Private health insurance

An expanding role in the future of health care?

NZIER report to Health Funds Association of New Zealand

December 2014

FINAL

About NZIER

NZIER is a specialist consulting firm that uses applied economic research and analysis to provide a wide range of strategic advice to clients in the public and private sectors, throughout New Zealand and Australia, and further afield.

NZIER is also known for its long-established Quarterly Survey of Business Opinion and Quarterly Predictions.

Our aim is to be the premier centre of applied economic research in New Zealand. We pride ourselves on our reputation for independence and delivering quality analysis in the right form, and at the right time, for our clients. We ensure quality through teamwork on individual projects, critical review at internal seminars, and by peer review at various stages through a project by a senior staff member otherwise not involved in the project.

Each year NZIER devotes resources to undertake and make freely available economic research and thinking aimed at promoting a better understanding of New Zealand's important economic challenges.

NZIER was established in 1958.

Authorship

This paper was prepared at NZIER by Michael Bealing and Derek Gill.

It was quality approved by John Ballingall.

The assistance of Sarah Spring and Shamubeel Eaqub at NZIER is gratefully acknowledged.

L13 Grant Thornton House, 215 Lambton Quay | PO Box 3479, Wellington 6140
Tel +64 4 472 1880 | econ@nzier.org.nz

Key points

A greater role for private health insurance (PHI)

The projected growth in spending on public health care will put the health budget under severe pressure. New Zealanders will be asked to take an increasingly greater personal responsibility for their health care. This creates affordability and access issues. This paper looks at policy options to support people to use private health insurance for an affordable and timely access to care that is not covered by the public system.

We have identified an accelerated return to work as the 'sweet spot' where PHI can add most public value. In the conclusion, we discuss the option of a workplace based scheme (similar to KiwiSaver) that is best designed to target return to work. The fiscal affordability challenge facing New Zealand suggests this option stands out as needing further development and wider public debate.

Growing fiscal pressures will force change

The combination of rising expectations, the cost of new technology, cost pressures and an ageing population will put enormous pressure on the health and disability budget in New Zealand in the next decade and beyond. There will be a growing gap between what treatment is possible and what people want, and what is fiscally sustainable.

Investment in prevention and cost control initiatives will only take us so far in closing that growing gap. This means the government will need to raise taxes, cut other government services, reduce access to health services, or increase user charges. None of these approaches are very palatable, but we need to accept them as reality.[1]

Around the world, policy-makers are struggling with the same challenge. We can learn from overseas experiences, and adopt and adapt what might work in New Zealand. However, the big lesson is that there is no single, simple solution.

Any strategy will need to include a broad spectrum of coherent and mutually reinforcing initiatives. This means that, no matter what, the future will inevitably involve more rationing of publicly funded health services, and shifting a greater share of the costs of care onto patients. It also means that people will need tools to manage their rising share.

We need to face up to the problem and set a sustainable path

This rationing and shifting of cost is happening already. It is an increasingly large problem. A survey commissioned by HFANZ suggests that in the last year 170,000 adults said they were told they would have benefited from surgery, but their condition was not serious enough to go on the waiting list. Only those with private

[1] See page 8 http://www.health.govt.nz/publication/briefing-incoming-minister-health-2014

health insurance or with the means to borrow or pay for procedures out of their own pocket, can then make the choice to access care and support.[2]

We have begun to face up to the unsustainable future costs of superannuation policy. We know the superannuation package needs to become less generous. KiwiSaver has been put in place to help people take greater responsibility for their income in old age, as have financial literacy initiatives. There will be more reform yet, around the age of eligibility and decoupling the amounts from wage growth. These may be politically difficult, but the path ahead is clear, allowing people to adjust to the new deal.

We need similar honesty and clarity on how the future funding of health and disability will become fiscally sustainable. This would involve providing people access to information and tools to allow them to take on greater responsibility for the cost of health care that the public system will not be able to cover. We need to start now.

Obstacles and potential solutions

There are five main obstacles to people being able to take responsibility for a greater share of their health care costs.

- information – the government needs to be up front with the population that the public system can only offer so much; if people want more, they will have to contribute more
- treatment cost – most people will not be able to pay for some of the highest cost treatments in the private sector unless they have insurance, which could be a struggle for low income households
- premium affordability – insurance premiums rise with the age of the policy-holder, as the likelihood of treatment rises, while incomes can drop sharply in retirement
- regret – people put off taking insurance, preferring to spend their money on other things, and then realise too late they cannot afford treatment or buy cover for their condition (the problem of time inconsistency)
- pre-existing conditions – it is expensive or simply impossible to get cover for pre-existing conditions. (This risk also hinders people switching between providers, so reducing one potential source of competitive pressure for lowering the cost of insurance.)

Currently there is no clear health policy position on the complementary role of private health insurance in New Zealand. The industry is actually experiencing a long-term decline in the number and proportion of people with health insurance (particularly among those with families or in their late 50s).

If people are to take responsibility for a greater share of the cost of health care, then it makes sense to ensure that the policy settings are supportive (if not actively encouraging) of people taking up private health insurance, so they can manage that extra burden.

[2] http://www.healthfunds.org.nz/pdf/Assessing%20the%20demand%20for%20Elective%20Surgery%20for%20release.pdf

We considered a range of options to address the broad obstacles set out above. These range from minor and light-handed facilitation (nudges) to the more active use of tax, subsidies and regulation, while stopping short of a switch to a social insurance health system with competing managed care health plans because this would be a major transformation of the health care system.

We assessed the options against standard public policy criteria of effectiveness, efficiency, equity, and administrative simplicity.

A number of generic options stand out as worthy of further debate and development, possibly in combination with each other. These options were based on how international experience could be applied to New Zealand.

Inform – one low-cost and light-handed approach would be to raise the population's awareness of the changing responsibilities, and how private health insurance can help people to manage these financial risks.

This can be an industry-led initiative, but would be more credible and effective if accompanied with clear government messages about what people can expect from the public sector, and an official recognition of private health insurance (PHI) as part of how we access health care in future. The role of PHI could also become part of official financial literacy initiatives.

The objective would be to raise awareness and to reduce the regret problem. When Israel legitimised supplementary insurance plans in legislation alongside the state's basic social insurance plan, it contributed to a rise in uptake from 45% to 73% over the space of a decade.

A KiwiSaver style approach – a more proactive approach would be to auto-enrol people in a health insurance plan, for example, when they start a job (like KiwiSaver).

The objective would be to attack the regret problem, and play on the so-called 'status quo bias'. The literature shows that people are often more likely to join a plan if they have to consciously opt out than if they can opt in, even though logically the choice is the same.

A related outcome of this status quo bias might be that, with an increased uptake, a greater proportion of people stay with their plan as they age, even as their incomes drop. This approach also has the efficiency benefits of participation being voluntary, allowing consumers to do what is best for them.

This type of policy would involve a range of administrative and regulatory supports, as the KiwiSaver experience shows. This includes a mechanism to certify default plans, and other 'clearing-house' type functions.

A less forceful option would be to make it easier for people to 'opt in' to a plan, for example, by requiring employers to offer a plan to employees. However, this is likely to result in a lower take-up, while still requiring many of the administrative supports of an 'opt out' scheme.

Carrot and stick – a more 'traditional' policy approach is subsidising the price of insurance premiums to increase uptake. The rationale is that people with health insurance relieve pressure on the public system, and enable public resources to be directed at those with low incomes, chronic conditions or other priorities. However, unless subsidies can be tightly targeted, the fiscal cost is likely to outweigh fiscal

savings, because of the deadweight losses of subsidising those who already have insurance.

Even targeting those on a low income (to address affordability concerns) or by age is imperfect.[3] One option explored in more detail in the paper is targeting the purchase of surgery that meets clinical and budgetary criteria. This has the potential to dramatically expand the coverage of private health insurance but it does not help the government fiscal sustainability problem by freeing up any resources.

Another carrot would be revising the treatment of PHI under Fringe Benefit Tax but we have not been able to identify a sufficient FBT distortion that warrants an exemption.

As well as a carrot, the stick is another option; Australian Medicare reforms over the last 15 years used a mix. In addition to a rebate (subsidy), people with incomes over AU$70,000 without private health insurance were subject to a 1% levy. Such a surcharge would need to be set high enough to encourage uptake and be reflective of the opportunity cost to the public health system.

The levy would increase uptake in the same way as a subsidy, but avoids the fiscal deadweight loss. However, the potential inefficiency of compulsion, and the impact of a levy on work incentives and tax strategy coherence needs further consideration.

New Zealand's health system, like other jurisdictions, will face increasing demographic and fiscal pressures. Making progress on addressing these pressures will require trading off conflicting objectives. Put simply, in Table 1 no option scores high (green) on every criterion but some have more red flags than others. In particular, the general subsidy option appears 'dominated'; it is inferior or no better than other options on every criteria.

Table 1 Option evaluation framework

Option	Effectiveness	Efficiency	Equity of access	Administrative simplicity
Nudging towards personal responsibility	Weak	High	High	Simple
KiwiSaver style approach	High	High	Moderate	Complex
Purchase of elective surgery	Weak	High	High	Moderately complex
General subsidy	Weak	Weak	Moderate	Simple
Targeted subsidy for the over 65s	Weak	Weak	Moderate	Simple
Targeted subsidy for accelerating the return to work	High	Moderate	High	Complex
Partial removal of FBT on PHI	Moderate	Weak	Moderate	Complex
Surcharge on high income earners who do not have health insurance	High	Moderate	Moderate	Complex

Source: NZIER

[3] Vaithianathan (2002) argues subsidising private care, rather than subsidising insurance would be more effective in reducing demand for public care; however, the objective of this paper is to look at options enabling people to manage increased cost-sharing. https://ideas.repec.org/a/bla/ecorec/v78y2002i242p277-83.html

The best solution depends on what objectives are most important. While there is no 'best practice' international model, international evidence shows that private health insurance (PHI) can play an important complementary role.

We have focused on where PHI can add greatest public value. The answer is clear – *accelerating the return to work from sickness*. Our initial rough estimates, which are conservative about the value of lost output, suggest that increasing the number of workers covered by PHI by 20% could save around NZ$60-$110 million in lost output and involve a fiscal cost between NZ$70 million and NZ$90 million[4]. One means of achieving a faster return to work from sickness would be an explicit subsidy or tax expenditure targeted at employees (similar to the Charitable Donations Rebate).

While more detailed examination and costing is required, it is clear that the most promising workplace approach could comprise a package of measures including:

- an ongoing information programme to raise public awareness
- automatic enrolment in a workplace subsidised employer plan (with the employees having the opportunity to opt out)
- a targeted enrolment subsidy.

The fiscal affordability challenge facing New Zealand suggests these options stand out as needing further development and wider public debate.

[4] The estimates of savings from avoided lost output are sensitive to the additional number of days an individual waits for public surgery relative to the private sector. We have seen estimates of the number days that vary between 30 and over 200 days. Waiting time needs to be modelled carefully with detailed data.

Contents

Figures

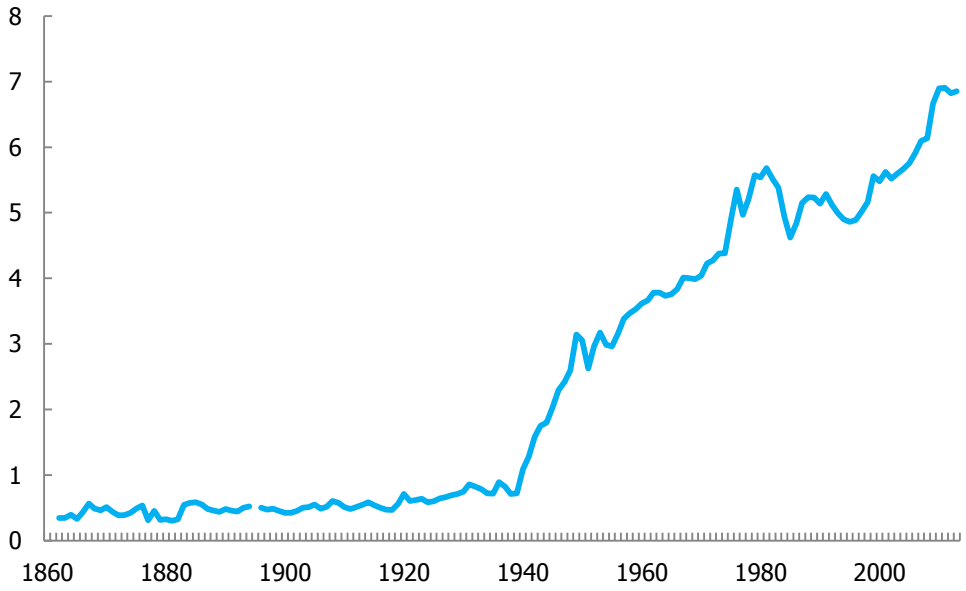
1. The fiscal challenge

Health care costs have been rising over many decades, and will continue to do so according to Treasury projections. Health care spending is taking up more and more of government spending and revenue – this cannot continue forever. In the future, there will be pressures to increase revenue or reduce spending – both of which are difficult due to an ageing population and political economy considerations.

Crown health care expenditure as a share of gross domestic product (GDP) has trended higher over many decades (Figure 1). Many factors have increased health spending, including technical progress in medicine, cost growth and increasingly obesity and ageing.

