

Planning the disposition and training of healthcare workers for an uncertain future

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Planning for an uncertain future

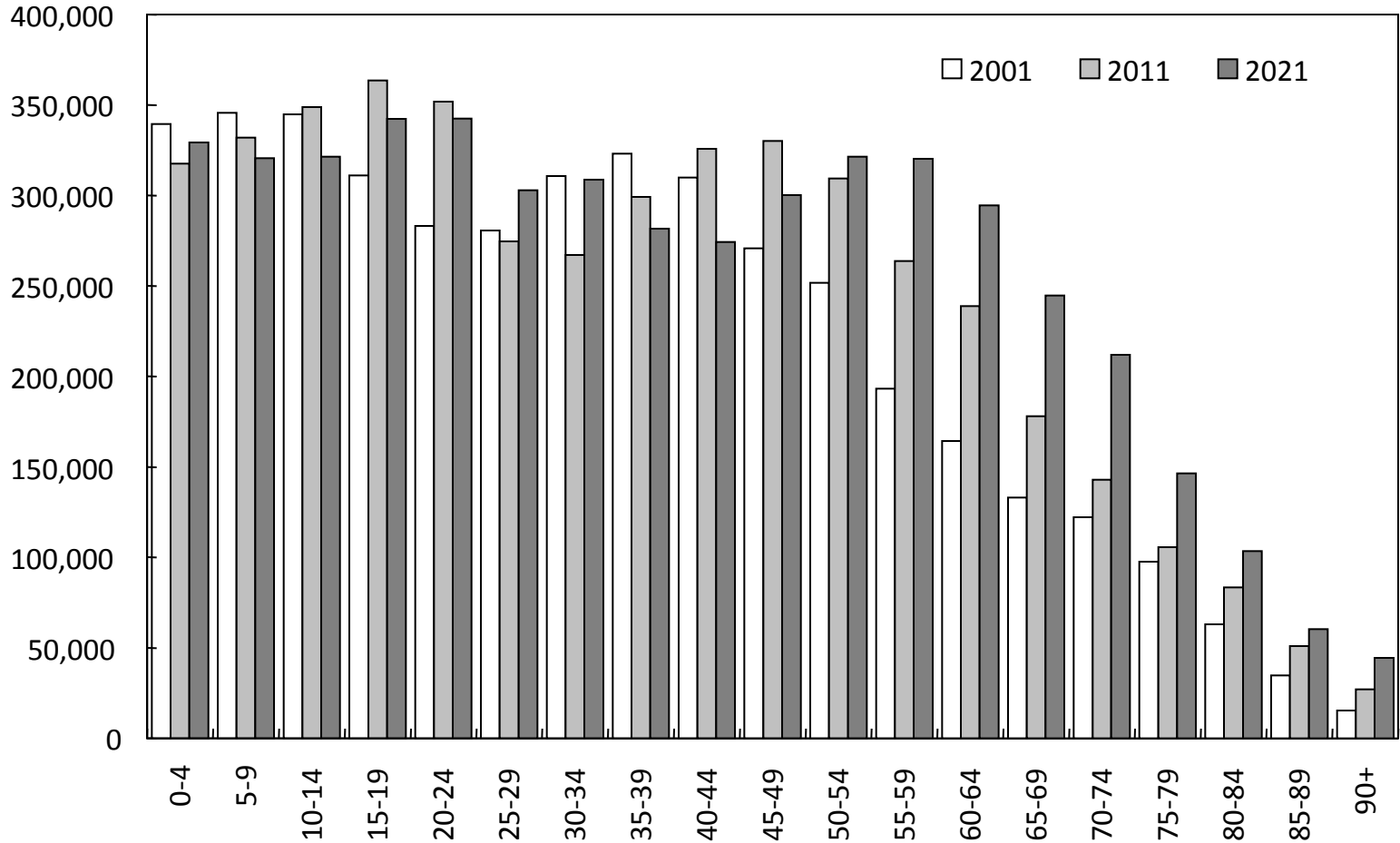
- Problem definition.
- Examples of the uncertainty.
- An approach to health workforce planning that accommodates uncertainty.
- Consistent findings and highly likely trends.

