Optimising the input mix for a futureproof health system

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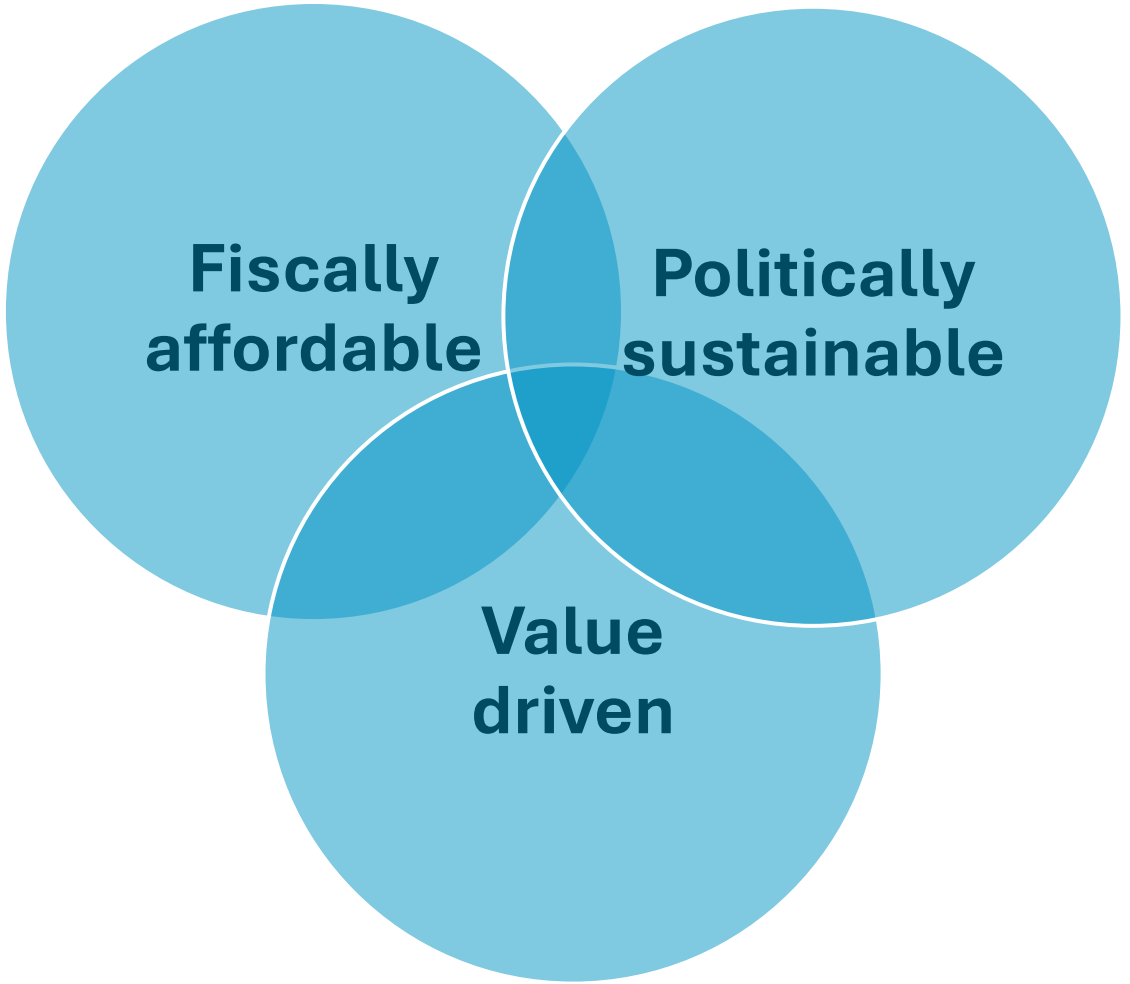
Key messages

1. Labour costs are a source of unavoidable cost growth in the health sector.
2. *How* we spend affects *how much* we spend.
3. Urgent need for improved decision-making with a long-term strategy:
    - Not for cost containment!
    - For input mix optimisation!