Figure 1 Health expenditure as share of GDP has been going in only one direction for a very long time

Crown health expenditure as % of GDP

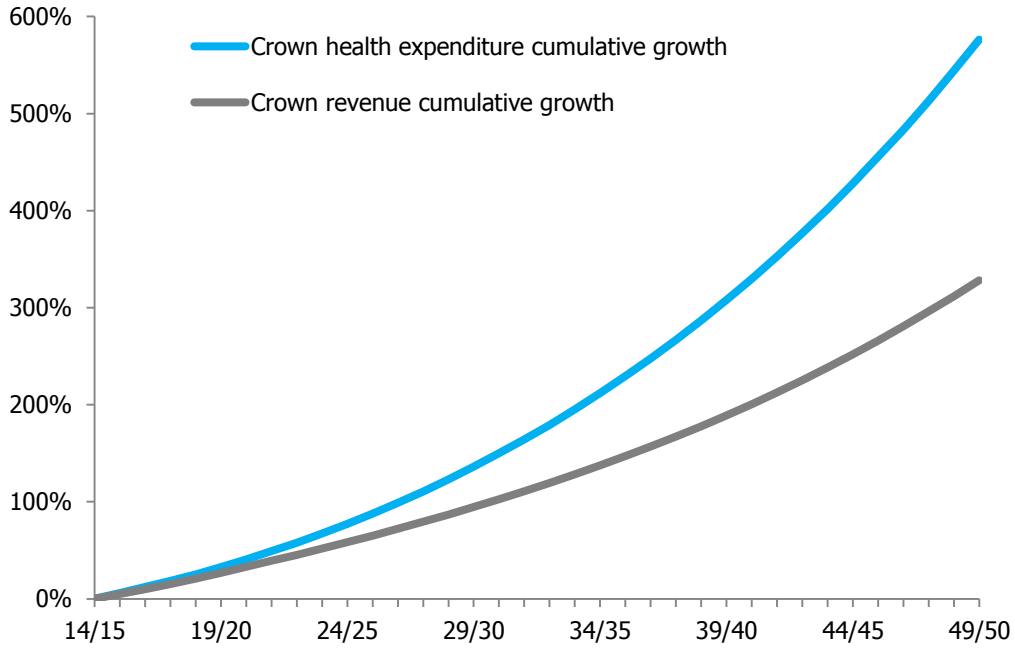


Source: Statistics New Zealand, NZIER

On current trends, health spending will create severe pressures on the government fiscal position in future years. Figure 2 shows that public health spending is projected to grow faster than Crown revenue.

Figure 2 Health expenditure forecast to grow faster than Crown revenue

Cumulative growth from 2014/15



Source: The Treasury Long Term Fiscal Model 2013

Other expenditure will also rise, including New Zealand superannuation. If the expenditure and revenue trends follow the Treasury long-term forecast, total fiscal expenditure will materially exceed total revenue for many years. The Treasury Briefing to the Incoming Minister for Health concluded that current growth rates for government health expenditure are unsustainable (Treasury, 2014). Tough decisions are required on:

- what mix of services should be partially or fully funded by the government
- who is eligible for fully funded public health care
- where other efficiency savings can be realistically sustained
- when health care services are provided and what length of waiting lists are reasonable
- the regional distribution of health care services
- how health care is funded/financed.

The likely future trend is people will have to take more personal responsibility for their health care costs and this will provide a greater potential role for private insurance. This report draws on public policy analysis, international experience and the literature on health financing to identify some worthy options for consideration based on these trends.

2. The public policy framework for health care provision

International comparisons of health care systems show that most countries have a mix of public and private health care providers. There is no standout solution for health care delivery. Health outcomes, the effectiveness of cost containment and equity impacts vary. Health systems tend to be path dependent; they are the result of historical policies and adjustments. Radical systematic changes are rare. The problems of how to finance, fund and provide health care are persistent and perennial. Thus health systems and health policies are constantly evolving to cope with changing demand, changing populations and future uncertainties.

Health care is a market, but it is an imperfect one. Health insurance is a mechanism for individuals to pool risks and lower the individual cost of uncertainty of the size and timing of health care costs. Private health insurance typically provides complementary and supplementary care over and above what is provided in the public system, to meet consumer demand for choice and access beyond the public offering.

Table 2 compares the strengths and weaknesses of public and private health care systems. The systems are driven by contrasting objectives. The public system aims to provide equitable access based on need, not ability to pay. The private system provides options more tailored to individual consumption preferences.

Table 2 Strengths and weaknesses of public and private systems

	Strengths	Weaknesses
Public system	Very equitable Economies of scale National risk pooling	Very limited choice Inefficiencies from bureaucracy Few pricing signals to guide demand Government bears the risk
Private insurance	Options to match consumer preferences and willingness to pay Market based signals that guide demand Managing the cost of risk and uncertainty over time	Access is limited by income Horizontally inequitable

Source: NZIER based on Morris et al., 2010

2.1. The role of the government in providing health care

Health care (other than public health initiatives such as vaccination) is subject to market failures (Morris, Devlin and Parkin, 2010):

- adverse selection – individuals who are at higher risk of health costs are more likely to purchase insurance than the average individual. Conversely low risk individuals are less likely to purchase health insurance than the average individual.
- moral hazard – the possibility that the availability of insurance encourages greater use of heath care services than is required without insurance.
- incomplete coverage – low income groups may find it difficult to access or afford health care insurance even after adverse selection risks are addressed.

Governments intervene in health care markets to address these market equity and selection issues. They do so either through regulation, funding or direct provision of health services.

Government policies are also motivated by social factors, including inequity of access, opportunity and affordability of care. Governments can introduce inefficiencies to health care through bureaucracy, imperfect information and a multiplicity of objectives. The involvement of governments in the provision of health care largely removes the strength of price signals to balance the supply and demand for health care services.

2.2. Public delivery of health care presents rationing challenges

In a perfectly competitive market, price signals equalise the demand and supply of health services. This price signal is blurred or removed from a public system where the objective is to deliver health care regardless of the ability of the patient to pay the cost at point of use. Users sometimes pay part fees in a public system but they are heavily subsidised by government. This means the links between revenue and expenditure are disconnected. Without a clear price signal, waiting time and what services are covered by the public health system become the drivers of demand.

One of the key propositions in economics is that resources are limited, but there are no limits on the economic outputs that are desired. In the case of health, this means that there are not enough health care resources to meet all of the health needs that people have.

The problem of scarcity is made more difficult in health where the services are funded by third parties either through insurance or taxation. Third party financing means that the people who have health needs do not face a direct budget constraint. While the individual New Zealander may face no or minimal part charges for health services, in practice rationing decisions are made at all levels of the health system. This is an inevitable fact of life as there are never enough scarce resources to meet all of the wants that people have, so we have to choose which wants are met and which are not met.

Using third party payments through taxation shifts the rationing problem to the political system. But the political system is not well placed to respond. Political systems particularly struggle to determine the levels of publicly financed goods in areas like health where individuals have very different intensities of preferences[5] (think of the different preferences of sick people and healthy people for health care). Older people, who are the major consumers of health services, are also much more likely to vote than younger people. With an ageing population, an increasing percentage of the population will potentially be high health consumers. Over time, the political system is likely to be overly responsive to an ageing group of voters (relative to the preferences of the population as a whole).

The challenge is getting the balance right between what is provided by the public system and what can be offered by the private system. That is where the boundary should be put for what is publicly financed and what is privately financed through insurance to ensure levels of access and equity that fits with our culture and values.

No country has the perfect solution. The structure of health systems and public expectations about health care provision are influenced by history. Many countries are struggling with the same challenge. Trade-offs between efficiency, equity, health outcomes, access and costs are addressed in different ways around the world. The next section provides a summary of the health systems of nine other OECD countries, and briefly compares them with New Zealand.

[5] More technically, Arrows Impossibility Theorem shows that there is no social choice rule using voting that consistently satisfies basic conditions.

3. Health system design and performance

National health systems differ on a number of dimensions: whether they are predominately *financed* by general taxation, a social insurance or private insurance, whether *provision* is predominantly public or private, and the extent that gatekeeping limits consumers' *choice* of providers. In this section of the report we mainly focus on how different countries finance their national health schemes. (See Joumard et al., 2010 for a more detailed discussion on health system classification by financing structure.)

The Commonwealth Fund recently published a comparison of the health systems of 11 OECD countries. Figure 3 compares the relative performance of different schemes, and shows that no one scheme dominates. In short, there is no perfect system. Performance depends on what the objectives are. There are trade-offs to be made in costs, quality, outcomes, equity and access. How the different elements in the trade-offs are weighted will influence the system design.

Figure 3 International comparison of health care systems

COUNTRY RANKINGS

Top 2*
Middle
Bottom 2*

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
OVERALL RANKING (2013)	4	10	9	5	5	7	7	3	2	1	11
Quality Care	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
Access	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
Efficiency	4	10	8	9	7	3	4	2	6	1	11
Equity	5	9	7	4	8	10	6	1	2	2	11
Healthy Lives	4	8	1	7	5	9	6	2	3	10	11
Health Expenditures/Capita, 2011**	$3,800	$4,522	$4,118	$4,495	$5,099	$3,182	$5,669	$3,925	$5,643	$3,405	$8,508

Notes: * Includes ties. ** Expenditures shown in $US PPP (purchasing power parity); Australian $ data are from 2010.
Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund *National Scorecard 2011;* World Health Organization; and Organization for Economic Cooperation and Development, *OECD Health Data, 2013* (Paris: OECD, Nov. 2013).

Source: The Commonwealth Fund, 2014

In this section, we discuss health system design and performance and investigate two types of health systems, commonly found overseas:

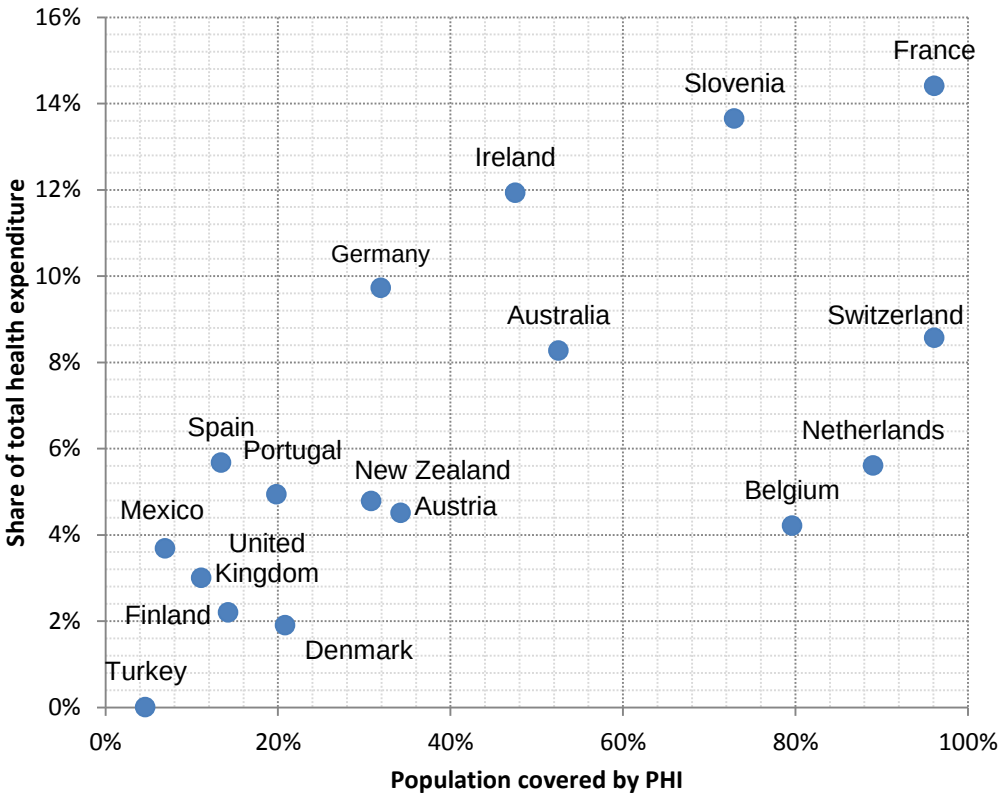
- tax funded (general taxation)
- social health insurance.

We have not included predominantly privately funded insurance, as the United States is the only jurisdiction that is in this category.[6] The key characteristics of these health care systems are summarised in Table 3.

Our analysis investigated the role of private health insurance in countries where coverage and contribution to total health expenditure is greater than in New Zealand (Figure 4).

Figure 4 PHI penetration and coverage

2012 or nearest year



Source: OECD, 2014a and OECD, 2014b

[6] The US was excluded from the analysis because it is a costly system with poor health outcomes and performance.

Table 3 Key characteristics of health care systems

System	Taxation	Social health insurance
Characteristic	Compulsory tax spread across the population User payments at the point of service and are linked to the ability to pay not individual risk	Universal health insurance is typically compulsory Funded through hypothecated taxes linked to employment and ability to pay rather than risk
Countries primarily using each system	New Zealand, UK, Australia, Ireland	France, Germany, Netherlands, Switzerland and Slovenia

Source: NZIER based on Morris, Devlin and Parkin, 2010

Below we examine a range of countries to understand what their experience has been in health provision and how PHI has been involved in meeting demand for health care.

3.1. Taxed funded systems

Contributions for tax funded systems (TFS) are sourced from general taxes at the national or regional level. Taxes can be direct, indirect, general, hypothecated, national or regional. Individual contributions are not linked to risk.

The advantages of TFS are:

- draws on a wide revenue base
- allows trade-offs between health and other areas of public spending
- wide access
- economies of scale
- health care is not linked to employment.

The disadvantages are:

- tax revenue fluctuates with the economic cycle, so in a recession there may be reduced tax revenue to fund health but higher demand, as individuals opt out of PHI (temporarily or permanently due to household budget pressures) which may increase demand on publicly provided health care (Evans, 2002)
- moral hazard.