Problem definition

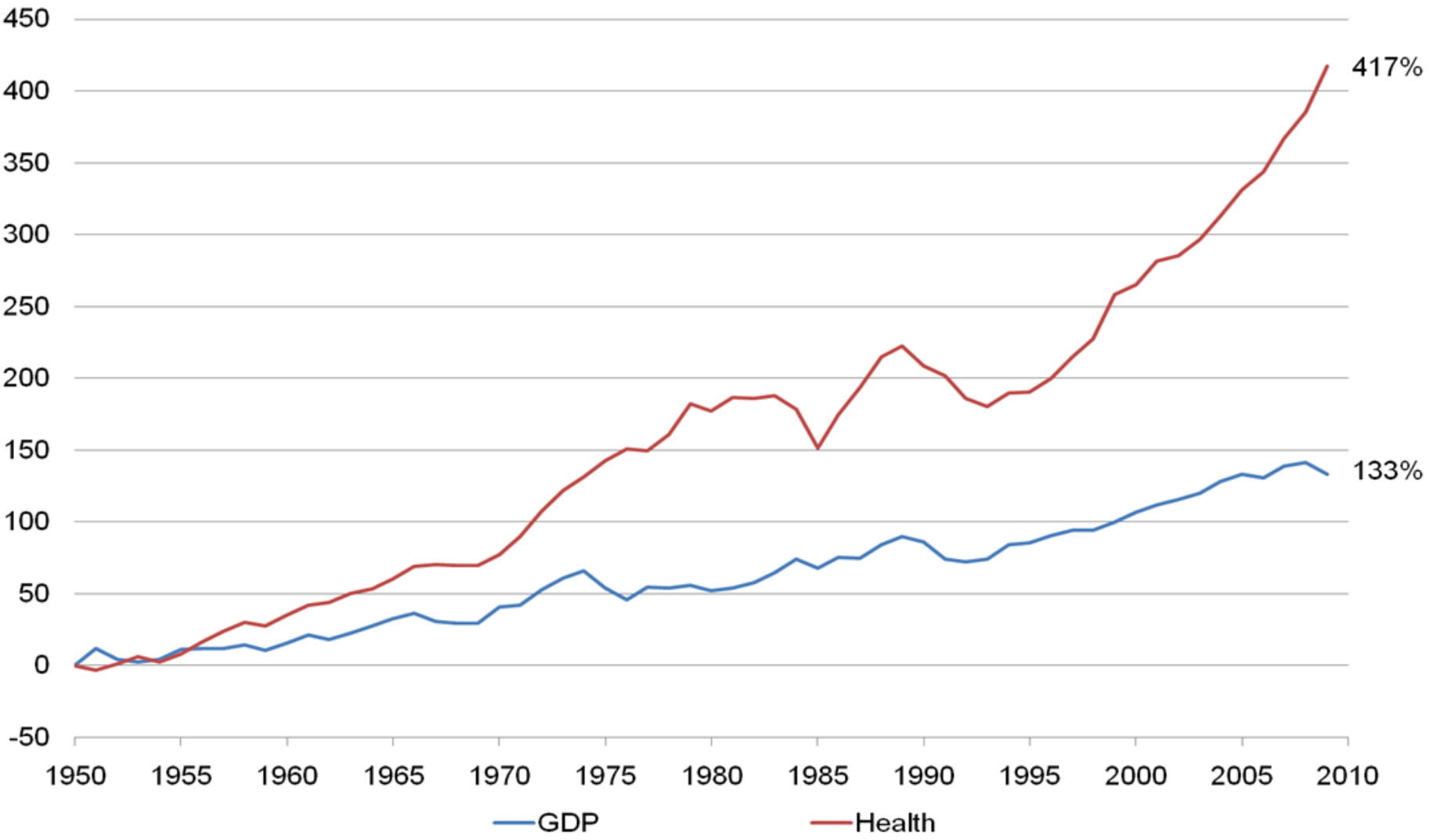
All predictions of the future health milieu suggest a supply, demand and affordability mismatch.

NZIER (2005)

NZ Population Projections by Age Cohort
(Assuming medium population growth)



Cumulative % change



Problem definition

Health planning, and particularly health workforce planning, is notoriously difficult and traditional approaches have been found to be highly unreliable.

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Examples of the uncertainty

Three disrupted models of healthcare as examples of the uncertainty.

An analysis of the medical and nursing workforces in New Zealand as professional examples of the uncertainty.

Examples of the uncertainty

Three disrupted models of healthcare as examples of the uncertainty.

- The discovery of an infective cause of peptic ulceration.
- The development of laparoscopic cholecystectomy.
- The development of cancer services based on the underlying mutation as compared to the affected organ.

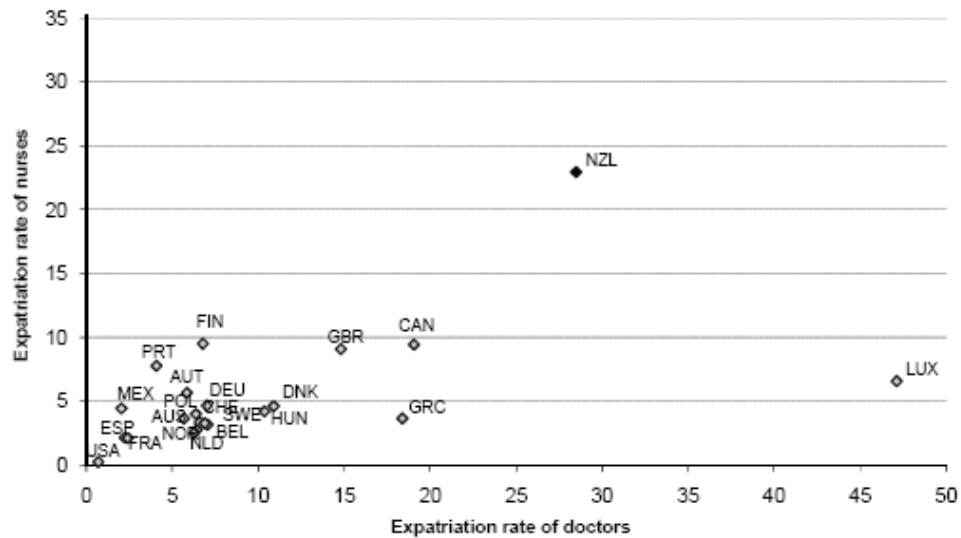
Examples of the uncertainty

An analysis of the medical and nursing workforces in New Zealand as professional examples of the uncertainty.

