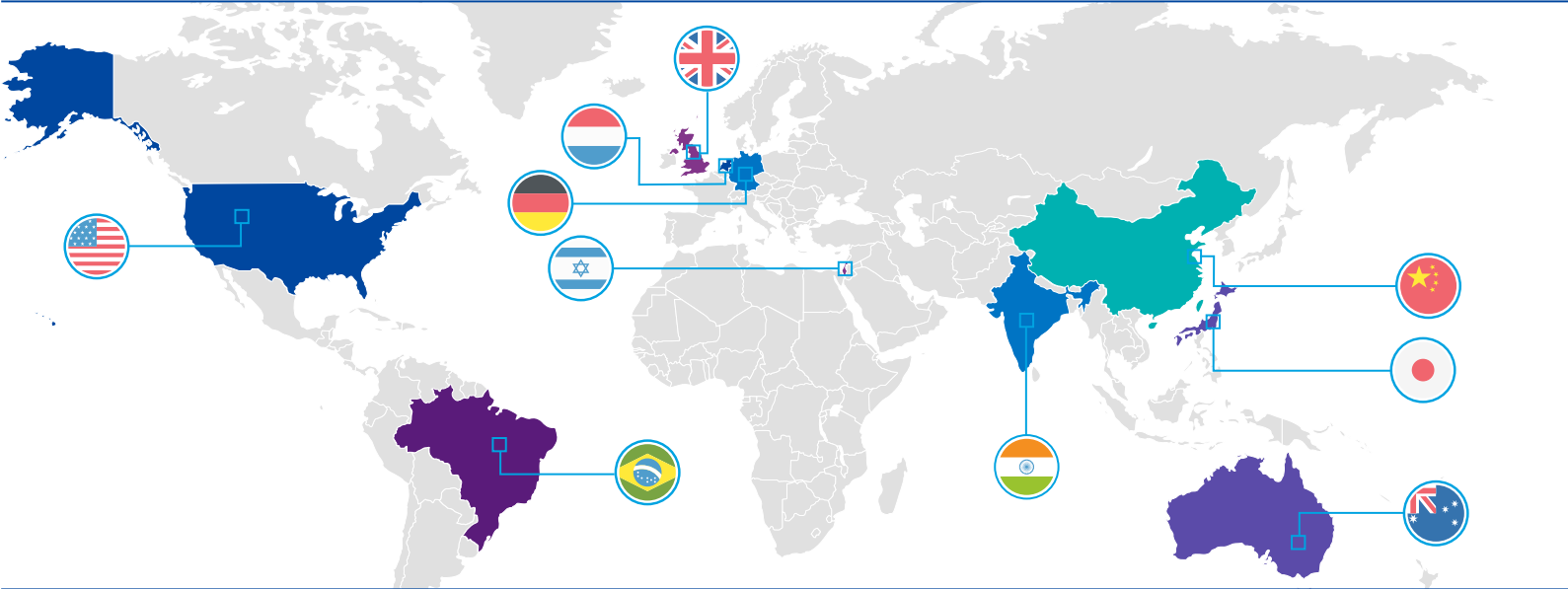
Japan

Tripled nurses from 550,000 to 1.7m in 13 years but still

need 250,000 more by 2025



Cognitive dissonance



Politicians and healthcare employers exhibit cognitive dissonance:

- 1** Healthcare staff lauded but persistently underappreciated
- 2** Celebrate extra jobs but fail to plan to fill them
- 3** Proclaim technology but don't prepare for digital disruption
- 4** No one country gets it completely right

Ten changes to tackle the global health workforce crisis

With 10 large-scale changes we can increase the capacity to care by roughly

20% meeting the anticipated shortfall in health staff



- | | | | |
|---|-----------------------------------|----|-------------------------------------|
| 1 | Productivity.
Health is wealth | 6 | Professionals.
Top of their game |
| 2 | Entrepreneurial
government | 7 | New cadre of
care workers |
| 3 | New models
of care | 8 | Digital
dividend |
| 4 | Patients as
partners | 9 | Agile learning
organisations |
| 5 | Communities
as carers | 10 | Managed and
motivated workforce |

1 Productivity


Health is wealth

“
Productivity isn't everything, but in the long run it is almost everything. It is the ultimate engine for economic growth.”
Paul Krugman