Futureproofing funding – A long-term strategy

What do we mean?



When we think about cost drivers…

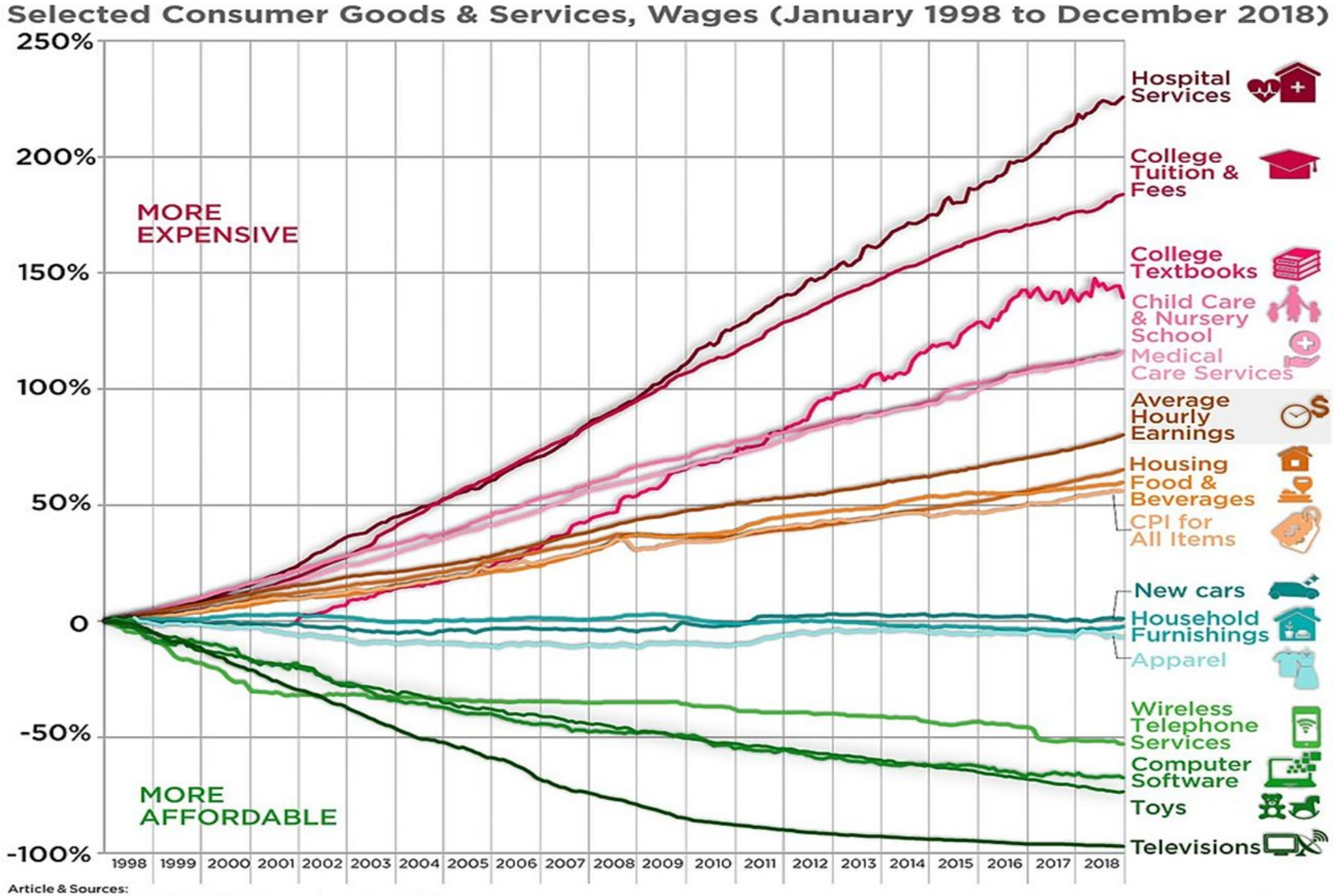
We talk about…

- Ageing and LE
- Burden of disease
- Expectations
- Innovation
- Incomes
- Output mix