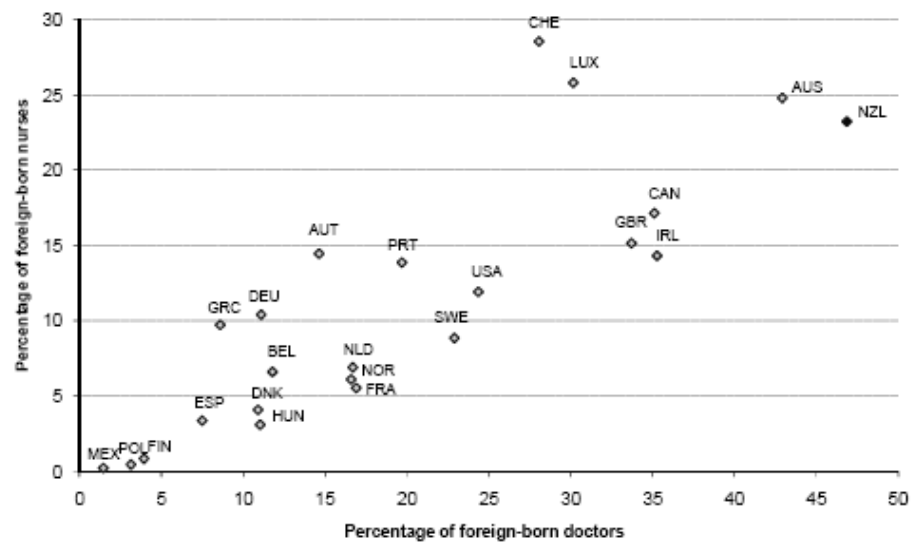
Examples of the uncertainty

In 2008, the New Zealand health system was the subject of a critical review by the WHO. This showed that New Zealand had only 70% of the OECD average number of doctors per capita and an excess reliance on immigrant doctors, in turn due to a very high emigration of doctors and in particular to Australia.

Chart 7. Expatriation rates and percentages of foreign-born doctors and nurses, selected OECD countries, circa 2000



Source: Dumont and Zum (2007)



Source: Dumont and Zum (2007)

Examples of the uncertainty

A series of strategies were introduced in 2009 and 2010 to reduce the rate of emigration of doctors from New Zealand – the hypothesis was that the annual loss of about 300 doctors permanently per annum to Australia alone would be halved by 2015. By 2012, the number leaving for anywhere in the world permanently was already less than 50.

Examples of the uncertainty

In 2013, considerable effort was required to identify internships for New Zealand domestic medical graduates.

- The retention rate of New Zealand doctors has changed over the last few years from a stable level of 75% to about 95%.
 - Many reasons exist to explain this shift, but the rate and extent was unpredictable.
- Senior doctors are now the most stable public workforce in New Zealand.

Examples of the uncertainty

As for other jurisdictions, a medical workforce that was poorly distributed against need was misinterpreted as an overall shortage – this has been exaggerated by the 2001 Primary Healthcare Strategy, which introduced a capitation and that has had an “unexpected” and perverse outcome on both the GP and ED medical workforces.