□

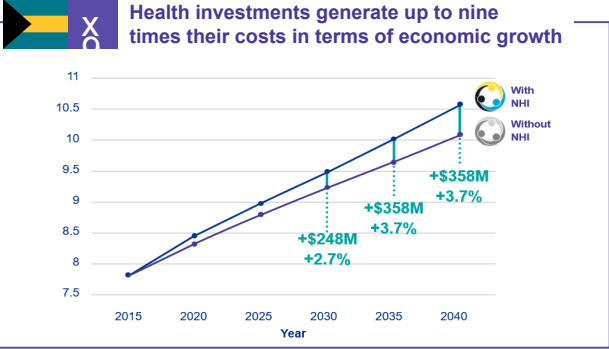
\$9trillion
dollar industry



□


10.4%
of GDP






□

Productivity growth in healthcare has averaged **0.9%**



□

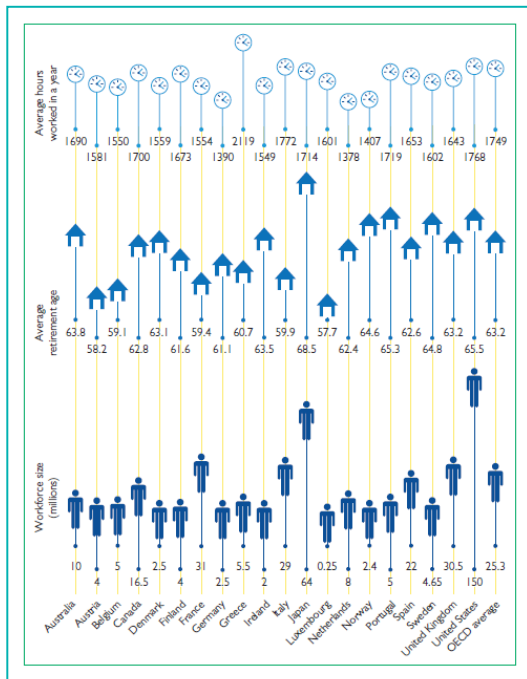
vs **2%** across all industries



2

Entrepreneurial government

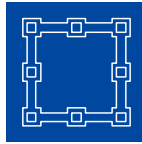
From under to oversupply



Stimulate
demand
and supply



Plan for
productivity



Proportionate
regulation



Progressive
Immigration



Australia:

Following the Bradley Review of 2008, restrictive entry policies into nursing were abandoned. The number of students admitted to nursing schools more than doubled



UK:

Physiotherapy opened up leading to jump in applications of **15%** between **2016** and **2017**.