We tend to ignore…

Input mix

20 Years of price changes in a market-based system (USA)



Article & Sources:
https://howmuch.net/articles/price-changes-in-usa-in-past-20-years
CPI and other price indices - Bureau of Labor Statistics - https://data.bls.gov/PDQWeb/cu
Average hourly earnings - Bureau of Labor Statistics - https://data.bls.gov/timeseries/CES0500000008

howmuch.net

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Fiscal affordability and political sustainability: Cost growth?

NZIER Insight

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THINKING ABOUT AOTEAROA NEW ZEALAND'S FUTURE

Five priorities to put the health system back on track

After years of denial that a crisis was unfolding, the moment of truth has well and truly arrived. In this NZIER Insight, we propose five priorities to get the system back on track and heading in the right direction.

The health system crisis is playing out daily everywhere from emergency departments and GP clinics across the country to the boardroom of Health New Zealand | Te Whatu Ora. Health professionals are burnt out, and New Zealanders' faith in the health system is being lost. This is a key issue the government will want to address before the next election. But will it address the underlying systemic issues or just kick the can down the road?

Costs are a key focus, but productivity is the key issue

Our health system crisis – like those affecting public health systems around the world – is often characterised as a cost crisis. The cost of delivering healthcare has reached the point where it no longer appears to be affordable. Doctors cost more and more, pay equity settlements translate into huge public sector outlays and the expected cost of building and maintaining the physical infrastructure that services rely on has reached epic proportions[1] (NZIER 2024).

The current crisis was predicted by economist William Baumol, whose work starting in the 1960s described the economic outcomes of industries having different rates of labour productivity growth. He later identified health as one of a number of "stagnant" industries – labour-intensive industries with fewer opportunities for productivity gains than other sectors such as manufacturing. He argued that, because health services are nevertheless needed, health labour costs would have to keep pace with labour costs in sectors that make more significant productivity gains.

The result is rising costs for services even without any improvement in quality – a phenomenon he coined "cost disease".

Baumol explained that this is why, even though many other goods and services become more affordable over time, healthcare does not. This was compellingly shown using US data on various industries' price changes relative to the consumer price index, an updated version of which is shown in Figure 1 below.

Figure 1 Price changes of selected goods and services in the US relative to the consumer price index (1990–2020)

Source: Hartwig and Krämer 2022

Baumol's theory predicts that health expenditure per capita and as a share of GDP will rise relentlessly, even with all else remaining constant.

[1] Our previous work on Crown-owned health infrastructure shows that, under the current approach, the health system will need $100–115 billion over the next 30 years just for hospital buildings (NZIER 2023).

NZIER – Insight

1

- Can health spending continue to grow as a % of GDP?
- The role of productivity
- Avoidable vs unavoidable cost growth

"*Fiscal illusion*" (Baumol 1992)

"… an unfortunate choice in this arena does indeed threaten to bring us an economy, in the words of the poet, 'where wealth accumulates and men decay'." (Baumol 1993).