Figure 6: Average hours worked per week by work role at main work site

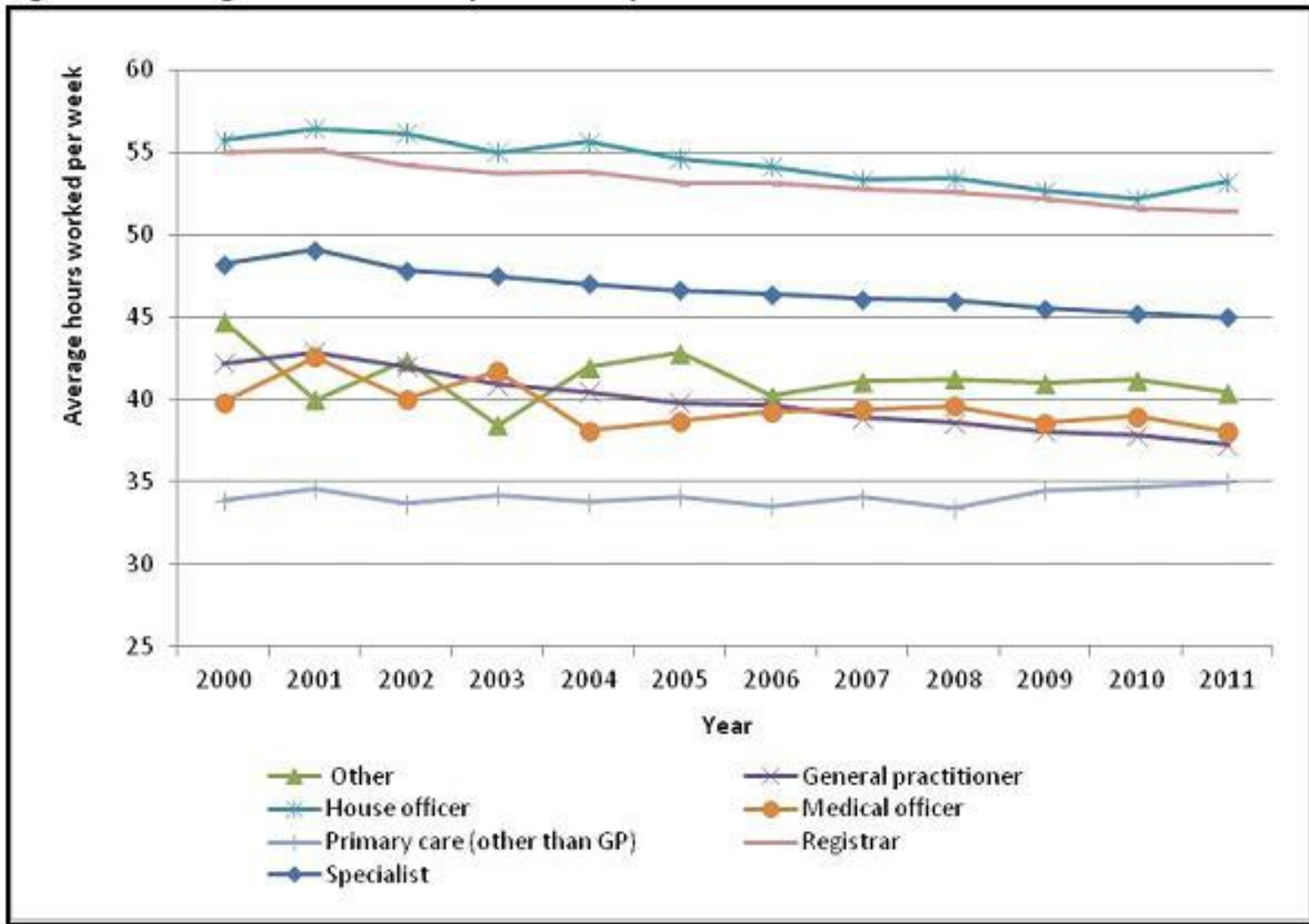
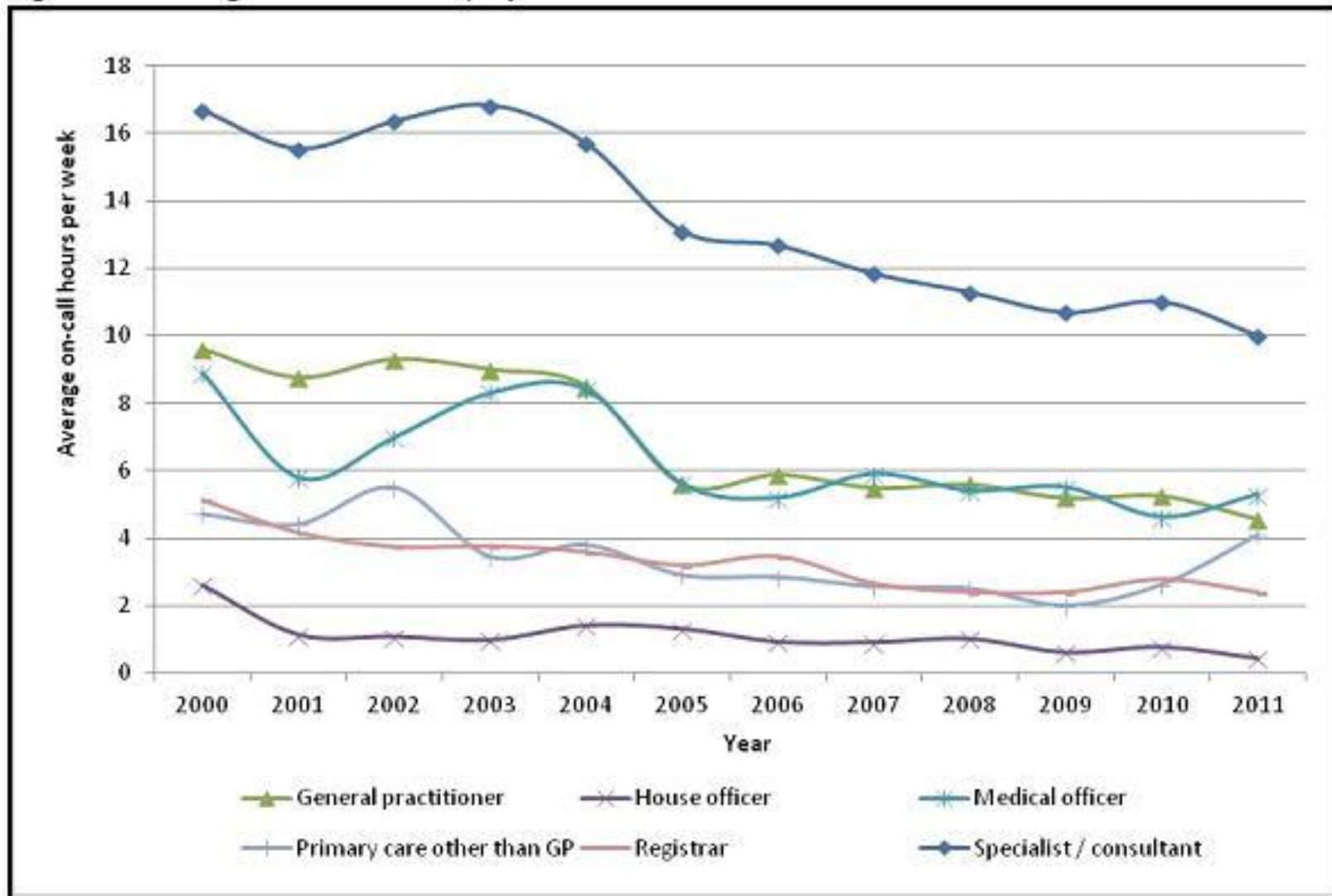