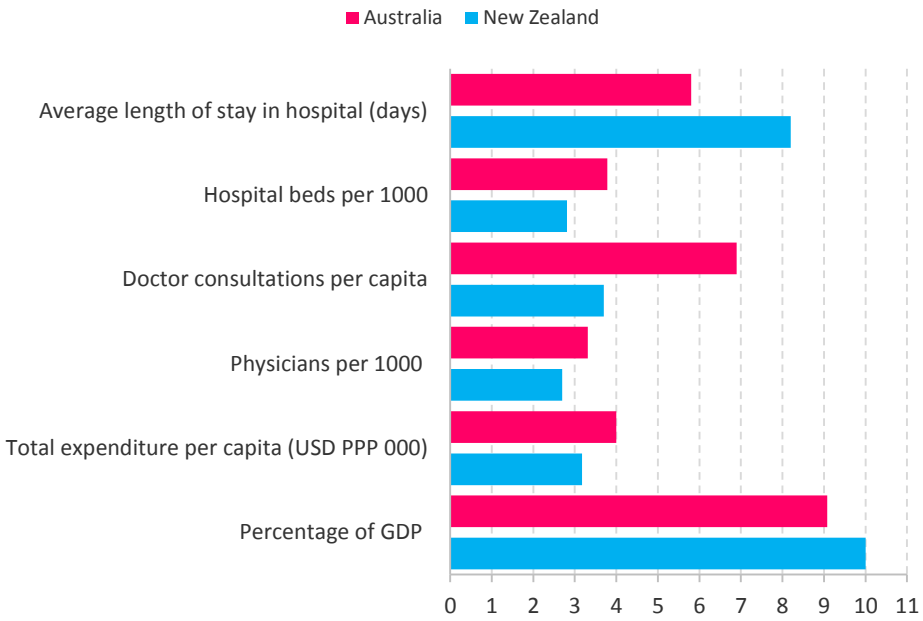
3.1.1. Health care in Australia

Total health expenditure in Australia is around 25% more than New Zealand on a per capita basis. The number of physicians and nurses per capita is similar in both countries. The number of hospitals per capita is higher in Australia, while the average length of stay in hospital in Australia is significantly shorter than in New Zealand.

Out-of-pocket expenditure in Australia is more than double the level in New Zealand. Similarly, expenditure on PHI, which is heavily subsidised in Australia, is twice as high as in New Zealand.

Figure 5 Health care comparisons between Australia and New Zealand

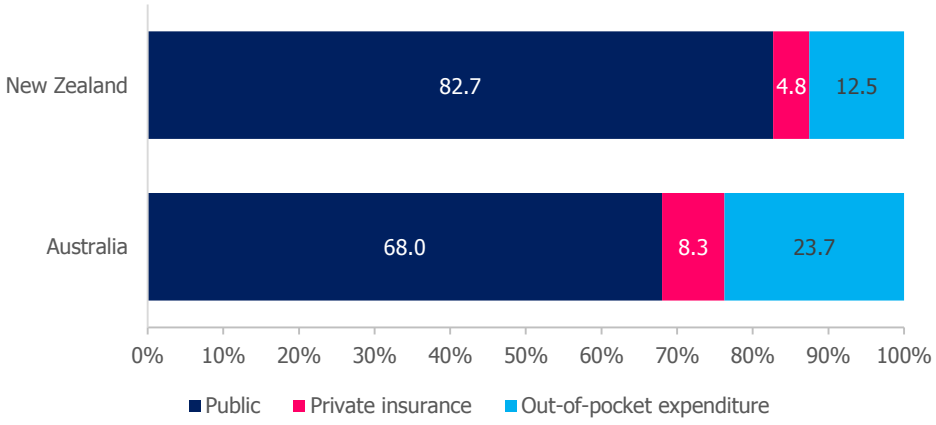
2012 or nearest year



Source: OECD, 2014b

Figure 6 Health care financing in Australia and New Zealand

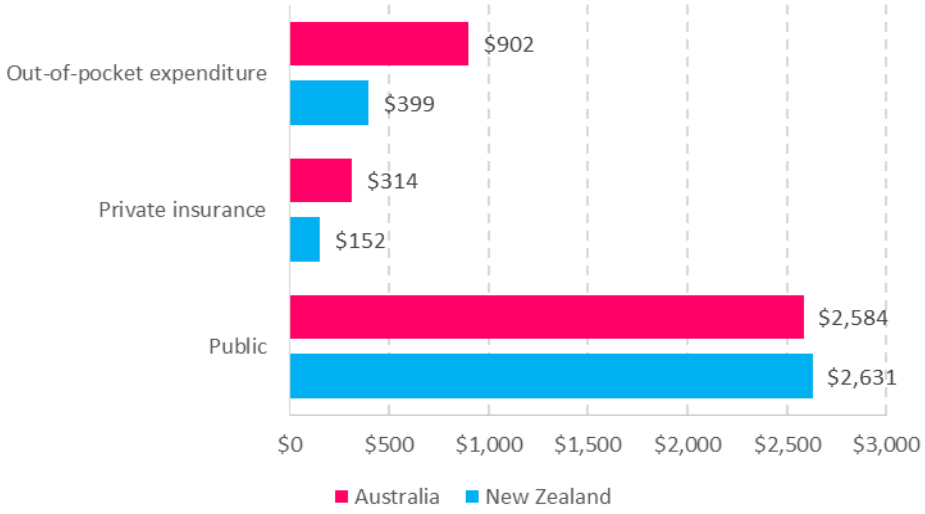
2011 or nearest year



Source: Source: OECD, 2014a

Figure 7 Who bears the cost in Australia and New Zealand?

2012 or nearest year, US$ adjusted for purchasing power parity



Source: OECD, 2014b

Rising health care expenditure is expected to put pressure on public spending. The Australian Government (2010) projected that government health care expenditure as a proportion of GDP could rise from 4% in 2009/10 to 7.1% by 2049/50. The ageing population and rising consumer expectations are the underlying drivers of the cost increase (Cheng, 2013).

The Australian health system has a mix of public and private health care provisions and financial incentives. Public universal coverage is provided through the tax-funded national health system Medicare. It covers 75% of the cost of treatment for public patients in public hospitals.[7] PHI covers the remaining 25% of hospital care costs.

PHI offers a wide range of choices in Australia (The Commonwealth Fund, 2013). It includes options such as:

- care in private hospitals
- private care in public hospitals
- choice among in-hospital specialists and practitioners of ancillary services such as dental care and optometry
- the timing of procedures
- out-of-hospital services that substitute for or prevent in-hospital care.

The proportion of the Australian population covered by PHI declined following the introduction of Medicare in 1984. This raised concerns about future demand on the public health system, in particular whether the rising cost of public health was sustainable (Cheng, 2014, and Robson and Pauolucci, 2012).

[7] http://www.privatehealth.gov.au/healthinsurance/whatiscovered/privatehealth.htm

From 1997 to 2001, the Australian government introduced three policies aimed at increasing the proportion of the population covered by PHI as the key approach to reducing the risk of unsustainable demand on the public purse:

- private health insurance rebates
- medicare levy surcharge (MLS)
- lifetime health cover (LHC).

At the same time, Australia liberalised PHI to allow for greater innovation and product differentiation.[8] Collectively the policies were intended to provide a framework of carrot and stick style incentives to improve coverage and deliver a financially sustainable health care system.

The PHI rebates, introduced under the Private Health Insurance Incentives Act 1998, established a 30% rebate for PHI.[9] The implementation of the rebate policy was followed by a dramatic increase in the proportion of Australians covered by PHI. From December 1999 to September 2000, the proportion with PHI rose from 30% to 46% (Cheng, 2013). Frech III et al. (2003) suggest that liberalising PHI regulation had the most effect on increased PHI coverage in Australia compared to the rebates, MLS and LHC.

The MLS, introduced in 1997, is a 1% tax penalty for individuals without PHI who have taxable annual incomes greater than AU$70,000.[10] This policy was intended to encourage those who can most afford PHI to take out insurance policies.

The LHC sought to incentivise early uptake of PHI by imposing an annual 2% premium increase if individuals took up PHI after 30 years of age.

Private health insurance accounted for 7.6% of total health expenditure in 2010–11, and in June 2013, 47% of the population had private health insurance and 54.9% had general treatment coverage (The Commonwealth Fund, 2013).

The effectiveness of the Australian policies in controlling public health care expenditure burden is questionable. The expenditure on rebates is substantial relative to PHI and is a material proportion of the total health expenditure. In 2011/12, premium rebates cost AU$4.7 billion. This was 4.8% of total government health expenditure in that financial year.

Frech and Hopkins (2004) argue that using a subsidy to incentivise a shift towards PHI that is large enough that it is self-financing (the cost savings to public sector equal the cost of the subsidy from public expenditure) would require a price elasticity which is unrealistic in the short term for normal goods such as PHI.

3.1.2. Health care in the United Kingdom

The structure of the health care system in the United Kingdom is similar to New Zealand. The government regulates health care and sets the budget and health care goals. The government also owns the National Health Service (NHS) which delivers universal health care available to all United Kingdom residents.

[8] Frech III, Hopkins and MacDonald, 2003.

[9] Subsequent amendments in 2005 increased the rebates for those aged 65 and over.

[10] Or AU$140,000 for couples.

This system is financed through general taxation. There are very few co-payments in the NHS. All hospital services are free, outpatient services have low charges, medication and over the counter medicines have low fees and dentistry costs are capped annually.

Unsurprisingly this level of publicly financed health provision is associated with a low share of individuals with PHI. Around 11% of people have PHI, which tends to be related to employment. The insurance is typically for the cost of co-payments or quicker access to care.

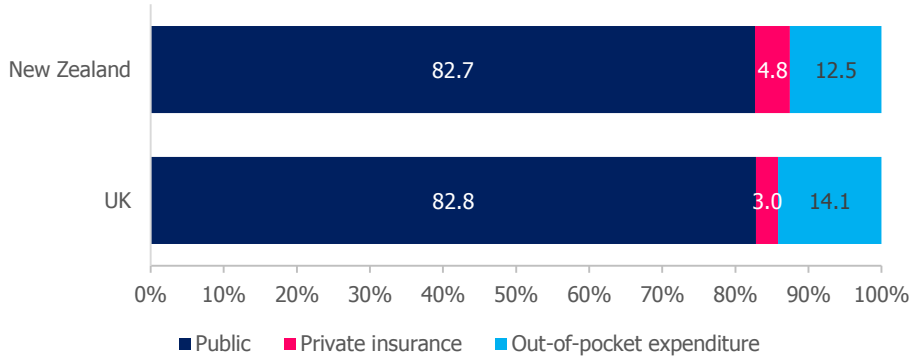
Access to health care regardless of the ability to pay is at the heart of the NHS. Children, students, low income earners, the unemployed, pregnant women, and those aged over 60 years are exempt from the cost of co-payments. This includes services such as dentistry and eyesight tests.

The question of subsidising PHI to reduce demand pressure has been raised in the United Kingdom. Emmerson et al. (2001) examined the question of whether PHI uptake should be encouraged through a subsidy. They found that consumers' demand for PHI in response to a change in price was very low and a policy that subsidised the cost of PHI was not likely to lead to big changes in PHI uptake. The implication of their analysis was that the cost of subsidising PHI would exceed the public expenditure cost savings through low uptake rates and the cost of subsidising those with PHI prior to the introduction of the policy.

The relative shares of health expenditure types are very similar to what we see in New Zealand.

Figure 8 Health care financing in New Zealand and the United Kingdom[11]

2011 or nearest year



Source: OECD, 2014a

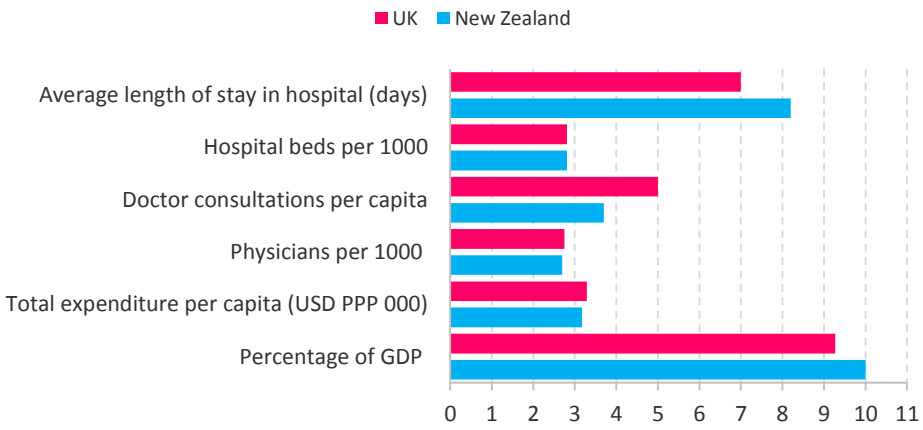
There are also a lot of similarities between New Zealand and the United Kingdom when cost, capacity and utilisation measures are compared. The structure, objectives and historical context are also strongly aligned. The drivers of demand for PHI in the United Kingdom are waiting times and perceptions about the quality of the health

[11] Public finance relates to whatever national system is in place. Out-of-pocket expenditure relates to user costs that are paid directly.

care system (Foubister et al., 2006). The cost of health is not a key driver of demand for PHI in the United Kingdom because the National Health Service is typically free for United Kingdom residents.