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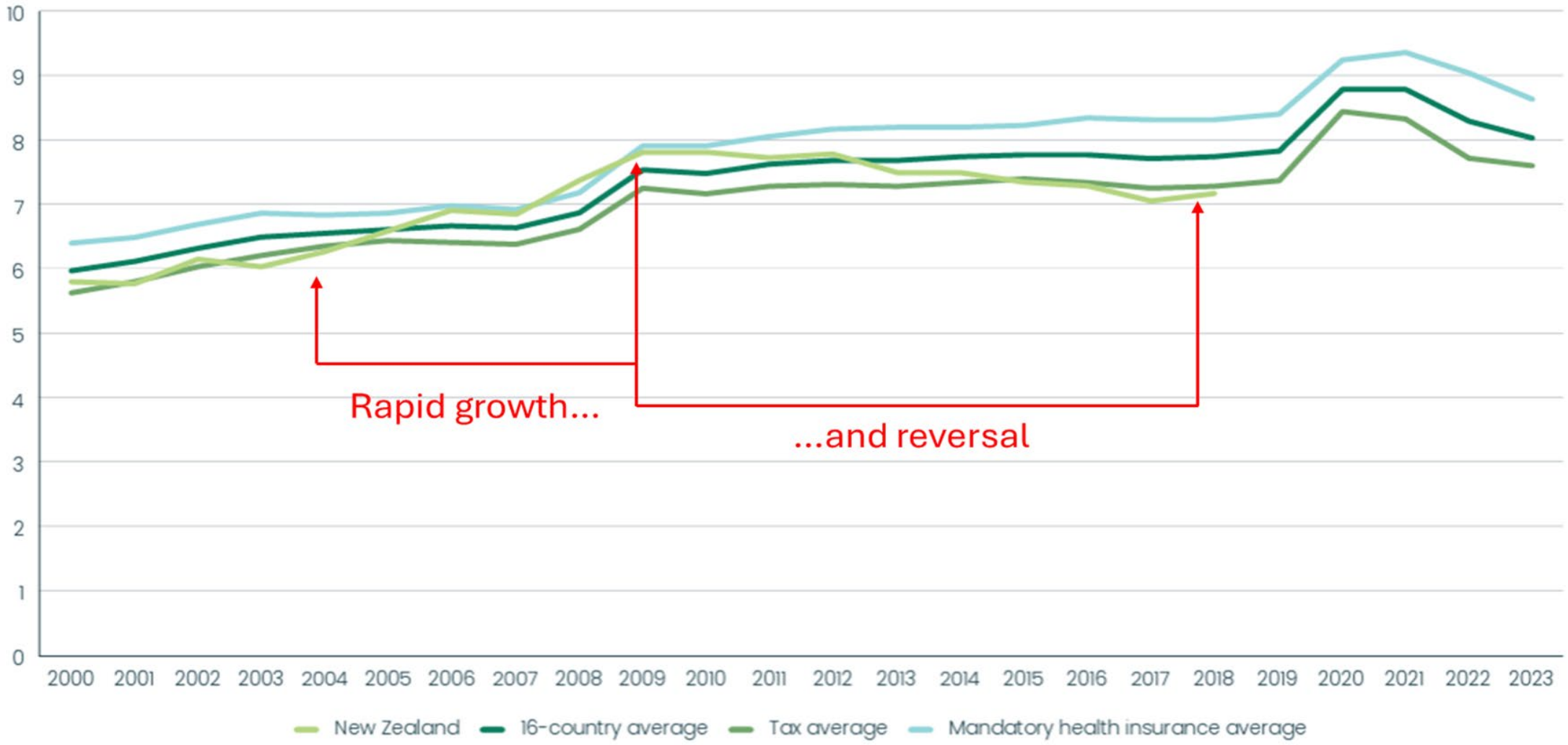