3

New models of care

Driving productivity gains of 16% to 20%

5

Driving forces



> Switch from face to face to virtual consultations



> Scale up primary care to become the undisputed leader



> Integrated and accountable care



> Clinical improvement science and standardisation



> Blockchain, robotics, machine learning and AI

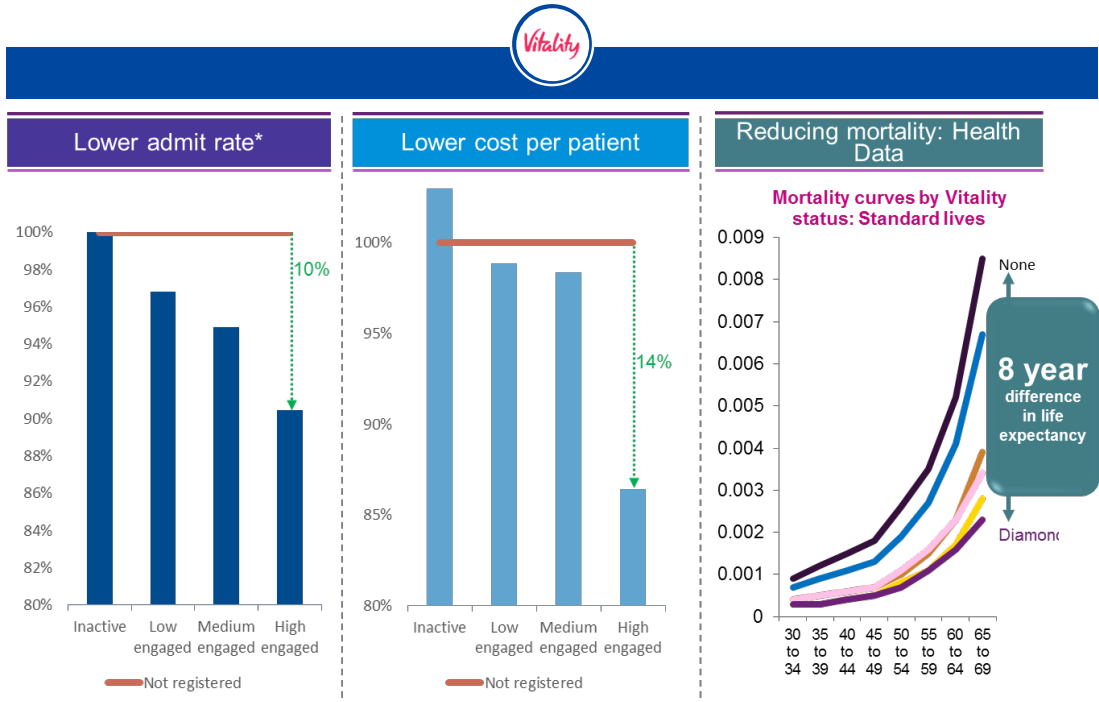
4 Patients as partners

Renewable energy

nesta People powered health could save the NHS **£4.4. billion**

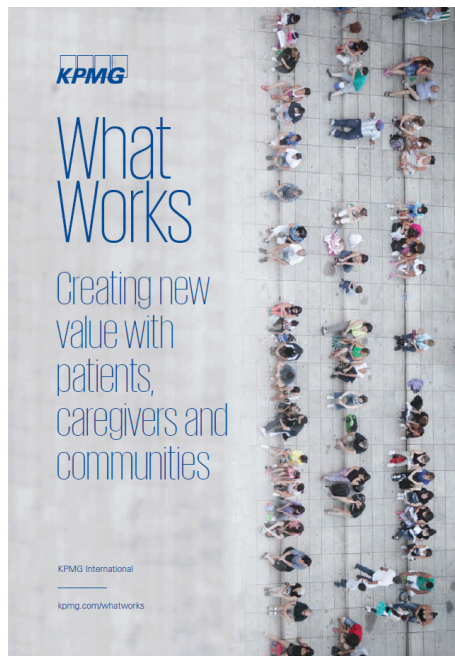
KAISER PERMANENTE Over **65%** of consultations take place in the cloud

NH Narayana Health Relatives care for patients **post-operatively**



5

Communities as carers



Germany

Offers cash payments to the person needing care - more popular and significantly cheaper than care homes. Range from **£283** a month to **£1,784** a month.



Alaska

Community power and cultural respect has enabled Nuka to secure a **50% reduction** in emergency room and urgent care visits, along with good results for illness prevention, screening and a **cultural respect rating of 99.2%**.

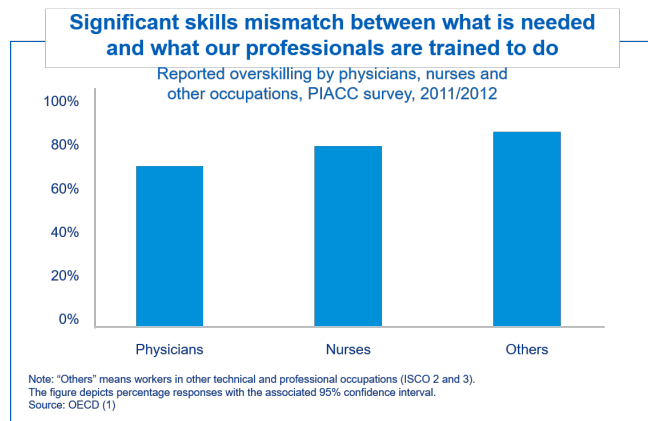


Brazil

'The program, which costs **\$50 per person** per year, has lessened the pressure on more expensive care providers and led to **significant improvements** in clinical outcomes nationally— **reducing hospitalizations** and mortality and **improving equity** and access'.
(Commonwealth Fund)

6 Professionals

Top of their game







76%
of doctors



79%
of nurses

Perform tasks for which they are **overqualified**



-  **Expand** scope of practice
-  **Employ** new cadre of care workers to support professionals
-  **Redesign** pathways of care
-  **Adopt** supporting technology