Figure 9 Health care comparisons between the United Kingdom and New Zealand

2012 or nearest year



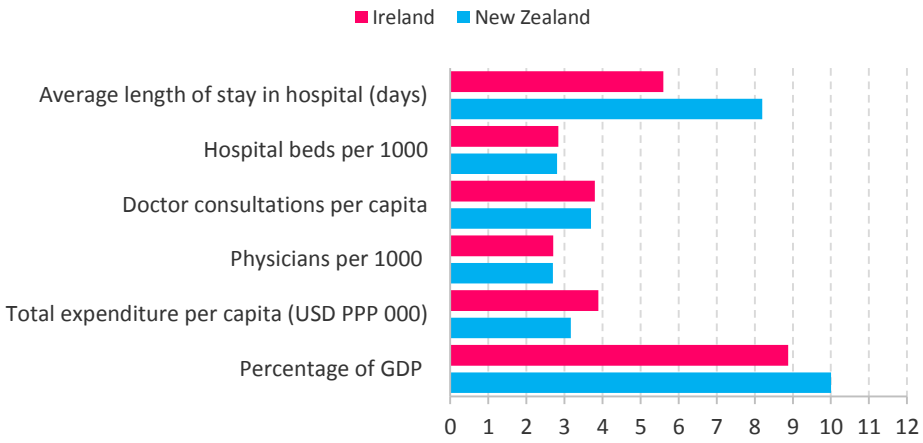
Source: OECD, 2014b

3.1.3. Health care reforms in Ireland

The Irish health sector has been undergoing major reforms since the global financial crisis and the economic recession that followed in Ireland. The aim of these reforms in the face of austerity was to find significant health sector savings. Cutting public resources has driven increased private health insurance coverage and the government has signalled that the private sector can reduce the pressure on the public sector while supporting access based on need.

Figure 10 Health care comparisons between Ireland and New Zealand

2012 or nearest year

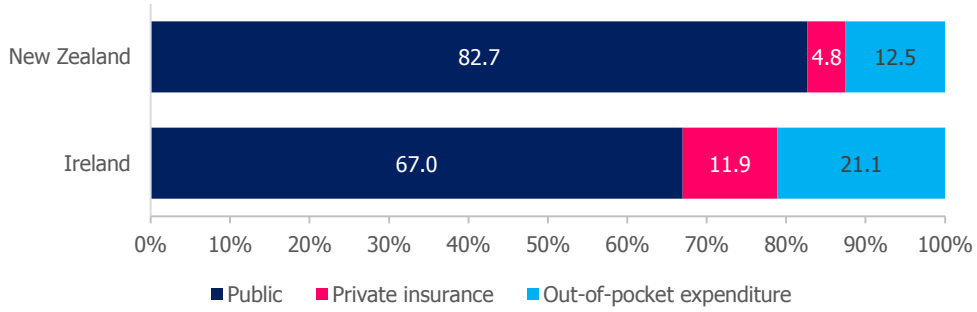


Source: OECD, 2014b

The size of the labour force in the public health system has been reduced and there have also been cuts to pay rates in the sector. The cost of co-payments has also been increased and there has been a selective reduction in what services are offered in the public system. PHI uptake has increased in response to increasing user costs, service reductions, uncertainty about what is covered by the public system and the timeliness of care (European Observatory on Health Systems and Policies, 2014).

Figure 11 Health care financing in Ireland and New Zealand

2011 or nearest year



Source: OECD, 2014a

The Irish government has signalled its intention to develop and implement a universal health insurance (UHI) system by 2019. The aim is to reduce inefficiencies and inequality by moving from a two-tier system to a single-tier system for primary health care. It is hoped that the cost of primary care can be reduced by introducing greater market competition and wider risk pooling (Minister of Health, Ireland, 2014).

Individuals will have the opportunity to choose their UHI provider from a range of competing insurers and a public option. They will pay premiums directly to that provider and will have the option of changing provider. The government intends to take a role in risk equalisation, financial assistance, regulation and monitoring.

The Irish experience has two important lessons for New Zealand. Firstly, individuals will take up PHI when there are changes to the public system that are large enough to create high levels of uncertainty about access to care, the possibility of increasing co-payments and a material reduction in services offered in the public system. Secondly, the health insurance market can be a useful partner when severe fiscal pressures require the public system to limit what it provides and to whom it provides it. Private sector capacity can free up public resources and generate cost savings for the public health system.

3.1.4. Lessons from tax funded systems

The main lessons are:

- the consumer demand response to subsidies or taxes in favour of PHI will be low when the tax funded public health system offers low or no cost services

and equitable access consistently. The public is reasonably confident they can get the health care they need when they really need it

- PHI becomes an attractive alternative for a greater share of the population when significant pressure on the public system means rising user costs, decreasing accessibility and greater uncertainty about what will be covered by public health or when it might be available
- material increases in uncertainty about the public health system have led to increased uptake in PHI
- austerity measures after the global financial crisis (GFC) in some countries led to a reduction in resources in some public health systems, and increasing concerns about inequality of access to primary care, and an increase in private health insurance and provision.

3.2. Social health insurance systems

Social health insurance (SHI) payments are not related to risk. Contributions are usually linked to employment, taking the form of ring-fenced deductions from earnings and additional compulsory contributions from employers. Contributions are collected by a central agency that is at arm's length from the government to reduce the scope for politicising the system (Normand and Busse, 2002).

SHI seeks to provide a mechanism for:

- providing general health care based on need
- lowering the average cost due to population-wide risk pooling
- bringing some of the efficiencies from the private sector into the public arena.

SHI has several advantages:

- greater transparency than general taxation
- greater protection from political interference than general taxation
- risk pooling occurs across the population and market-based efficiencies are more accessible than under general taxation
- cover is portable and continuous during job changes
- the capacity of the overall health sector tends to be larger under SHI than tax funded public provision, which is a benefit that comes from a multi-provider system
- the barriers to PHI tend to be lower under SHI because the SHI is often provided by insurance entities that also provide PHI services.

SHI has the following disadvantages:

- employer contributions increase the cost of labour across the whole workforce
- the problem of access for the unemployed population needs to be resolved. This often means the government finances their SHI from general taxation.

SHI is used in a range of OECD countries including France, Germany, the Netherlands, Switzerland and Slovenia. They have better access, quality, and equity than New Zealand, but our system has greater efficiency and coordination. SHI can be

supplemented by PHI. The SHI package is often provided by a PHI infrastructure which increases the overall capacity of a health system within a country.

A SHI system would be useful if the primary goal was to reduce waiting times and to enlist the capacity of PHI infrastructure to expand the capacity of the overall health system to meet demand. The PHI system is probably not large enough in New Zealand to provide that sort of capacity at this point. There may be scope in the future if the PHI expands. The portability aspect of SHI is a key element that will be discussed later in relation to a KiwiSaver style option for increased PHI coverage.

3.2.1. Health care in the Netherlands

The Dutch system is designed to provide universal basic health coverage for all citizens, through compulsory SHI. It is managed primarily by the private insurance market and facilitated by government. Equity is reinforced by regulations that require private insurers to accept anyone who applies for basic SHI coverage.

SHI is financed through two key forms of individual contribution. Firstly, citizens must pay a flat-rate premium (which is set by the government) to their chosen SHI provider. Secondly, employers deduct a fixed percentage of an employee's salary and pay it into a central government health fund. This is re-distributed to SHI providers on the basis of the risk profiles of those they insure.

Individuals are also free to purchase supplementary PHI for additional health care coverage. The purchase of supplementary PHI from the same provider as their SHI can reduce the transaction costs and enhance the continuity of overall health care. The system of market-based SHI and PHI helps ensure equity through SHI while allowing allocative efficiencies to be gained through PHI.

The government monitors the structure, conduct and performance of SHI and PHI markets. They also set and review the compulsory flat-rate premiums, the additional income-based contributions and the minimum attributes of the basic package.

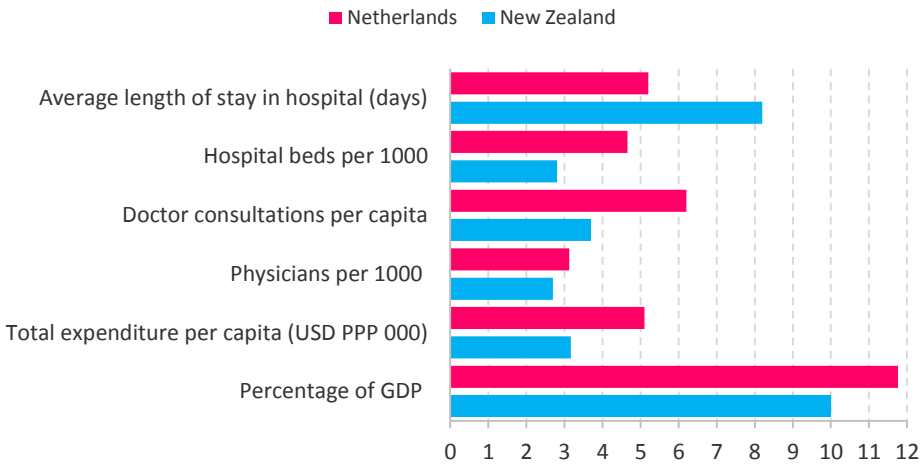
Risk pooling and moral hazard are managed through two government interventions. Firstly, SHI providers are required by regulation to accept all applicants for basic SHI coverage. Secondly, the government manages the costs associated with varying risk profiles by collecting and redistributing the income-based health care deductions to SHI providers on the basis of health risk profiles. These interventions help to ensure equity and allow the system to function more smoothly than it might as a pure free market system.

Individuals who need long-term care for chronic conditions receive it regardless of their ability to financially contribute to the cost of that care. The government provides funding for their care to hospitals and not-for-profit health care providers.

Low-income earners and non-earning adults receive an allowance to lessen the cost of the compulsory flat rate premium for this part of society. SHI coverage includes entitlements for children and spouses.

Figure 12 Health care comparisons between the Netherlands and New Zealand

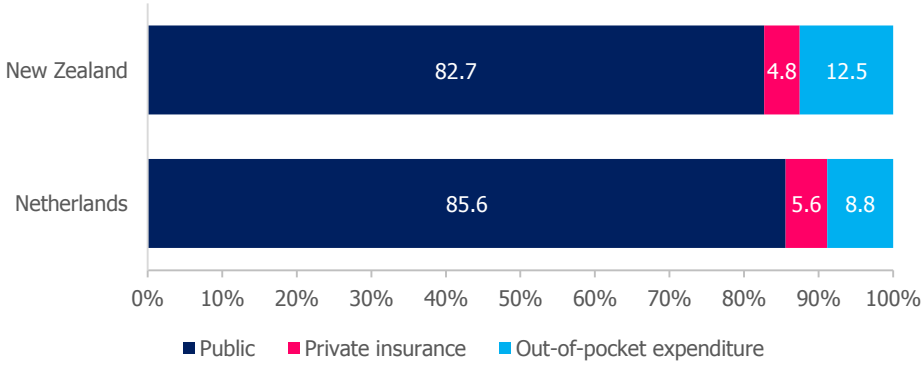
2012 or nearest year



Source: OECD, 2014b

Figure 13 Health care financing in the Netherlands and New Zealand

2011 or nearest year



Source: OECD, 2014a

Health care in the Netherlands has a much greater capacity on a per capita basis compared to New Zealand. This comes at a cost. The total expenditure on health care in the Netherlands is 60% higher than in New Zealand, on a per capita basis.

The strengths of the SHI in the Netherlands relative to New Zealand are:

- **timeliness of care**. The Netherlands has some of the shortest waiting times in the OECD. The waiting time for some procedures halved from 2000 to 2006. Shifting from fixed budgets to activity-based funding has driven this. The challenge of containing the cost of activity-based funding is an on-going policy problem
- **universal coverage** provided by the SHI system enhances the equity of health care.

3.2.2. Health care in Germany

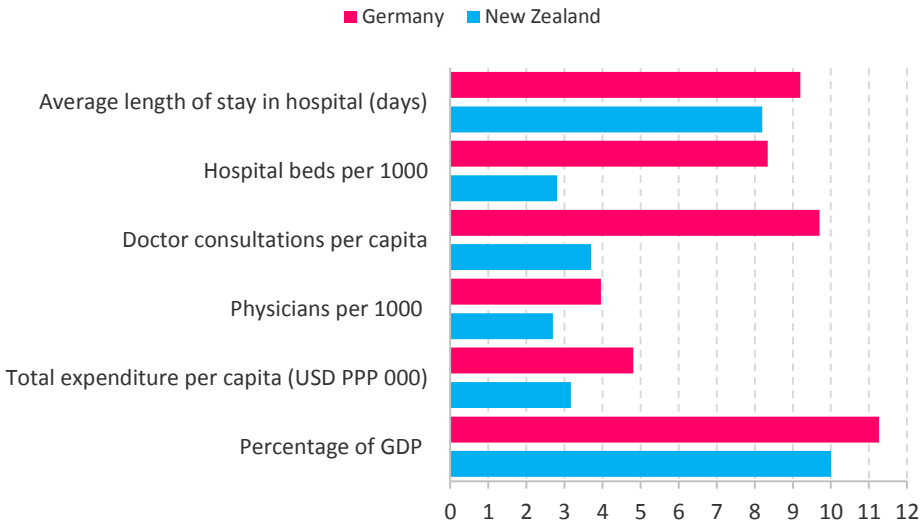
Social health insurance is at the core of the German system. The German health system is founded on three principles:

- **solidarity**. Everyone is covered based on need, regardless of their ability to pay. In other words, universal coverage based on need financed through community wide risk-pooling adjusted for income
- **subsidiarity**. While central government shapes the legislative and regulatory framework, provision of care is very localised. Provision of health care services is the responsibility of the smallest possible local body that is capable of facilitation or direct delivery
- **corporatisation**. Health funds are allocated by governing boards, at national and regional levels, that are formed by elected members. The advantage is flexibility and responsiveness. The disadvantage is that a change in health board membership could mean a radical shift in emphasis. Thus consistency can be difficult to maintain.

SHI in Germany performs better than New Zealand on access and equity because the system delivers greater capacity. Germany is driven by long held objectives of solidarity and low cost at the point of use. Delivering this level of access and equity is more costly than the system in New Zealand.