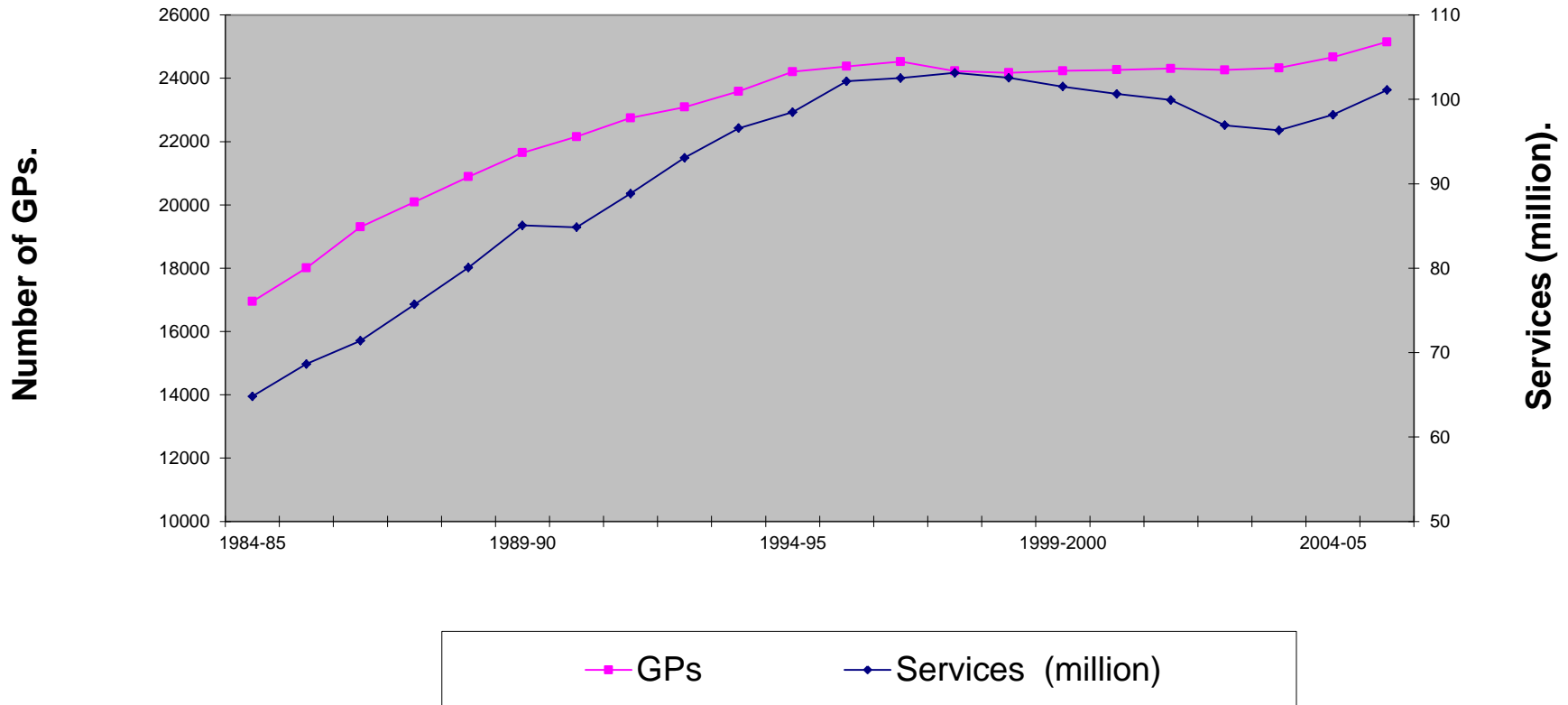
Figure 8: Average on-call¹ hours, by work role at main work site



¹ On-call hours are defined as hours when the doctor was on call, but not actually working.

Relationship between GP numbers and services in the Australian fee-for-service health system