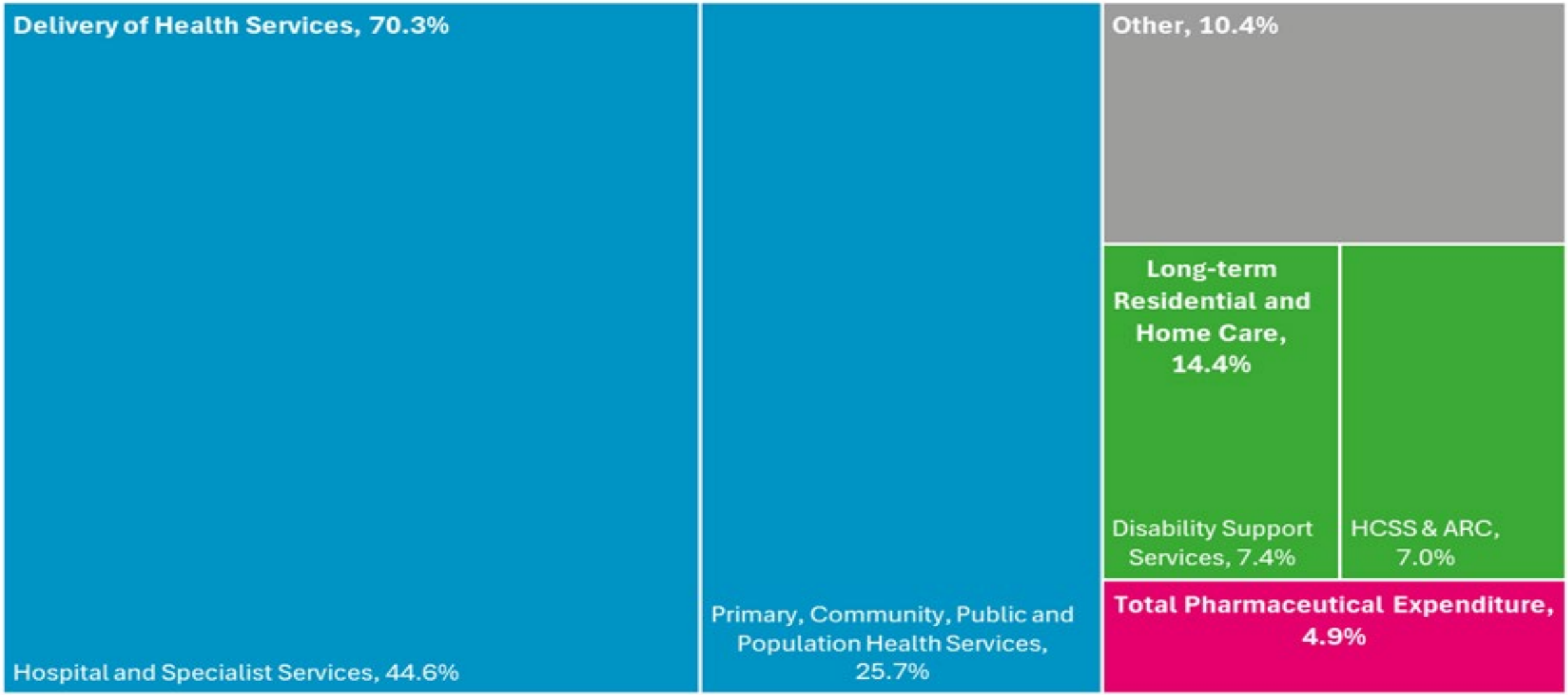
Publicly mandated health expenditure as % of GDP, by financing type 2000-2023