Burnout and stress
 “Top of your game” not
 “top of your capacity all the time”

7

New cadre of care workers

Spanning health and social care and supported by cognitive augmentation



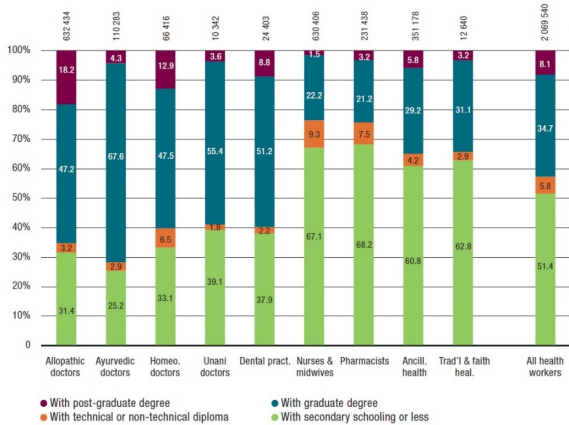


THE AGA KHAN UNIVERSITY

Midwives in Nairobi have been trained to use **Point of Care Ultrasound and internet teleradiology** to provide **antenatal care** in rural Kenya

	Buurtzorg	Other Dutch home-care providers
Average hours of home care (per client per year)	108 hours	168 hours
Average home-care costs (excluding follow-up costs)	€6,428 (\$6,990)	€7,995 (\$8,695)
Average follow-up costs in the Exceptional Medical Expense Act (mainly nursing home cost)	€2,029 (\$2,207)	€2,510 (\$2,730)
Average follow-up medical (physician and hospital) costs	€7,787 (\$8,468)	€5,187 (\$5,641)
Total case-mix adjusted cost per client, (Including home care and follow-up costs)	€15,357* (\$16,701)	€15,856* (\$17,243)

Figure 2.3. Health workers by category: disaggregated by level of education



8 Digital dividend

Rise of the humans



Digital disruption
can be applied across clinical and non-clinical fields

科大讯飞
iFLYTEK

Healthcare sector
productivity will be increased

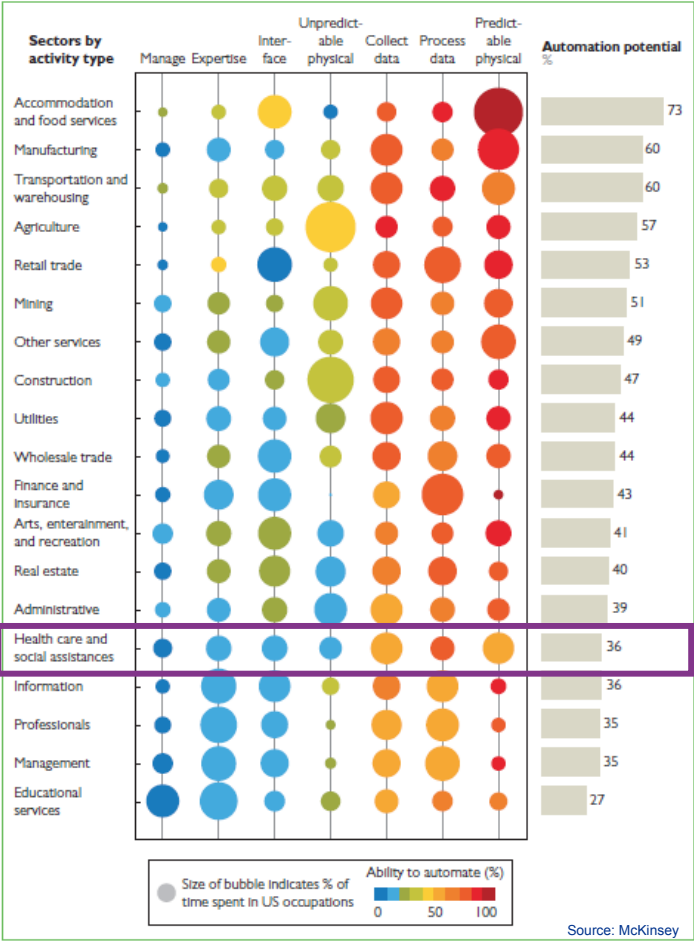
AI interpretation
of 3D scans for diagnosis and referral