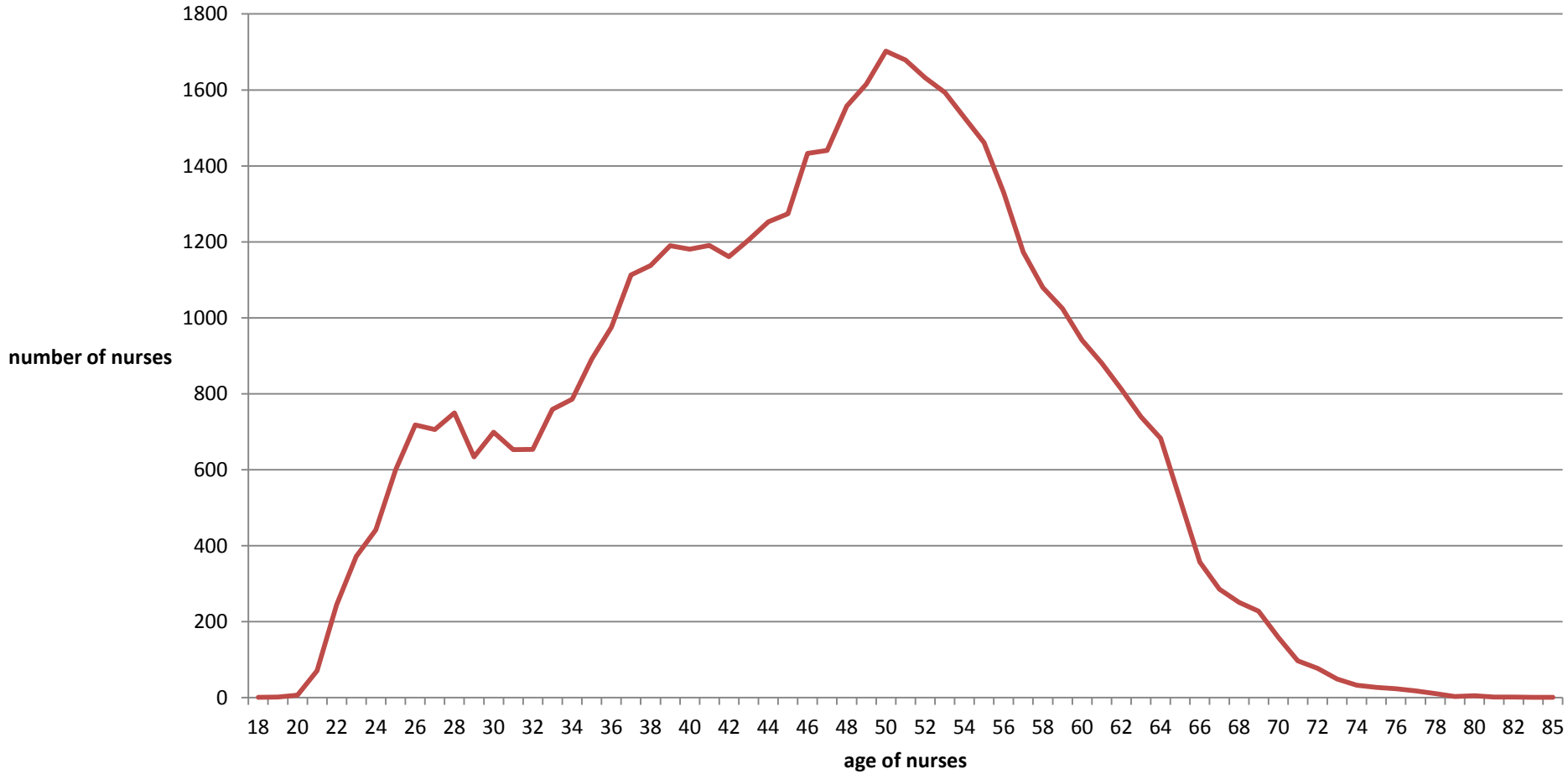
GP Numbers and GP Services 1984-85 to 2005-06



Examples of the uncertainty

Nurse participation in the workforce is closely (inversely) aligned to general labour market economic conditions, and to age (i.e., sharp drop off in effective FTE after the age of 50), and is generally independent of health need and of healthcare planning and funding. For this reason, 'feast and famine' in the nursing workforce occur as unpredictably as do changes in general economic conditions.

Number and age of nurses in workforce in October 2011



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Health workforce planning that accommodates uncertainty

HWNZ made five fundamental decisions in this context.

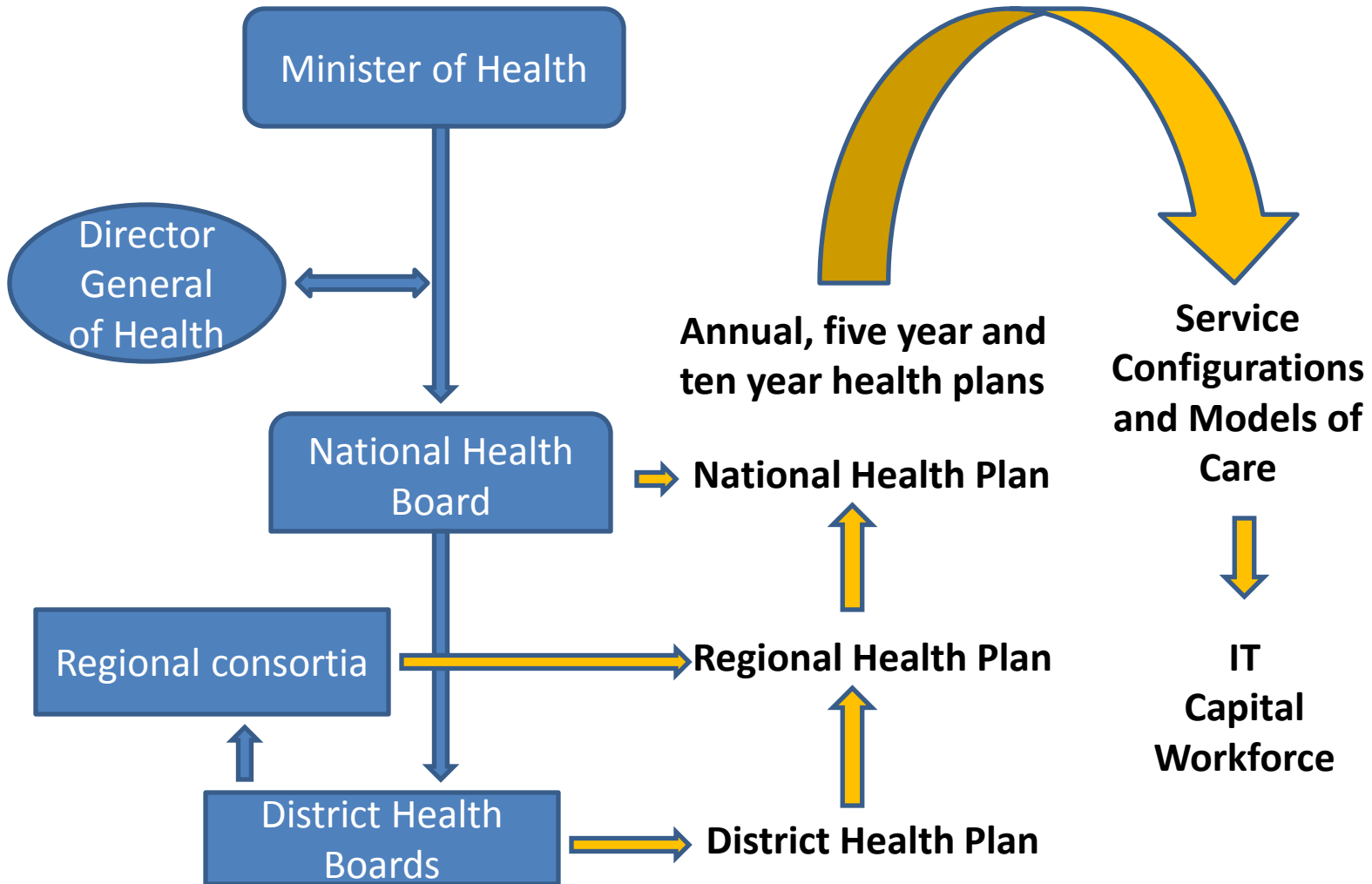
(1) The IHI Triple Aim – or at least a New Zealand variant – is an appropriate template for planning.