Source: OECD data
Note: OECD estimates for New Zealand after 2018 not included

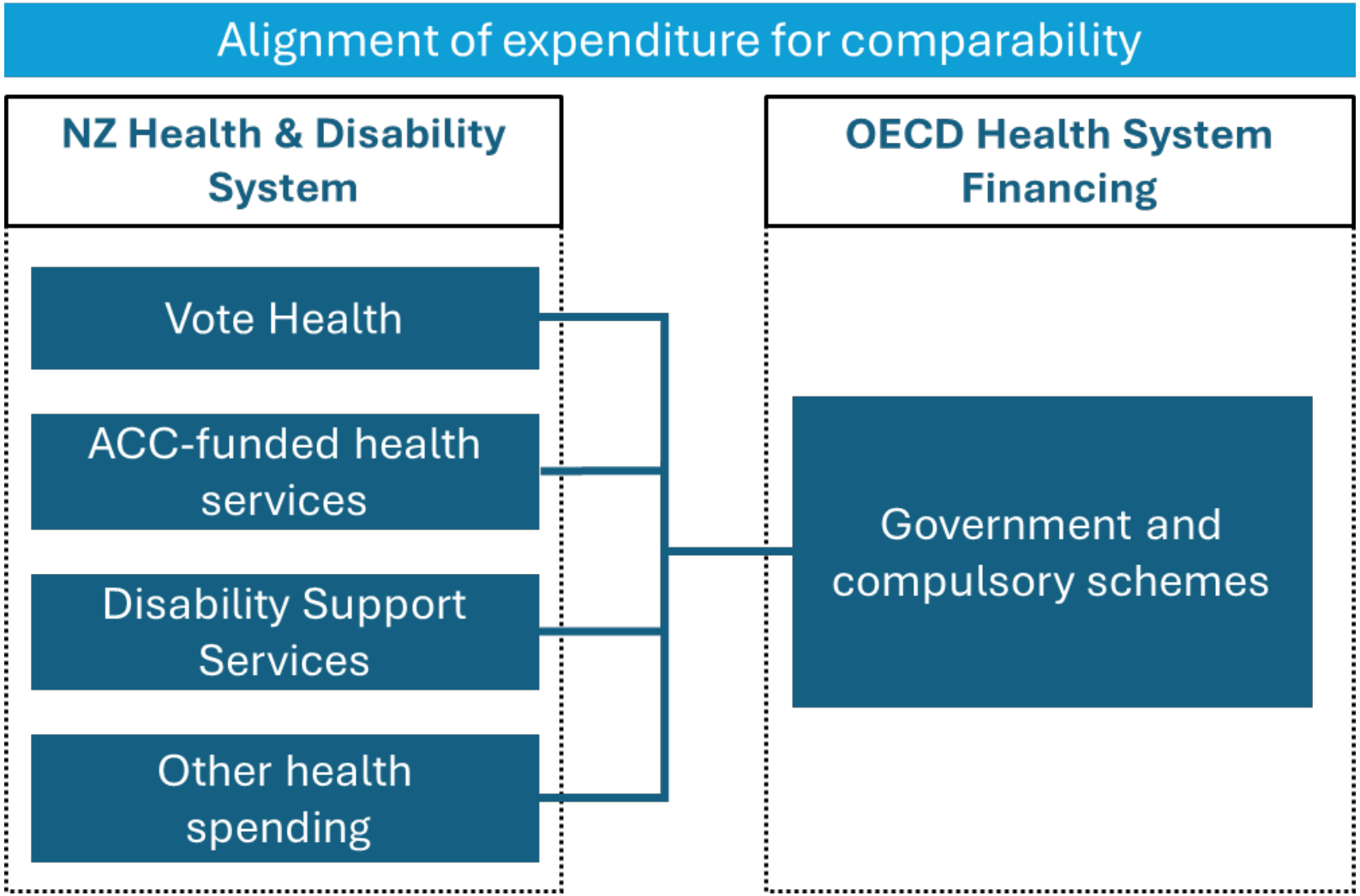
Source: Tenbensel & Lorgelly, 2025.

New Zealand's input mix



Government and mandatory schemes only

Comparisons: Low level of transparency – confidence in decisions?