Figure 14 Health care comparisons between Germany and New Zealand

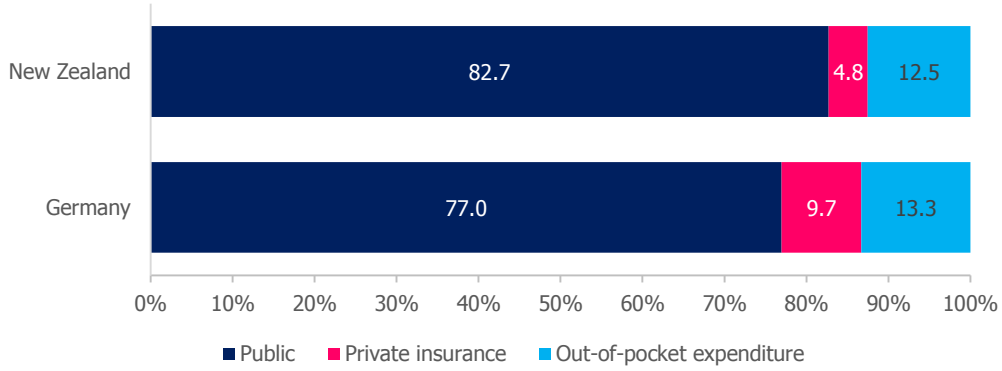
2012 or nearest year



Source: OECD, 2014b

Figure 15 Health care financing in Germany and New Zealand

2011 or nearest year



Source: OECD, 2014a

The system is funded primarily from income contributions which are fixed at 15.5% of gross income. This contribution is split between employers (7.3%) and employees (8.2%). The unemployed are also required to contribute from any government support they receive. Long-term health care is a particularly important issue in Germany, due to the ageing population. Long-term care is funded and financed separately with employment-based contributions. The mandatory 1.95% contribution of gross salary is shared between employees and employers.

Contributions are collected by the Central Health Fund and redistributed to insurers based on a formula that adjusts for health risk factors. This avoids adverse selection and moral hazard problems.

Out-of-pocket expenditure has historically been low in Germany. Cost-sharing has been used as part of an effort to manage cost increases since 2004. Cost-sharing is capped at 2% of household income or 1% for the chronically ill. The unemployed, accidently injured, and pregnant women are exempt from any cost-sharing.

Individuals have the option of taking out PHI for supplementary services and to cover for out-of-pocket expenses. Individuals can also opt to substitute their own PHI for SHI and opt out of the national scheme. Individuals that choose to opt out must receive all of their health care services through a PHI provider. This kind of approach has some appeal because it is seen as a way for the wealthy to finance their own health care and reduce the demand on the universal health system. In practice it means the costs of the universal health system are spread over a smaller population group who contribute proportionally less to financing the system.

3.2.3. Health care in Switzerland

Switzerland has universal SHI available to those intending to live there. The SHI package is mandated by the central government and includes GP visits, hospital care, physiotherapy, pharmaceutical needs and optical care (The Commonwealth Fund, 2013). Families are subsidised to ensure health care is affordable.

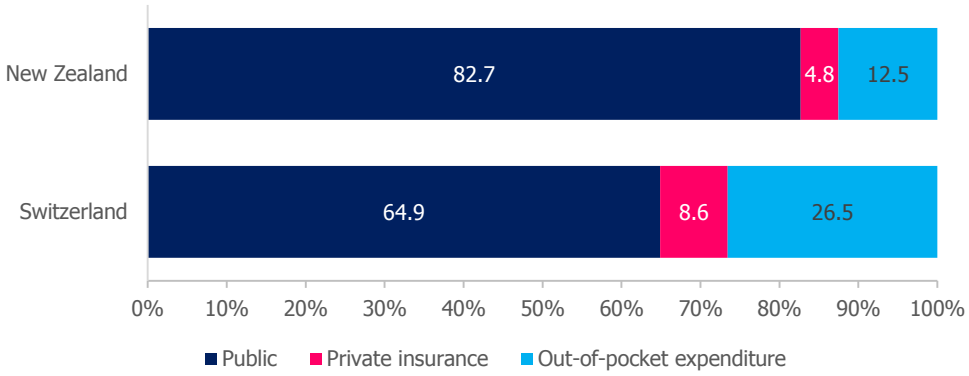
SHI is financed from general taxation, levies on health related forms of insurance (disability insurance, old age insurance, accident insurance, and military insurance),

and local government taxes. SHI services are provided by a range of competing not-for-profit entities.

Many individuals choose to purchase PHI to supplement the SHI and to give them more choice than is offered by SHI. PHI is delivered by for-profit entities that often have a not-for-profit subsidiary that delivers SHI too.

Figure 16 Health care financing in Switzerland and New Zealand

2011 or nearest year

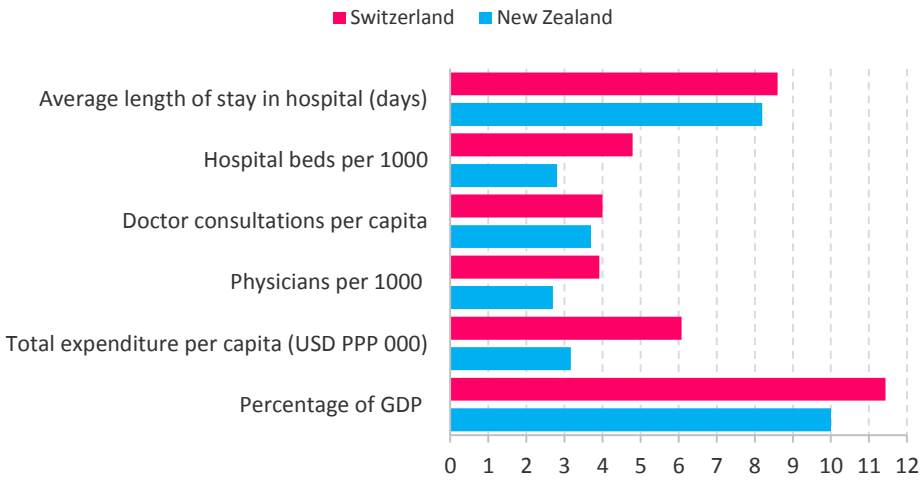


Source: OECD, 2014a

The Swiss health care system is recognised as being one of the most comprehensive and high quality systems in the OECD. It is also one of the most expensive. Managed competition between insurers has delivered choice and broad coverage, however insurers need more incentives to reduce costs if the health care system is to remain affordable in the future (OECD, 2011).

Figure 17 Health care comparisons between Switzerland and New Zealand

2012 or nearest year



Source: OECD, 2014b

Reforms have sought to reduce costs and improve efficiency through increased competition amongst providers. The success of these reforms has been limited. In response, the risk equalisation formula used by central government to provide funding based on service delivery has been adjusted to enhance the incentives for insurers and providers to seek efficiency improvements.

In 2013, the Swiss government launched a new strategy for dealing with the major health care challenges in the future – Health2020 (FDHA, 2013). The major challenges are:

- an increase in the incidence of chronic illnesses
- adaptation of health care delivery structures
- financial viability and affordability of the health system
- lack of manageability and transparency.

To address these challenges the government is targeting the following:

- improving efficiency to control costs
- reducing duplication
- utilising more technology to increase the effectiveness and efficiency of health care delivery
- encouraging greater personal responsibility for health and fitness
- greater emphasis on prevention
- more outpatient care
- selectively reducing what is covered by the basic SHI package.

The lesson for New Zealand is that a social health insurance system can deliver comprehensive care and very broad coverage across a population. But the system needs very clear incentives to focus on efficiency to control costs.

3.2.4. Health care in France

The French system is founded on compulsory SHI. This system guarantees health care for all including the chronically ill and those who cannot afford it. The compulsory SHI is financed through income-based contributions and taxes dedicated to health. Patients also pay some out-of-pocket health expenses and can choose to take out PHI to manage these costs. The social health care system is administered by the central government and delivery is split between the public sector and the private sector. The private sector provides the majority of outpatient services and the public sector (or a not-for-profit provider) delivers hospital services.

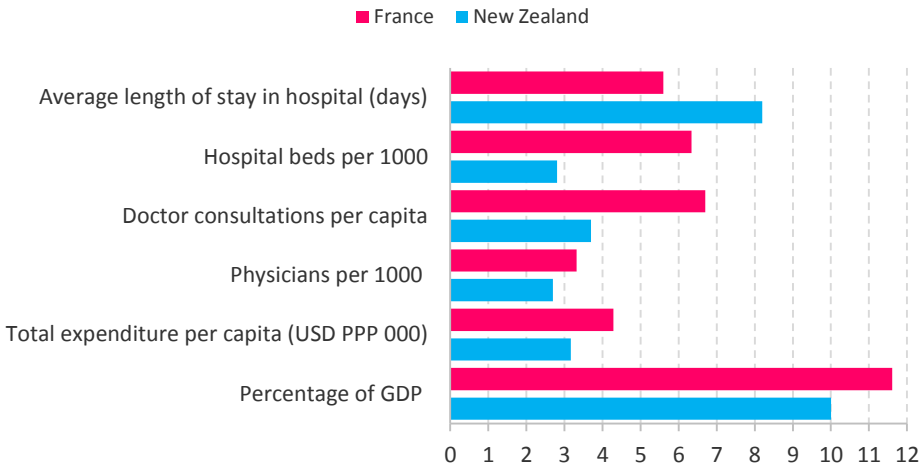
Private health insurance in France does not provide individuals with shorter waiting times or a different level of service. It is limited to insurance for potential out-of-pocket expenses and remains competitive by offering a range of financial coverage packages. Such a system is founded on the principle of health care based on need, but also on maintaining social equality of care.

Despite the emphasis on equity in France, the government intervened to deal with regional disparities in terms of access and proximity to services in provincial areas. In 2012, reforms were passed to ensure that all residents had access to emergency services (including maternity services) within 30 minutes' drive. Special interventions

were also introduced to increase the number of rural doctors and increase the salary packages for specialisations that faced shortages.

Figure 18 Health care comparisons between France and New Zealand

2012 or nearest year

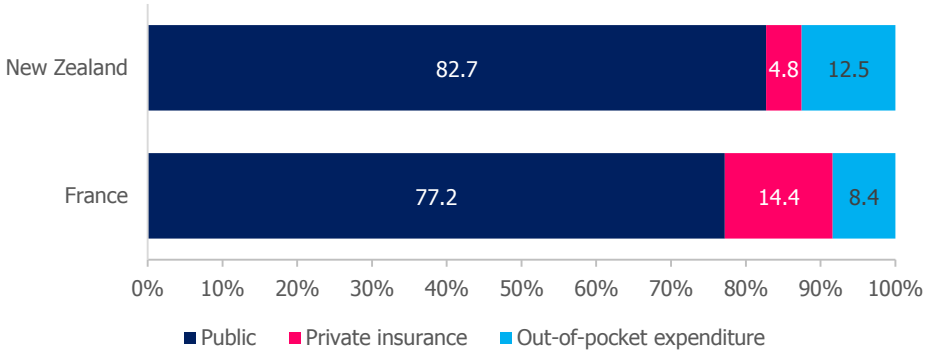


Source: OECD, 2014b

Cost control is a major issue in France. Publicly funded health care has had a funding ceiling since 1996 but the total cost of health care has breached this ceiling most years. To combat this cost problem the government has introduced guidelines for care that are aimed at reducing costs and optimising expenditure based on need.

Figure 19 Health care financing in France and New Zealand

2011 or nearest year



Source: OECD, 2014a

3.2.5. Health care in Slovenia

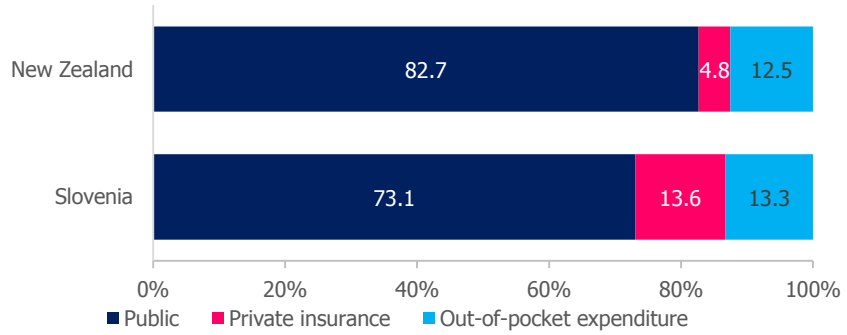
Slovenia has compulsory universal SHI and 95% of individuals who contribute to SHI also have voluntary private health insurance. There are three key motivations for voluntary PHI in Slovenia (Albreht et al., 2009):

- long waiting times for treatment
- most services including inpatient hospitalisation and ambulances have user co-payments
- health insurance is important for financing health care during old age and retirement.

A centralised system been introduced to manage variations on risk profiles between insurers. In 2005, compulsory SHI premiums were equalised across all individuals regardless of age. In New Zealand and many other countries, health premiums increase with age to reflect changes in health risks associated with ageing. Smoothing the premiums over the life of individuals is an option to encourage the ageing population to maintain their PHI.

Figure 20 Health care financing in Slovenia and New Zealand

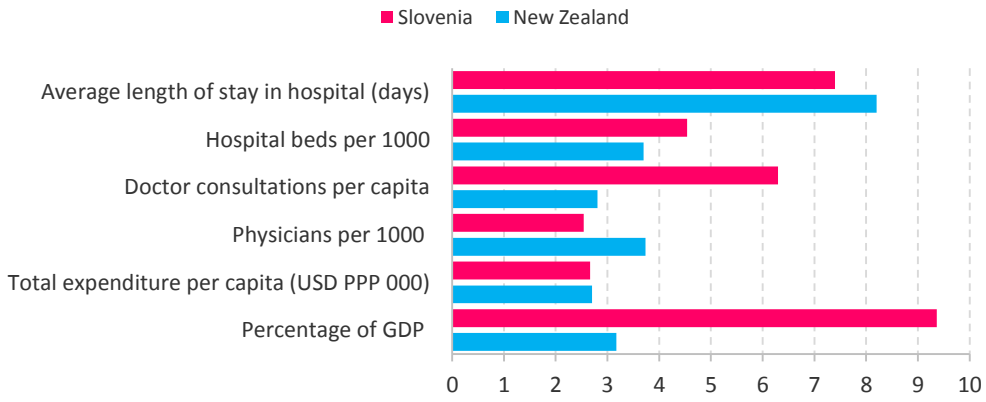
2011 or nearest year



Source: OECD, 2014a

Figure 21 Health care comparisons between Slovenia and New Zealand

2012 or nearest year



Source: OECD, 2014b

3.2.6. Summary

A move to a social insurance based health system would result in a significant increase in the level of PHI coverage. At its core, SHI is a system of managed competition. The role of government is quite different than in tax funded systems. Government's role is largely as a regulator shaping what is provided by the SHI package, designing the regulations around price, managing risk equalisation across providers and facilitating care for those with low incomes and chronic health care needs.