Health workforce planning that accommodates uncertainty

HWNZ made five fundamental decisions in this context.

(2) Health workforce planning needs to be organic and integrated with capital and IT planning and subservient to agreed models of care and service configurations – in turn driven by health need.

The New Zealand Health System in 2014



Health workforce planning that accommodates uncertainty

HWNZ made five fundamental decisions in this context.

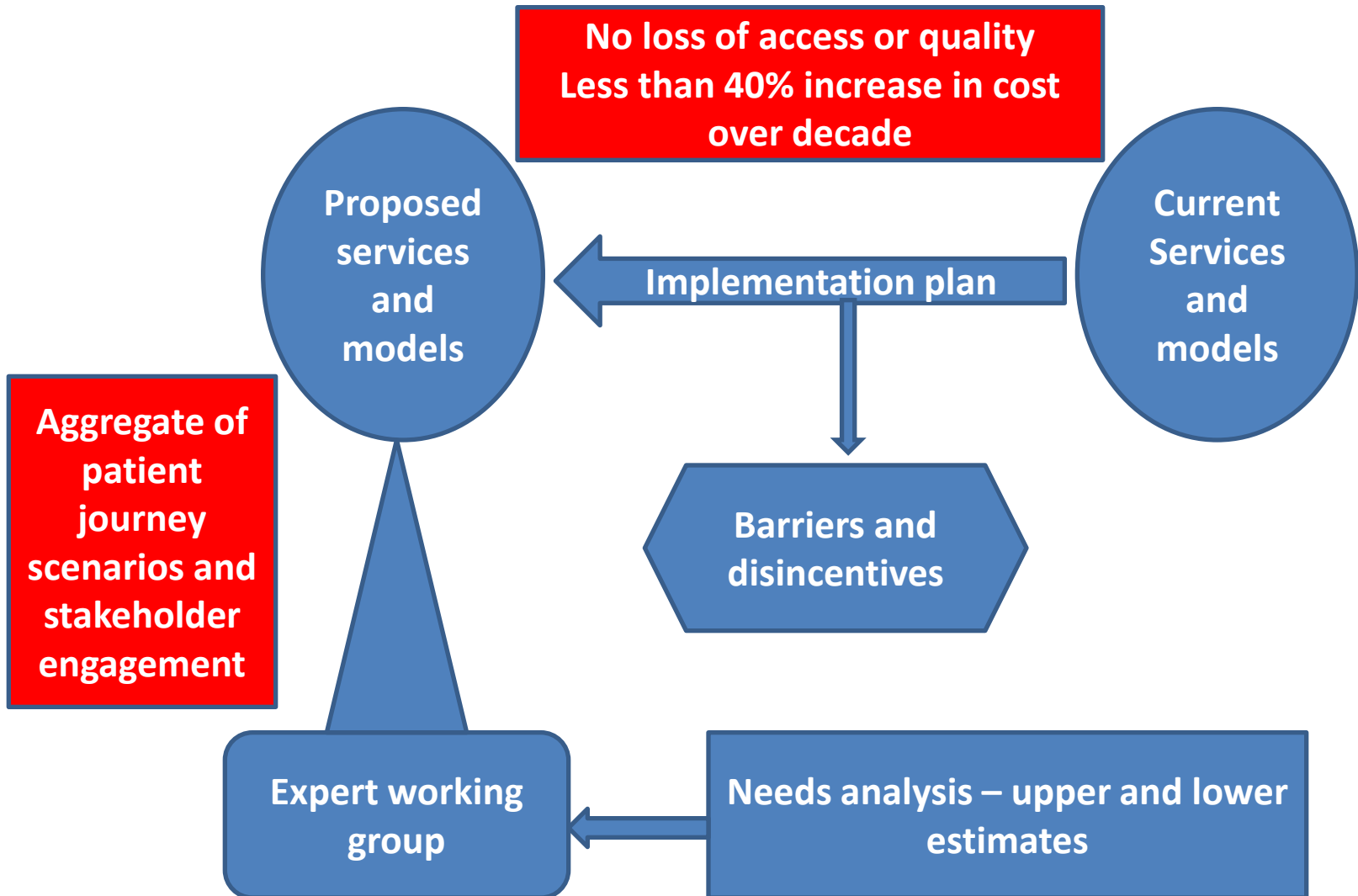
(3) Health planning is more effective when based on service aggregates – e.g., aged care, rehabilitation, mental health, mothers and baby's health etc. – than when it is based on professional groupings.