New Zealand's input mix is an outlier

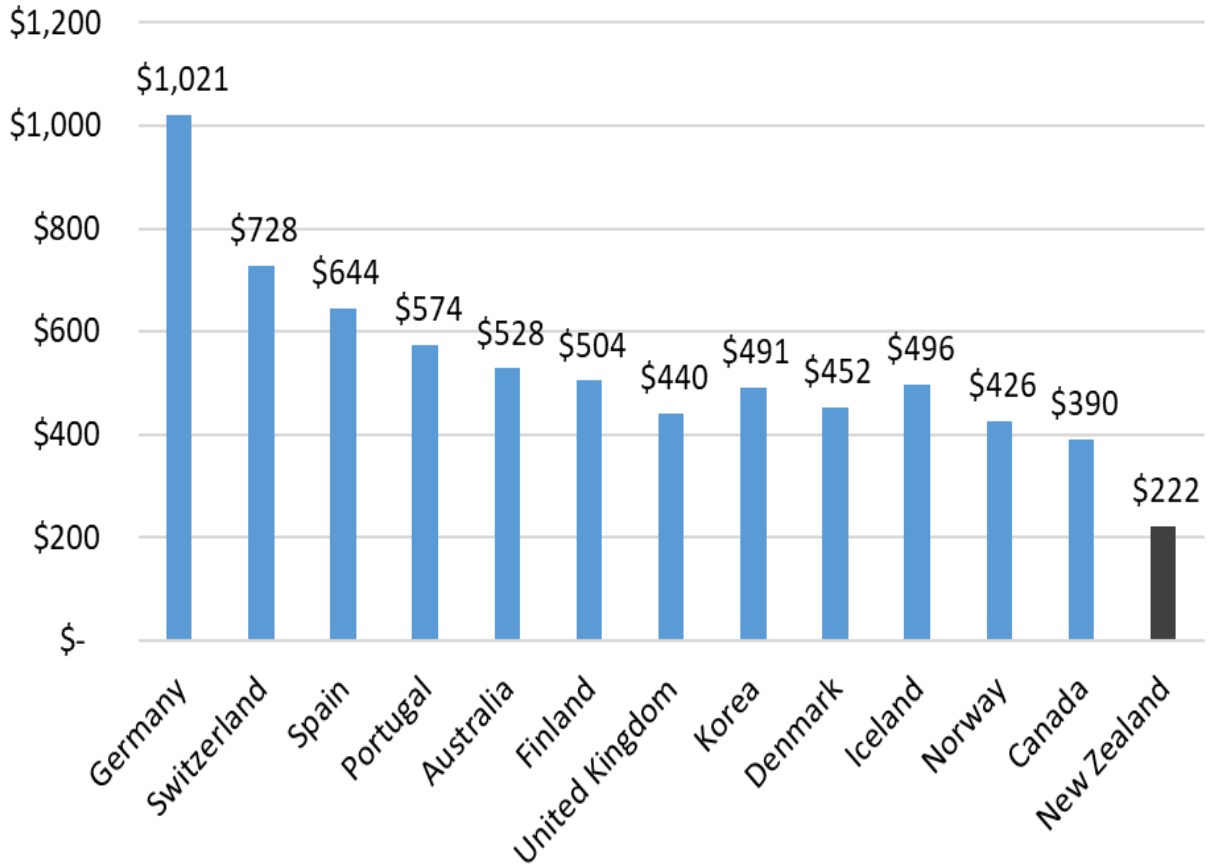
	Delivery of health services	Total pharmaceutical expenditure	Long-term residential and home care	Other health expenditure
Average (mean)	**61.4%**	**13.3%**	**16.1%**	**9.2%**
Australia	65.2%	12.2%	9.8%	12.9%
Canada	65.2%	9.6%	19.8%	5.5%
Denmark	60.2%	9.2%	23.0%	7.6%
Finland	59.9%	11.6%	25.2%	3.3%
Germany	54.3%	16.4%	12.4%	16.9%
Iceland	61.8%	10.4%	19.7%	8.1%
Korea	66.4%	19.3%	10.5%	3.8%
New Zealand	**70.3%**	**4.9%**	**14.4%**	**10.4%**
Norway	54.6%	6.6%	32.1%	6.6%
Portugal	46.2%	26.0%	2.0%	25.8%
Spain	63.9%	22.6%	7.5%	6.0%
Switzerland	62.0%	13.6%	19.2%	5.1%
United Kingdom	68.1%	10.0%	14.5%	7.4%

Government and mandatory schemes only

Are we spending enough on medicines?