The Irish health care system is undergoing a major reform and the government is planning on introducing a SHI model by 2019 that has the aim of lowering costs and improving equity. That level of reform is complex and requires time to implement correctly. New Zealand should maintain a watching brief on the Irish experience to glean lessons from the Irish reforms,[12] regardless of whether New Zealand moves in the direction of SHI.

New Zealand had the debate about tax or social insurance based health care following the 1991 Health Services Taskforce report and decided to stick with tax financing our health care. Questions raised at the time remain such as whether there is adequate private health capacity in New Zealand for a managed competition system – particularly outside of Auckland. In this paper, we have considered a range of options to enhance the role of PHI while stopping short of a detailed examination of a switch to social insurance health system, because this would be a major transformation of the health care system and it is not clear that the pre-conditions exist in New Zealand for a SHI scheme.

This section reviewed the health systems of a number of OECD countries. The analysis showed that no one country's scheme dominates all others. Schemes perform differently in achieving objectives such as cost management, quality, outcomes, equity and access. In short there is no perfect system and trade-offs between the objectives must be made.

If New Zealanders are to be asked to take greater personal responsibility for their health care, other countries' experiences may suggest policy options that New Zealand needs to consider. This next section of this paper looks at policy options to support people to use private health insurance in New Zealand.

[12] See Mikkers and Ryan (2014) for a review of whether Ireland meets the established pre-conditions for the successful introduction of a SHI system.

4. Options for increasing the role of private health insurance

In this section, we describe a number of options for increasing the role of PHI in New Zealand. We have drawn on the literature and international experience. The focus of these options is some form of carrot or stick to incentivise greater PHI uptake to generate long-term fiscal cost savings.

In addition to direct ownership where the Crown owns, finances and operates a public health care system, there are five types of public policy tools for shaping the interface between publicly provided health care and the market driven private health insurance: supply of information, regulation, subsidies, purchase and special tax treatment. In this section, we explore nine options:

- provision of *information* to raise public awareness
- use of *regulation* to achieve a KiwiSaver style workplace-based insurance
- the Crown *purchases* elective services delivered by private providers that would meet clinical and budget thresholds
- use of *subsidies:*
  - (a) for PHI in general
  - (b) targeted at the over 65s
  - (c) targeted via employers (in a KiwiSaver style scheme)
  - (d) targeted at employees (a tax expenditure similar to the Charitable Donations Rebate)
- revision of the *tax* treatment of Fringe Benefit Taxation on employer based insurance
- a *tax surcharge* on high income earners who do not have health insurance.

We have considered these options against four public policy criteria: effectiveness, efficiency, equity of access, and administrative simplicity. For the purpose of this analysis, we have defined them in the following way:

- effectiveness: encourages greater personal responsibility and addresses the fiscal health expenditure challenge
- efficiency: resources are productively used and allocated well
- equity of access: horizontal equity so similar people have similar access and vertical equity so all people have access to basic access but more access is available if desired
- administrative simplicity: it is easy for users to understand and for business and the government to implement.

For each option, we provide:

- a brief description of the policy option

- an assessment against the four public policy criteria
- any factors or conditions that are particularly relevant to implementation.

Table 4 Options summary

Option	Effectiveness	Efficiency	Equity of access	Administrative simplicity
Nudging towards personal responsibility	Weak – nudges behaviour at the margin	High due to low transaction costs	No change in access to the public system, but more alternatives	Simple
KiwiSaver style approach	Overcomes inertia and facilitates future cover	A voluntary system is allocatively efficient	Equity issues arise but can be dealt with in policy design	Complex
Purchase of elective surgery	Weak	Increased choice and resource allocation	Improved equity	Moderately complex
General subsidy	Weak, unless well targeted at certain groups	Weak, deadweight losses can be high	Mixed findings – frees up public system for the poor, but subsidises the rich	Simple
Targeted subsidy for the over 65s	Weak	Weak	Less equitable between age groups	Simple
Targeted subsidy for accelerating the return to work	High	Moderate	Improves the equity of access for surgery to related to work place injuries	Complex
Partial removal of FBT on PHI	Moderate	Weak	Moderate	Simple
Surcharge on high income earners who do not have health insurance	An increased share of public hospital costs are being met by private patients	Potentially a deadweight loss to society – if the service is comparable	Less equitable	Complex

Source: NZIER

4.1. Providing information to raise public awareness

Signals from government can affect expectations and behaviour. A very low cost and light-handed approach would be for the government (in conjunction with industry) to signal that there will be more emphasis of personal responsibility in the future.

New Zealand's experience with greater part charges in the 1990s and the recent experience of substantial health reforms in Ireland show that people will take up PHI when they are faced with major changes to the level of service and the costs at point of use. The key driver of the increase in uptake in Ireland is uncertainty about what

the public system will actually provide in the future (European Observatory on Health Systems and Policies, 2014).

Public awareness campaigns have been successful in creating cultural and attitudinal changes for issues like drunk-driving and smoking. In the case of raising awareness of the need for greater personal responsibility for health care, a public awareness campaign can support an improved understanding about the public waiting times and the benefits to employees and employers of what the private health sector can provide. The programme would involve a combination of advertising, regular publication of waiting times' information and wider discussion of the fiscal health challenge.

The outcome here is more likely to be small increases in PHI uptake because this kind of nudge policy is getting individuals who are on the fence to cross the line. These individuals are also more likely to be the ones who can afford PHI. This would free up capacity for patients who need care but can't afford the cost of PHI.

4.2. The Crown purchases elective services delivered by private providers that would meet clinical and budget thresholds

Under this option, the public health system would reimburse the avoided cost of any surgical and specialist services provided by a private insurer that met the public sector's clinical and budget thresholds. Of total premiums of NZ$1.1 billion in the year to December 2013 some NZ$600 million is directed to services that meet public clinical and budget thresholds.[13]

To illustrate this issue, 87% of health claims covers the cost of hospital and specialist services while the balance is applied to primary care (mainly part charges). HFANZ estimates suggest that around 20% of these services, while they are medically necessary, do not meet the public sector's threshold for clinical priority with a fixed budget.

In the education sector, where there is a mix of public schools, private integrated schools and private independent schools, the government pays a share of the costs for each type of provider. No equivalent payment for services arrangement exists for privately funded secondary and tertiary health care. The effect is that people with private health insurance are in effect paying twice for the same potential services, once through health insurance and once through taxes. This 'paying twice' occurs because of waiting times in the public system, as well as the greater flexibility in the timing of the procedures and the improved quality 'hotel' services offered by private health providers.

We have examined the public policy case for Crown purchase against four public policy criteria: equity of access, effectiveness, efficiency, and administrative simplicity. There are valid equity arguments for the Crown purchase option so that similar cases are treated similarly.[14] There are also good efficiency arguments as the

[13] Based on data in HFANZ (2010).

[14] Note however that that there is a horizontal inequity if the purchase is not extended to individually funded surgical care.

increased choice for health consumers and explicit prioritisation across all providers promotes allocative efficiency. Administratively it is moderately complex. One technical problem is that thresholds vary across DHBs and across time. Overseas countries provide plenty of examples for reimbursement regimes for privately funded and provided services that could be utilised. The main criterion that Crown purchasing fails to address is effectiveness in increasing personal responsibility. This option does not help the government address its affordability problem as the fiscal responsibility for increased health demand remains with the government.

Overall, there is a reasonable public policy argument for the government purchase option. It would encourage greater PHI uptake by lowering PHI premiums, as the insured are no longer 'paying twice'. Thus this option essentially expands health capacity at the public health system price point. The prospect is remote for political support for a policy with a fiscal price tag of NZ$600 million p.a. in a fiscal environment of continued budgetary stringency. The next sections explore whether there are subsidy or tax expenditure options that involve less ongoing direct fiscal costs.

4.3. General subsidies for PHI

We have examined the option of a general tax funded subsidy for PHI. The potential public policy argument is that NZ$600 million of PHI is directed to funding surgical services that meet public clinical and budget thresholds (discussed in Section 4.2 above).

Box 1 Other countries' experiences with subsidies

Frech and Hopkins (2004) argue that using a subsidy to incentivise a shift towards PHI that is large enough that it is self-financing (the cost savings to public sector equal the cost of the subsidy from public expenditure) would require a price elasticity which is unrealistic in the short term for normal goods such as PHI. This implies that a PHI subsidy is highly unlikely to be a cost effective policy in most countries including New Zealand.

Private health insurance coverage is also low in the United Kingdom where the public health system provides comprehensive care. Emmerson et al. (2001) examined the question of whether PHI uptake should be encouraged in the United Kingdom through a subsidy. They found that consumers' demand for PHI in response to a change in price was very low and a policy that subsidised the cost of PHI was unlikely to lead to big changes in PHI uptake. The policy implication of their analysis was that the cost of subsidising PHI would exceed the public expenditure cost savings because of low uptake rates and the cost of subsidies for those that had PHI prior to the introduction of the policy.

Cheng (2014) estimated that if PHI subsidies were reduced by 5%, public hospitals could deliver double the number of medical procedures with the savings. This result has cast doubt on the cost effectiveness of using significant subsidies to reduce public health care expenditure by shifting demand and cost of health towards the private sector in Australia.

The economic argument for tax subsidies to lower the cost of PHI and increase uptake is weak (Mossialos and Thomson, 2004). For a subsidy to be effective the response to the subsidy must be self-financing which implies that the level of PHI uptake must be greater than cost of providing the subsidy. Otherwise, society would be providing the health services directly at a lower cost. Studies in the United

Kingdom and Australia show that the demand response to a tax subsidy is low. The literature on the Australian and the United Kingdom health systems suggest that seeking to increase the uptake of health insurance through financial incentives is not effective and it can be counterproductive to reducing overall public expenditure on health.

There are valid equity of access arguments for the general subsidy option (analogous to those for the Crown purchase option) as similar cases are treated similarly. However, subsidies are regressive in relation to income as generally they would benefit individuals with higher incomes that would take up PHI regardless of whether there was a subsidy or not.

4.4. Use of subsidies targeted at the over 65s

An alternative to general subsidies is to target a specific population such as those aged over 65. The public policy argument is that the government could leverage public health dollars and so increase access to elective health care. By subsidising health insurance, more people would retain health insurance for longer and decrease the burden on the public health care system without reducing access, if not increasing it.

The ageing population is a driver of long-term fiscal projections for health expenditure. The medical cost of old age care can be up to 10 times higher than during mid-life (Blakely et al., 2013). The type of health care required by the elderly is more intensive than younger people. Their health problems are often multifaceted and complex. The speed of recovery is slower on average during old age, which can tie up the capacity of health care institutions.

The share of individuals with PHI decreases after 60 years of age, as the cost of insurance increases with age and income declines after retirement. The result is that the public health budget becomes the insurer of last resort for individuals who have paid health insurance premiums throughout their working lives, but choose not to maintain their policy during the period when they are more likely to require health care.

The effectiveness of a subsidy depends on how well it can be targeted (to minimise transfers to people who would have retained health insurance anyway), and how responsive the target group's demand for health insurance is to price.

Our assessment is that, based on the literature on demand responsiveness (discussed in Box 1 above), and the age-specific profiles of those with health insurance, there is a significant risk of transfer to those who already have health insurance. The result of subsidised health insurance would be that demand for insurance funded health care would be from people who would benefit less than the cost of providing it. This creates a deadweight cost. Given the current fiscal environment, the government may not wish to bear such a risk.

The proposal is not simply a transfer of who pays what. It is also likely to reduce efficiency in the overall market for health care. This is because it would distort the price of health insurance. There do not seem to be a robust public policy argument that would justify this subsidy.

If the objective is to increase access then, from a nation-wide perspective, a similar amount of extra electives could be achieved by government increasing its spending on the public health system (by the amount that the newly insured over 65s would otherwise have funded privately) without incurring the deadweight loss of a subsidy in the insurance market.

There will also be equity impacts which are for politicians to weigh up. The proposal would result in likely users of health care paying more privately. The winners would be over 65s with health insurance, those now able to afford health insurance, the health insurance industry, and private providers of elective health care services. The losers would be the wider New Zealand population who would otherwise have received either more publicly funded services and higher income transfers, or tax cuts.

4.5. A subsidy targeted on accelerating the return to work

An alternative to tax concessions and general subsidies is to target some assistance to encourage an accelerated return to work by employees. Holt, in a Treasury Working Paper (2010) estimated that employee ill-health prevented 42,300 people from participating in the workforce, and cost around 2.3% of all hours worked (1.2% of GDP). Increasing the number of employees who have access to a basic private surgery module covered by PHI has the potential to expand the effective workforce and reduce the cost from work hours lost.

The vast bulk of health insurance claims relate to the cost of hospital and specialist services. Private health insurance enables employees to avoid the waiting times in the public system[15], as well as having greater flexibility in the timing of the procedures. These in turn provide key benefits to employers in terms of reduced sick days off work, reduced need to hire temporary staff, reduced incidence of workplace stress and increased workforce productivity.