Health workforce planning that accommodates uncertainty

HWNZ made five fundamental decisions in this context.

(4) Health workforce planning needs to be based on an inclusive set of possible future scenarios for a service aggregate, and these scenarios should be generated by an inter-professional group of clinician subject matter experts and opinion leaders.

The HWNZ Planning Process for 2020



Health workforce planning that accommodates uncertainty

HWNZ made five fundamental decisions in this context.

(5) Advocacy for general scopes of practice for slow to train and expensive to train health workers and for flexibility in deployment for all health workers will help to future-proof the health workforce.

Health workforce planning that accommodates uncertainty

To date, 14 health service aggregate forecasts have been completed. In addition to specific outcomes for the aggregate, which includes the development of novel worker roles (e.g., diabetes registered nurse prescriber and prescribing pharmacists), cross-sectional analyses of the forecasts show some consistent findings and highly likely trends that can be incorporated into plans.

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Consistent findings and highly likely trends

(1) The future health milieu is very uncertain and in some service aggregates, possible scenarios vary widely in terms of consequent workforce, IT and capital demands; some scenarios have become redundant within a year or two of generation! This is argued to justify an organic forecasting approach to planning.

Consistent findings and highly likely trends

(2) More of the same, by way of models of care and service configurations, is not an appropriate response to future health challenges.

- HWNZ has facilitated and/or led the development of a large number of innovative models of healthcare and worker roles. The issue here is that most of these innovations remain largely fixed to the regions or facilities where they were developed.

Consistent findings and highly likely trends

(2) More of the same, by way of models of care and service configurations, is not an appropriate response to future health challenges.

- Barriers to generalised uptake include shortfalls in clinician and health system leadership, inadequate health system intelligence, restrictive business models and (often perverse) funding systems, restrictive regulatory practice, the threat of litigation, and territorial behaviour by potentially ‘disrupted’ craft groups and professions.

Consistent findings and highly likely trends

(3) The shift in disease burden to predominantly chronic and non-communicable disease requires a workforce that is able to provide care in the community and in people's homes - a doctor-led and hospital based health system is consequently increasingly less useful. The same is true for a provider-centric system, and a shift to a patient-centric system is being facilitated by an electronic shared care record and advanced care planning.

Consistent findings and highly likely trends

(4) The service forecasts have identified some general trends for individual professional groups.

Consistent findings and highly likely trends

Highly likely over-supply

- Psychologists – of most but not all subtypes
- Dentists
- Pharmacists
- Opticians
- Physiotherapists

Highly likely under-supply

- Oral hygienists and dental therapists
- Ultrasonographers
- MRI technicians
- Perfusionists

Consistent findings and highly likely trends

New Zealand has and will likely continue to have enough doctors. A low vacancy medical marketplace provides an opportunity for the following:

- (1) An increase in the ratio of New Zealand trained to overseas trained doctors in the broader New Zealand health system from 60/40 to 85/15;

Consistent findings and highly likely trends







New Zealand has and will likely continue to have enough doctors. A low vacancy medical marketplace provides an opportunity for the following:







(2) A change in the recognition, reward and remuneration schema for doctors from one that has a recruitment and retention bias to one that has a productivity and (outcome) quality bias; and

Consistent findings and highly likely trends

New Zealand has and will likely continue to have enough doctors. A low vacancy medical marketplace provides an opportunity for the following:







(3) A demographic, geographic and disciplinary redistribution of the medical workforce to better meet health need.







Primary care and community-based doctors	2014	2020	2025
Projected need			
Projected supply			







Secondary and tertiary-quaternary doctors	2014	2020	2025
Projected need			
Projected supply			

Consistent findings and highly likely trends

Currently, there are few, if any, vacancies for nurses in New Zealand, but this is likely to change as the current recessionary economic conditions continue to ease, as the average age of nurses exceeds 50, and as the Australian health system experiences significant nurse shortages.

Enrolled nurses and nurse assistants	2014	2020	2025
Projected need			
Projected supply			

Registered nurses	2014	2020	2025
Projected need			
Projected supply			

Nurse practitioners	2014	2020	2025
Projected need			
Projected supply			

Consistent findings and highly likely trends

Many people working in the unregulated community-based health workforce are relatively under-skilled for the services that they are required to provide. The underpinning concern of course is that up-skilling this workforce will lead to an increase in salary and other employment costs, so that many community-based services might become unaffordable and or unprofitable.

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