Total pharmaceutical expenditure per capita (PPPs)

Government and mandatory schemes only



Source: NZIER

Total pharmaceutical expenditure (% of GDP) vs. HALE/LE

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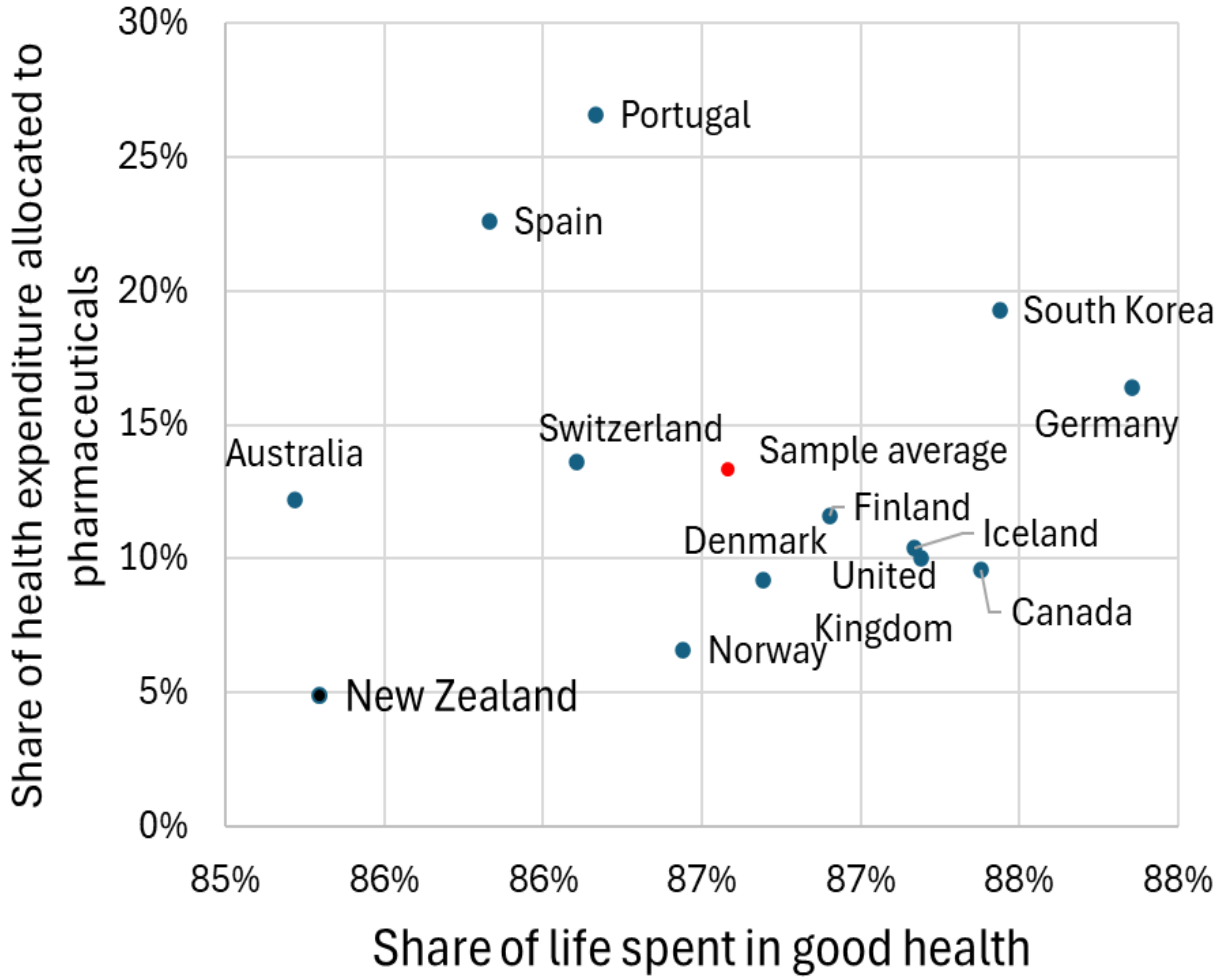

Where do we spend now for a futureproof system?

Objectives

- Is flexible, adaptable
- Recognises opportunities and is ready to invest
- Supports people to manage their own health
- Transparent and accountable

Enablers: The key inputs to strengthen