Our initial rough estimates, which are conservative about the value of lost output, suggest that increasing the number of workers covered by PHI by 20% could save around NZ$60-$110 million in lost output and involve a fiscal cost between NZ$70 million and NZ$90 million[16]. One means of achieving a faster return to work from sickness would be an explicit subsidy or tax expenditure targeted at employees (similar to the Charitable Donations Rebate).

Essentially this option is based on an investment proposition: to support the working population to buy PHI which enables them to bypass waiting times in the public system in order to return to work more quickly. This is potentially a win-win-win solution: employers would have reduced sick pay and a more productive workforce, employees would have a more speedy return to health and the government would

[15] HFANZ (2010 p4) quotes Southern Cross data that insured workers with an illness requiring surgery take 14 days off work on average compared to 48 days for those workers without insurance.

[16] The estimates of savings from avoided lost output are sensitive to the additional number of days an individual waits for public surgery relative to the private sector. We have seen estimates of the number days that vary between 30 and over 200 days. Waiting time needs to be modelled carefully with detailed data.

benefit from increased taxation on the additional labour income, reduced pressure on the public health system, and avoided income support (e.g. Working for Families).

Over time, this option also would help increase labour force participation as ageing workers remain engaged in the workforce for longer and younger workers' attachment to employers and the workforce is improved. Appendix A discusses how this option would require detailed modelling and costing.

The effectiveness of an explicit subsidy or a tax expenditure targeted at employees will depend crucially upon:

- how effective it is at increasing the take-up of PHI from those in the workforce who don't have PHI
- how feasible it is to target uninsured employees without paying the subsidy to those that already have PHI.

The relatively low responsiveness of demand for health insurance to a change in prices means the subsidy rate needs to be higher. A subsidy to all employees involves deadweight costs, as employees who already have health insurance will collect it too. To avoid this problem in the next section we explore a workplace based subsidy targeted on new enrolments. Nonetheless, the potential gains suggest that an explicit subsidy or a tax expenditure targeted at employees is an option that could be worth developing further. Appendix A sets out how this could be explored further.

The options discussed in Sections 4.2 to 4.5 all explored the use of subsidies. Given a fiscal environment of continued budgetary stringency, the next option therefore explores the use of regulatory instruments that need not entail substantial ongoing fiscal costs.

4.6. Use of regulation to achieve KiwiSaver style workplace based insurance

KiwiSaver was introduced to incentivise greater retirement savings by using the workplace as the location to address concerns that individuals were assuming that much of their retirement income will come via government superannuation.

One option for dealing with the long-term fiscal challenge in public health care expenditure would be to use regulation to achieve a KiwiSaver style workplace based health insurance scheme. This option would involve legislation requiring that all employers provide access to health insurance for employees and their families. Currently around 1.35 million (30%) of New Zealanders have PHI, around 33% less than coverage achieved in the early 1990s. Spending on group health schemes is around NZ$340 million annually and around two-thirds of these are under employer group schemes.

There a number of variants of this regulation option depending upon whether:

- an employer subsidy is also mandated
- the employer or employee chooses the provider and the plan
- the default setting is automatic enrolment with the opportunity to opt out or a voluntary scheme with opt in.

The variants of this option can be seen as a continuum ranging from:

- *mandating workplace group schemes* – a light-handed option where the employer chooses the provider and the plan, and the individual needs to make an active decision to opt in
- *mandating employer subsidies* – the obligation on employers to provide a group scheme is augmented by a mandated employer subsidy and employees can chose to opt in
- *opting out of the workplace scheme* – under this variant there is automatic enrolment in the subsidised employer plan and employees have the opportunity to opt out
- *employee choice of plan* – under this variant, employees can choose from a limited range of competing employer-subsidised plans.

All these variants would expose more people to the quality of care and professional innovation found in the private sector. Over time, it may also allow the capacity of the private sector to grow, which would to reduce the demand and expenditure levels in the public health care system.

There are a number of design issues that would need to be considered if policy analysis was in favour of this option. These include:

- a mechanism to certify default plans
- 'clearing-house' type functions (with employee choice of plan in particular)
- portability mechanisms for handling employees who change employer.

Workplace based schemes provide the greatest benefit for risk pooling when there is universal enrolment for all staff as the risk of adverse selection (hidden information) is reduced. However, any option involving universal enrolment and mandated employer contributions involves implementation problems as a number of employers would require ‘salary sacrifice’ to cover the cost of the mandated contribution. One means of easing the phase in of mandated contribution to workplace based schemes would be to target assistance on all new enrolments.

The government subsidy would be time limited and only apply to new enrolments (which keeps the deadweight costs to a minimum). The subsidy would only apply to the base private surgery module of PHI as this is the element of PHI that encourages a faster return to work from sickness. However, employees could voluntary elect to add extensions for primary care, part charges and to extend the plan to family members. This subsidy option would be designed to work in tandem with the use of regulation to achieve a KiwiSaver style workplace based insurance.

The combined effect of compulsion and a targeted subsidy means that it is highly effective at addressing the fiscal health expenditure challenge. The overall efficiency depends on how responsive the target group’s demand for health insurance is to price. On equity of access, there would similar access to private surgery for employees with an accident (under ACC) and an illness (with PHI), but better access for those without PHI. There would be an improvement in efficiency with a more productive workforce and limited deadweight costs, while administratively it should not be too complex.

All variants of this option have the potential to encourage greater personal responsibility and help to address the fiscal health expenditure challenge. The more

heavy-handed options are more effective than the more light-handed variants. For example, all but the most light-handed can be expected to reverse the trend decline in private health insurance. However, the more heavy-handed the option, the less consistent it is with efficiency (resources are used and allocated well) equity (access is similar for all people) and the greater the administrative difficulty.

Workplace based health insurance is also likely to be more effective, if as discussed above there is a targeted subsidy on new enrolments that encourage employers to participate and employees to join a PHI scheme. This option increases overall efficiency by increasing participation in the workforce.

4.7. Revision of the fringe benefit tax treatment of employer based insurance

Revision of the tax treatment of employer subsidised health insurance is another option to improve the attractiveness of health insurance. Employers provide remuneration packages to employees that can include base remuneration, at risk incentive payments, and a range of non-cash benefits such as health, income and life insurance as well as allowances and other perquisites. Non-cash benefits are sometimes provided to improve the economic security of staff members and improve employee retention. In other cases, where there are gaps in tax coverage or boundary issues,[17] they are also provided in order to avoid income tax.

The general principle in a broad base, low rate tax system is that anything that is salary or wages or is a substitute for salary and wages should be taxed. Employer contributions to an employee's PHI currently attracts Fringe Benefit Tax (FBT) in New Zealand on the grounds that these are part of an employee's remuneration. But even if, as a matter of good tax policy, employers' insurance contributions should be treated as part of an employee's remuneration, this leaves open whether there are other public policy reasons why a partial or full exemption from FBT is justified.

In particular, is there a case for an exemption because of the benefit to employers from their employees having medical insurance? There are two potential public policy arguments – fiscal savings or efficiency gains.

The fiscal savings argument is that the FBT exemption would essentially pay for itself. HFANZ (2010) modelling suggests that the fiscal gains from full FBT removal offset the fiscal costs in year four or five and over the longer term has a large positive fiscal net present value (NPV). While we have not examined the HFANZ estimates in detail, our initial review suggests that more detailed modelling is required to be confident of the robustness of the results. Our assessment is that with moderate take-up, the FBT exemption is likely to exceed the fiscal benefits from avoided public elective surgery. With the removal of FBT, just like subsidising health insurance, the majority of cost comes from extending a concession to those who already have insurance. To make it work, this option would need to generate a large improvement in productivity from reduced sick pay and increased return to work.

[17] An example of a boundary issue is where a car park is a fringe benefit. The traditional boundary is if a car park is on the employers' premises it is exempt from FBT but a leased car park is liable for FBT.

An alternative public policy argument based on efficiency would be if there was a boundary problem created by FBT between self-insurance and employer subsidised employee health insurance. While there are second order technical interface and compliance cost issues with FBT, we have been unable to substantiate a first order fundamental problem with FBT applied to employer subsidised PHI.

As a result the FBT exemption option scores low on efficiency (unless the fiscal cost is low) and high on administrative simplicity. It also scores moderately well on equity as it aligns access to medical treatment for workers suffering an accident under ACC and with those experiencing sickness under PHI. The overall effectiveness will depend on the take-up by employees.

4.8. Tax surcharge on high income earners who do not have health insurance

One mechanism Australia used for incentivising the uptake of health insurance to contribute to the cost of health delivery was a 1% surcharge on incomes above AU$70,000[18] for those who do not have 'appropriate' PHI. The medicare levy surcharge is intended to encourage PHI uptake among employees who are more able to afford it. Otherwise they pay a greater share of health taxes if they choose to rely on the public system.

KPMG (2012) suggested the medicare levy surcharge has been successful because there was more hospital revenue from private patients in public hospitals without a corresponding increase in public hospital operating costs. But it is naïve to consider this a success when PHI is heavily subsidised from the public health budget. The cost of subsidisation far outweighed the additional revenue.

PHI coverage increases with income in New Zealand (Figure 22), yet 56% of people earning NZ$70,000 p.a. or more do not have PHI cover in any form.[19] These people are more likely to be able to afford PHI, and take greater responsibility for their own health care cover than many others. Yet they choose to rely on the public health system.

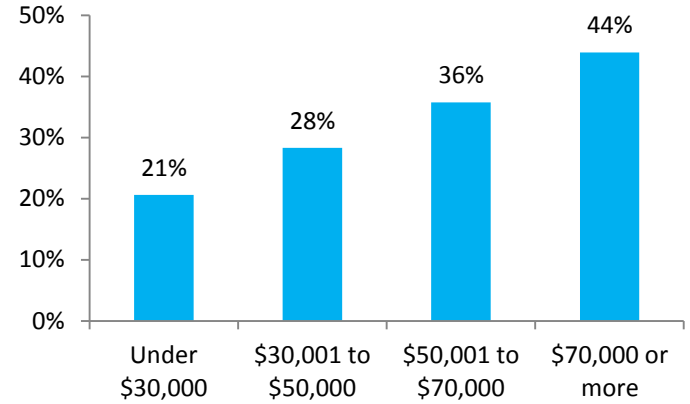
If the surcharge lifted coverage to 60% of those earning over NZ$70,000 p.a. it would mean an additional 39,000 income earners would be covered by PHI. Those without cover would pay an estimated NZ$204 million in additional tax revenue in the first year based on income distribution statistics for 2012 (IRD, 2014).

[18] Since this policy was introduced in 1997, the eligible income threshold has increased to AU$90,001 for taxable income (2013/14).

[19] Data supplied by HFANZ.

Figure 22 PHI coverage by personal income in 2013

NZ$, Percentage of the population covered by PHI



Source: Supplied by HFANZ

This policy is clearly targeted at increasing PHI to reduce demand on the public health system. Otherwise, it may be desirable to simply increase taxes by the same amount and direct it into the public health system. Such a surcharge would need to be set high enough to encourage uptake and be reflective of the opportunity cost to the public health system. The levy would increase uptake in the same way as a subsidy, but avoids the fiscal deadweight loss. However, the potential inefficiency of compulsion, and the impact of a levy on work incentives and tax strategy coherence needs further consideration.

If a Medicare levy surcharge type policy is considered in New Zealand it could be in combination with the use of regulation to achieve a KiwiSaver style workplace based PHI. There is less of a case for combining this with a PHI subsidy because the combination of these two approaches expands the deadweight loss to society.

The tax surcharge option would arise if an expansion of the private health care capacity was encouraged. This would reduce the demand on the public system and encourage those who can most afford it to take greater personal responsibility for their own health care to do so. This would be a clear step towards the European experience where the development of SHI and allowing private entities to deliver elements of universal health has led to greater capacity to meet the range of health care needs across the whole population. The tax surcharge also provides the opportunity to fund other initiatives, such as a partial exemption of FBT on employer contributions to group PHI plans.

Expanded capacity and a bigger role of PHI will support greater specialisation, like we already see with elective surgery. This is particularly relevant to the provision of health care for older individuals that require a complex set of interventions; hospitalisation in the public system is often not the most effective use of resources or comfortable environment for these individuals.

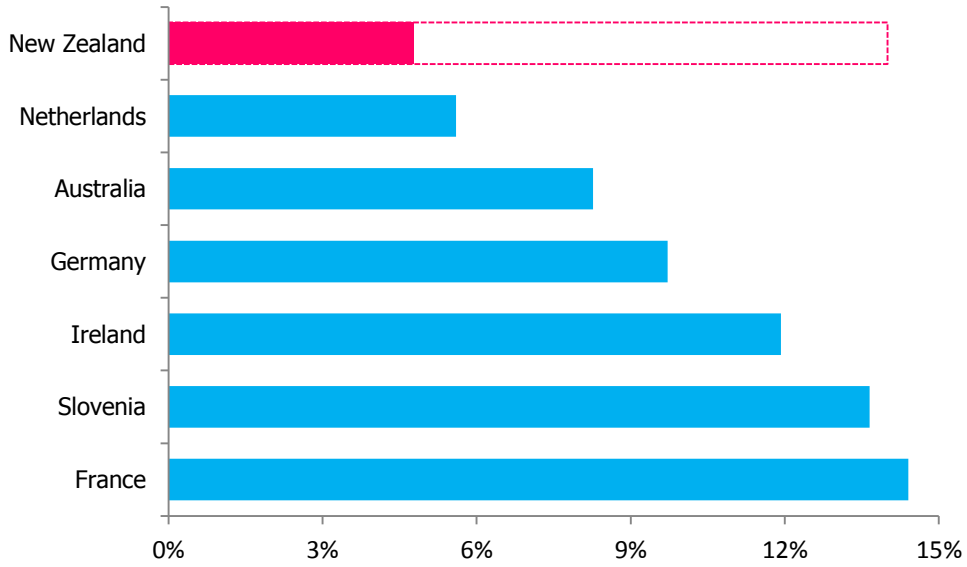
5. Conclusion

New Zealand's health system, like that of other jurisdictions, will face increasing demographic and fiscal pressures. The projected growth in spending on public health care will put the health budget under severe pressure. New Zealanders will be asked to increase personal responsibility for their health care. This paper looks at policy options to support people to use private health insurance for affordable and timely access to care that is not covered by the public health system.