Releasing clinicians
to use their skills at the top of their licence

Administrative tasks
automated by bots

Retraining non-clinical staff
for patient facing roles

Allowing redesign of end-to-end processes
Automation will replace tasks not jobs



9

Agile learning organisations

A more flexible and responsive workforce



More than **50%** of the UK's healthcare workforce will **still be working** in the health service in **2032**



Moving from traditional **“predict and provide”** workforce planning to **“agile workforce shaping”**

From: Strategic workforce planning	To: Agile workforce shaping
Supply and demand analysis looking and 'gap closing' over a three- to five-year time horizon	Continuous analysis of workforce impact and required skills as intelligent automation is deployed
Analysis based on existing job families	Analysis based on job families and new required capabilities based on 'to-be' tasks and critical skills for end-to-end processes
Owned and conducted by HR, which consults with the business	Owned and conducted by the business units and end-to-end process owners, facilitated by HR
Employed workers	Human workers both employed and not employed as well as bots owned and not owned
Traditional pyramidal top-down work structures with critical roles driven by hierarchy	Team-based and an end-to-end process view of work organization with critical roles driven by skill scarcity and value-add to the business
Bias for 'an answer' with sensitivity analysis on either side based on existing organization mindset	Bias for scenarios with probabilities attached, based on horizon scanning and "outside-in" mindset
Current workforce model (shape and structure of the workforce in terms of spans, layers, rates of attrition and promotion, etc.) provides the dominant mental model for the planning effort	Ongoing reexamination of the workforce model using a framework such as the SCs to ensure a more multidisciplinary approach to forecasting and the possibilities for the organization

10 Loving your staff

Bring joy to work

Top 5 drivers of doctors' and nurses' dissatisfaction

- 1 Less than 30% of staff have meaningful appraisals
- 2 Work/life balance and no time to engage with patients are main staff complaints
- 3 Pay needs to be competitive
- 4 Retention is key
- 5 Leadership, culture and agility is crucial

Doctors

Rank	Factors	18–25 years	26–35 years	36–45 years	46+ years
1	Work-life balance	Work-life balance	Work-life balance	Work-life balance	Amount of time to engage with patients Support from immediate team
2	Amount of time to engage with patients	Flexibility of shifts	Recognition Amount of time to engage with patients	Amount of time to engage with patients	Pay
3	Pay	Pay	Pay	Support from immediate team	Flexibility of shifts Work-life balance
4	Flexibility of shifts	Opportunities for CPD	Flexibility of shifts Opportunities for CPD Support from immediate team	Flexibility of shifts The support I get from my organization	Level of responsibility
5	Support from immediate team	The support I get from my organization	Level of responsibility The support I get from my organization	Pay	Recognition Sense of fulfillment Opportunities for CPD The support I get from my organization

Nurses

Rank	Factors	18–25 years	26–35 years	36–45 years	46+ years
1	Pay	Work-life balance	Work-life balance	Pay	Pay
2	Work-life balance	Pay	Pay	Work-life balance	Amount of time to engage with patients Work-life balance
3	Flexibility of shifts	Flexibility of shifts	Flexibility of shifts	Recognition Support from immediate team	Flexibility of shifts
4	Amount of time to engage with patients	Amount of time to engage with patients	Amount of time to engage with patients	Amount of time to engage with patients Flexibility of shifts	Recognition Support from immediate team
5	Recognition	Recognition	Support from immediate team	Opportunities for CPD	Level of responsibility