PHI currently contributes NZ$1 billion annually to total health expenditure. Increasing the role of PHI to the level of France will triple this contribution adding around NZ$2 billion to total health expenditure. This could facilitate cost savings and decreases in demand pressure in the public sector. But this would require material changes in PHI coverage. PHI contributes 14% to total health expenditure in France from 96% of the population being covered.

Figure 23 Scope to increase the contribution of PHI financing

2011 or nearest year



Source: OECD 2014b

While there is, no 'best practice' international model, international evidence shows that PHI can play an important complementary role. Making progress on addressing these pressures will require trading off conflicting objectives but the result will be increased personal responsibility for health care.

We have reviewed a range of options including the provision of information to raise public awareness, use of nudge regulations to achieve a KiwiSaver style workplace based insurance, the Crown purchase of elective services delivered by private providers that meet public thresholds, general and targeted subsidies, revision to the FBT tax treatment and a tax surcharge on high income earners. No option scores high

(green in Table 1 and Table 4) on every criterion but some have more red flags than others. It is clear that some options are more promising than others.

We have focused on where PHI can add the greatest public value. The answer is clear – *accelerating the return to work from sickness*. Our initial rough estimates, which are conservative about the value of lost output, suggest that increasing the number of workers covered by PHI by 20% could save around NZ$60-$110 million in lost output and involve a fiscal cost between NZ$70 million and NZ$90 million. One means of achieving a faster return to work from sickness would be an explicit subsidy or tax expenditure targeted at employees (similar to the Charitable Donations Rebate).

A workplace based scheme that nudges people towards greater personal responsibility with features like preferred providers, portability and non-exclusion – adopted in the KiwiSaver scheme – could play an important role in making the New Zealand health system more sustainable.

While a more detailed examination and costing is required, it is clear that the most promising workplace approach could comprise a package of measures including:

- an ongoing information programme to raise public awareness
- automatic enrolment in a workplace subsidised employer plan (with the employees having the opportunity to opt out)
- a targeted enrolment subsidy.

Private health insurance can play a part by getting people back to work quicker and keeping the workforce healthy. We have found that there was no strong public policy case for any particular individual option, when considered on its own. However, a well-designed mutually reinforcing package of measures could make a difference. A series of complementary measures will provide additional improvements leading to better health and economic outcomes.

Detailed examination and costing is required for this package of measures so the robustness of the overall net benefit is clear and the extent of any trade-offs between objectives is clarified. However, the fiscal affordability challenge facing New Zealand suggests these options stand out as needing further development and wider public debate.

Appendix A The next steps

This appendix describes the work required for the business case for enabling an accelerated return to work through higher PHI cover. The business case would cover both the economic and the fiscal effects.

The rationale

Ill-health diminishes the potential productivity and wellbeing of New Zealanders. Holt (2010) estimated the ill health prevented 42,300 people from participating in the labour force. If these people had undertaken full-time work for the whole year, it would have added about 88 million hours to labour force productivity. That is 2.3% of all hours worked in the 2004/05 period. Evaluating this in monetary terms, $1.754 billion has been lost; around 1.2% of GDP.

Having large numbers of people on waiting lists for elective surgery imposes costs on society that could be avoided with private health insurance, without imposing further costs on the public health system. We propose to explore two questions:

- Is there a robust business case to encourage individuals through PHI to accelerate their return to work from sickness, rather than relying on the public system waiting list?
- If the business case is robust, what policy intervention would be the most effective?

People on waiting lists fall into two high level groups - those participate in the labour force and those outside the labour force (e.g. the retired, students, children, discouraged workers). The business case would be focused on individuals who participate in the labour force. Waiting for elective surgery creates economic costs for individuals, employer, government and the overall economy.

Cost benefit analysis (augmented by a fiscal analysis) provides the best framework to establish the business case for interventions that target accelerating the return to work. The remainder of this appendix describes what should be considered in the cost benefit analysis to assess the business case.

The problem definition

Surgical waiting times impose economic costs on society. There is a potential opportunity to increase potential economic output by accelerating the return to work through subsidies for a targeted group of elective surgeries through the private health insurance sector.

The options to be assessed

The options for enabling an accelerated return to work through higher PHI cover that could be formally investigated include:

- the status quo – establishing the baseline by formally quantifying the economic cost of waiting time now and in the future
- a package of interventions akin to a KiwiSaver style option including a targeted subsidy for PHI that covers private elective surgery delivered through workplace based insurance schemes

- a standalone assistance option delivered either through an explicit subsidy for employees taking out PHI that covers private elective surgery or the reduction of FBT.

The standalone assistance has two variants. More detailed analysis is likely to narrow down this option to one variant.

Benefits that should be assessed

Employees, businesses and the government could all benefit from accelerating the return to work. These benefits stem from reducing the economic costs of waiting times. These costs include impaired quality of life while awaiting treatment and the duration of lost opportunity to work. Our initial assessment of the costs waiting is described below.

The individual could experience the following kinds of economic costs from waiting:

- unpaid leave: sick leave is often capped in an employment agreement or at the discretion of the employer. Therefore, there is a risk that the individual could face a period of without income. Although if the absence from work is due to a work place accident then lost income will be partially meet by ACC.
- loss of career opportunities because of either absence from work or diminished performance. A particular concern here is hysteresis whereby a temporary illness leads to a permanent withdrawal from the labour force.

Employers could experience the following costs of waiting time:

- loss productivity for employees that are either absent from work or underperforming due to illness
- the cost of sick leave payments
- the cost of hiring additional staff to cover the loss in productivity. This could happen at short notice which could lead to higher costs than the typical recruitment or contracting process.

The government could experience the following economic costs:

- temporary health costs while the individual is waiting for care
- in addition to the economic costs, the Government faces fiscal costs including lost tax revenue on unpaid paid leave, and potential output forgone as well as increase income assistance support payments.

Unless there is surplus labour supply then long waiting times for elective surgery reduce potential GDP. Therefore accurate data on waiting times will be crucial to producing a robust business case. Waiting times are currently not published in New Zealand, but the information is collected. Better information on these waiting times would help clarify what the publicly funded system can and cannot fund and give New Zealanders more certainty about their eligibility for care (Luigi et al. 2013).

Costs that should be assessed

The economic and fiscal costs of each option needs to be quantified to allow the development of a comprehensive business case. The costs include the following:

- temporary and permanent costs for the government (which vary for each option)
- administrative costs for business.

Next steps

Based on an analysis of waiting times data, it will be possible to prepare a business case for enabling an accelerated return to work through higher PHI cover. The business case would compare the both the fiscal and wider economic costs and benefits of from employees and the self-employed having higher PHI cover.

6. References

Albreht T., Turk E., Toth M., Ceglar J., Marn S., Pribaković Brinovec R., Schäfer M., Avdeeva O. and E. van Ginneken. 2009. Slovenia: Health system review. Health Systems in Transition. http://www.euro.who.int/en/about-us/partners/observatory/health-systems-in-transition-hit-series/countries-and-subregions/slovenia-hit-2010 Accessed on 14 November 2014

Australian Government. 2010. Australia to 2050: Future challenges. The 2010 intergenerational report overview. Australia: Government of Australia.

Blakely, T., Atkinson, J., Kvizhinadze, G., Nghiem, N., McLeod, H., and N. Wilson. 2013. Health system costs by sex, age and proximity to death, and implications for estimation of future expenditure. *The New Zealand Medical Journal*, 127(1393), pp. 12-25.

Cheng, T.C. 2014. Measuring the effects of reducing subsidies of private health insurance on public expenditure for health care. *Journal of Health Economics*, vol. 33, pp. 159-179.

Cheng, T.C., 2013. Does reducing rebates for private health insurance generate cost savings? *Melbourne Institute Policy Brief* 3/13. University of Melbourne.

Civitas, 2013. Health systems: Germany. http://www.civitas.org.uk/nhs/download/germany.pdf Accessed 10 September 2014.

Colombo, F. and N.Tapay. 2004. Private health insurance in OECD countries: the benefits and costs for individuals and health systems. *OECD health working paper* 15.

Emmerson, C., Frayne, C. and A. Goodman. 2001. Should private medical insurance be subsidised? *Health Care UK*, Spring, pp. 49-65.

European Observatory on Health Systems and Policies, 2014. Health system responses to financial pressures in Ireland. http://www.euro.who.int/en/about-us/partners/observatory/studies/health-system-responses-to-financial-pressures-in-ireland Accessed on 9 November 2014.

Evans, R. G. 2002. Financing health care: taxation and the alternatives. in *Funding health care: options for Europe*, pp.31-58.

FDHA. 2013. Health2020: The Federal Council's health-policy priorities. http://www.bag.admin.ch/gesundheit2020/index.html?lang=en. Accessed 10 November 2014.

Foubister T. Thomson S., Mossialos E. and A. McGuire. 2006. *Private medical insurance in the United Kingdom*. World Health Organization.

Frech III, H.E. and S. Hopkins. 2004. Why subsidise private health insurance? *The Australian Economic Review*, vol. 37, no. 3 pp. 43-56.

Frech III, H.E., Hopkins, S. and G. MacDonald. 2003. The Australian private health insurance boom: was it subsidies or liberalised regulation? *Economic Papers*, Vol. 22, No. 1, pp. 55-64.

Friedman, L. S. 1984. *Microeconomic policy analysis*. New York: McGraw-Hill.

Health Services Taskforce. 1991. Report to the Prime Ministerial Committee on the Funding and Provision of Health Services. Wellington: Health Services Taskforce, April.

HFANZ. 2010. Work-place based health insurance: how employers, employees and government can benefit from fostering greater take-up.

Holt H. 2010. The cost of ill health. *New Zealand Treasury working paper* 10/04.

IRD 2014. Wage/salary distributions for individual customers, 2003 to 2012. http://www.ird.govt.nz/aboutir/external-stats/revenue-refunds/wage-salary-dist-for-ind/ Accessed 14 November 2014.

Irish Minister of Health 2014. The path to universal health insurance. http://www.imo.ie/policy-international-affair/overview/White-paper-on-Universal-Health-Insurance.pdf Accessed on 24 November 2014.

Joumard, I., C. André and C. Nicq. 2010. Health Care Systems: Efficiency and Institutions", *OECD Economics Department Working Papers*, no. 769, OECD Publishing. DOI: 10.1787/5kmfp51f5f9t-en

KPMG 2012. Review of the impact of the new Medicare Levy Surcharge thresholds on public hospitals. Year 3 final review report. http://www.health.gov.au/internet/main/publishing.nsf/Content/KPMG-review-+medicare-levy-surcharge-thresholds-public-hospitals Accessed on 21 November 2014.

Luigi, S., Michael, B., & Valerie, M. (Eds.). 2013. *OECD Health Policy Studies Waiting Time Policies in the Health Sector: What Works?* Paris: OECD Publishing.

Maynard, A., and A. Dixon. 2002. Private health insurance and medical savings accounts: theory and experience in *Funding health care: options for Europe*, pp. 109-127.

Mikkers, R. and P., Ryan. 2014. "Managed competition" for Ireland? The single versus multiple payer debate. *BMC Health Services Research* 2014, 14 (442) DOI:10.1186/1472-6963-14-442.

Ministry of Health, 2012. *Health expenditure trends in New Zealand 2000–2010*. Wellington: Ministry of Health.

Mossialos, E., and S. M. Thomson. 2004. Voluntary health insurance in the European Union. *Funding health care: options for Europe*, 128.

Morris, S., N. Devlin and D. Parkin. (Eds.). 2010. *Economic analysis in health care*. (Eds.). Chichester, U.K.: John Wiley and Sons Ltd.

Normand, C., and R. Busse. 2002. Social health insurance financing. in *Funding health care: options for Europe*, pp. 59-79.

OECD 2014a. *Health at a glance 2013*.

OECD 2014b. *Health at a glance 2014*. Frequently requested data.

OECD 2011. *OECD reviews of health systems: Switzerland* http://www.oecd.org/els/health-systems/oecdreviewsofhealthsystems-switzerland.htm#further

Robson, A. and F. Pauolucci. 2012. Private health insurance in Australia: the effects of recent changes to price carrots and income sticks. *The Geneva Papers* vol. 37, pp. 725-744.

Schoen, C., Osborn, R., Squires, D., Doty, M.M., Pierson, R. and S. Applebaum. 2010. How health insurance design affects access to care and costs, by income, in eleven countries. *Health Affairs*, 29, no.12 (2010), pp. 2323-2334 (published online November 18, 2010; 10.1377/hlthaff.2010.0862). Accessed on 12 October 2014.

Stabile, M., and S. Thomson. 2014. The Changing Role of Government in Financing Health Care: An International Perspective. *Journal of Economic Literature*, 52(2) pp. 480-518.

The Commonwealth Fund, 2014. *Mirror, Mirror on the Wall, 2014 Update: How* the U.S. Health Care System Compares Internationally. *http://www.commonwealthfund.org/publications/fund-reports/2014/jun/mirror-mirror*

The Commonwealth Fund, 2013. International profiles of health care systems 2013. http://www.commonwealthfund.org/publications/fund-reports/2013/nov/international-profiles-of-health-care-systems. Accessed on 1 November 2014.

The Treasury. 2014. *Briefing to Incoming Minister: Health*

Thomson, S, and Mossialos E. 2009. Private health insurance in the European Union. European Commission.

Vaithianathan, R. 2002. Will Subsidising Private Health Insurance Help the Public Health System? *Economic Record* 78 (242) pp. 277-283.