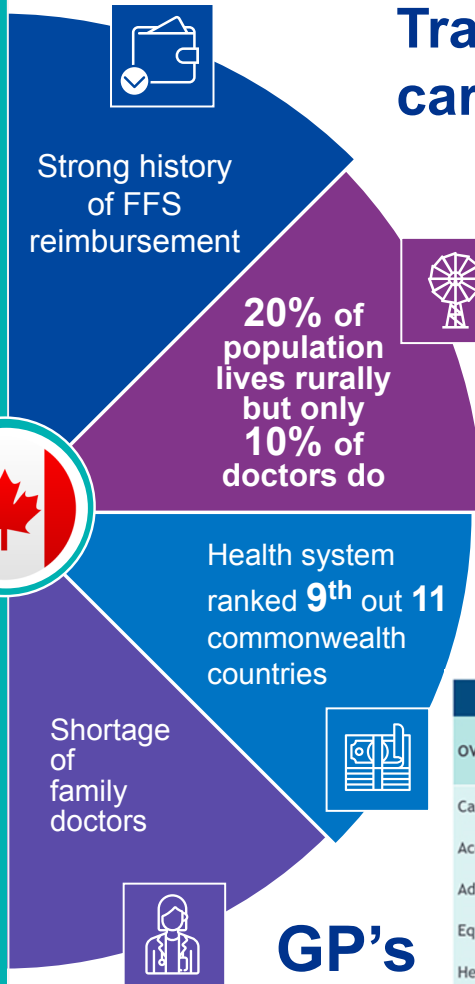
Source: Deloitte



Canada

Still at the crossroads

1 in 6 Canadians lack access to a primary care doctor



GP's

Traditional models of care lead to low productivity

Geographical disparity

Commonwealth rankings for access, outcomes and equity

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING	2	9	10	8	3	4	4	6	6	1	11
Care Process	2	6	9	8	4	3	10	11	7	1	5
Access	4	10	9	2	1	7	5	6	8	3	11
Administrative Efficiency	1	6	11	6	9	2	4	5	8	3	10
Equity	7	9	10	6	2	8	5	3	4	1	11
Health Care Outcomes	1	9	5	8	6	7	3	2	4	10	11



Canada

Innovation in Medical Education



92% of medical students come from Northern Ontario and over 70% stay after graduation



Triple C competency-based curriculum aligns skills of graduates with local population needs

Telemedicine



Expensive medical evacuations reduced by **60%** after introduction of virtual consultations in a rural inuit setting using connected equipment such as stethoscopes and ultrasound

Innovating for the future



Progressive policy in Ontario

FFS reimbursement: from 2002 to 2015, FFS payments to primary care physicians reduced from **94%** to **25%**

Integration: Ontario healthcare reforms will see the formation of multi-disciplinary healthcare teams

Expanded Scope of Practice for nurse practitioners in primary care leading to better primary healthcare access

Why some rabbits outrun foxes

- 1 We are hurtling towards a global workforce crisis in healthcare
- 2 The solution is within our grasp. We can create an extra 20% capacity to care
- 3 We need to entirely reframe the workforce debate to one of productivity, health and wealth
- 4 There is an emerging global consistency on new models of care
- 5 10 solutions leverage all assets and need to be managed through new partnerships
- 6 There is no linear management solution. It is a wicked problem requiring complex adaptive thinking
- 7 “Work as imagined vs. work as done”
- 8 Wicked problems are not solved through healthcare hierarchies. Agile networks are needed
- 9 Apperception is the ability to use our collective experience to frame or re-frame situations to find new solutions
- 10 It took Michaelangelo four years to paint the Sistine Chapel. We have a bit longer. Let’s get going.

UPDATES NOT RECEIVED

“

“I first worked with Mark twenty-four years ago. He has worked across the world since. This book confronts the truism that there is no healthcare without a workforce.”

— Professor Dame Sally Davies, Chief Medical Officer for the UK Government

“

“Mark shows us that, in health, every country has something to teach and every country has something to learn.”

— Dr Yasuhiro Suzuki, Chief Medical and Global Health Officer and Vice-Minister for Health, Japan

“

“Humans need to master the technological and digital potential offered through the Fourth Industrial Revolution. This book makes a compelling case for doing so.”

— Ms Sangita Reddy, Managing Director of Apollo Hospitals in India

“

“This is a terrific book. It reminds us that demography is not our destiny and offers far reaching solutions to seemingly intractable health system problems.”

— Professor David Bloom, Harvard T.H. Chan School of Public Health, USA

“

“Britnell calls for politicians and professionals, patients and the public, to act now to avoid a global workforce crisis.”

— Professor Detlev Ganten, President World Health Summit, Germany

“

“This book is a call to action. Mark reminds us that people are the biggest challenge – and best solution – to the problems in healthcare.”

— Dr Francisco Balestrin, President International Hospital Federation, Brazil

“

“Students and scholars alike will find this book illuminating. It has global reach and is infused with practical examples of what works.”

— Professor Ling Li, Peking University, People's Republic of China

