The Treasury

Budget 2017 Information Release

Release Document July 2017

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[1]	to prevent prejudice to the security or defence of New Zealand or the international relations of the government	6(a)
[4]	to prevent prejudice to the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial	6(c)
[11]	to damage seriously the economy of New Zealand by disclosing prematurely decisions to change or continue government economic or financial policies relating to the entering into of overseas trade agreements.	6(e)(vi)
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[31]	to maintain the current constitutional conventions protecting collective and individual ministerial responsibility	9(2)(f)(ii)
[33]	to maintain the current constitutional conventions protecting the confidentiality of advice tendered by ministers and officials	9(2)(f)(iv)
[34]	to maintain the effective conduct of public affairs through the free and frank expression of opinions	9(2)(g)(i)
[36]	to maintain legal professional privilege	9(2)(h)
[37]	to enable the Crown to carry out commercial activities without disadvantages or prejudice	9(2)(i)
[38]	to enable the Crown to negotiate without disadvantage or prejudice	9(2)(j)
[39]	to prevent the disclosure of official information for improper gain or improper advantage	9(2)(k)
[40]	Not in scope	

In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) and section 18 of the Official Information Act.

Cost Benefit Analysis Template

Section A Descriptive Information

Vote	Health
Responsible Minister	Hon Dr Jonathan Coleman
Initiative title	Health Workforce Training and Development - additional support

Funding Sought ($m)	2017/18	2018/19	2019/20	2020/21	2021/22 & outyears	TOTAL
Operating	[33]	1.919	1.919	1.919	-	[33]
Capital	-	-	-	-	-	-

Problem Definition

A description of the problem or opportunity that this proposal seeks to address, and the counterfactual.

New Zealand has experienced a shortage of doctors in a range of specialties over a number of years and has, to date, been reliant on international medical graduates (comprising approximately 40 percent of the medical workforce in the last decade). In 2008/09, the Government increased the number of New Zealand government-funded medical school places by 200 a year, phased in from the 2010 academic year. To date, 174 of the additional 200 places have been implemented. The number of PGY1 positions has therefore increased in recent years: from 394 in 2014, 423 in 2015 and 476 in 2016. The Ministry of Health anticipates the number of PGY1 positions will stabilise at 553 from 2022. Health Workforce New Zealand is currently funded for 476 positions.

[33]

Without additional funding for the increased numbers, the number of places for graduates on PGY1 positions will be restricted. This will result in the graduates delaying or not progressing further in their medical profession career. The returns on investment in teaching these graduates to train as junior doctors will not be realised.

[33]

Both the above workforce activities are intended to reduce New Zealand's reliance on international graduates, and therefore our susceptibility to the global market, and to build a sustainable workforce to meet New Zealand's health care needs. With growth in New Zealand's population and an ageing population, demand for health services is projected to increase. Without a sustainable workforce, health services could be constrained.

Initiative Description

A description of what the initiative will provide or produce and how this will address the problem or opportunity.

This initiative is to support existing business-as-usual activities to meet cost pressures from higher volumes, which is aligned to Government priorities to build a sustainable workforce and reduced reliance on international graduates.

Alternative Options Considered

[33]

The option of not giving every graduate a PGY1 placement was considered. There is not currently an evidence based approach to determine the appropriate number of medical graduates in PGY1 positions other than matching 100% of graduates to placements. Without robust evidence to support a reduction in numbers, it is difficult to develop a rationale. In addition, the benefits from the investment made on teaching medical students will not be realised if graduates are unable to further progress to a PGY1 placement.

Section B Impact Analysis

Impact Analysis

An explanation of who is impacted (winners and losers), what the impacts are (costs and benefits), and when the impacts will be realised and for how long. The impacts should be quantified and monetised if possible.

Reducing investment in medical graduates and the [33] is likely to reduce the New Zealand supply of health workforce. Unless international health workforce is available, the ability of the health system to meet demand for health service could be constrained. Waiting times for some services could increase, especially in hard-to-staff communities and specialities. The impact of this on health services is likely to start about 5 years from now.

Medical graduates who do not receive PGY1 placements will immediately find that their medical career has been disrupted. This disruption will commence in early 2018 if a decision is made not to increase the number of funded PGY1 positions.

Impact Summary Table

All monetised and non-monetised impacts should be listed.

Impacts - Identify and list $m present value, for monetised impacts	$'M	Assumptions and evidence (quantify if possible, and use ranges where appropriate)	Evidence certainty[1]
Additional Graduates	**(10)**		High
Avoid HCD related benefit payments	**23**		Low
Improved Quality of Life	**182**		Medium
Net Present Value of Total Quantified Societal Impacts	**196**		Medium

Section C Conclusions

Conclusions

What is being recommended and why?

This proposal recommends :

- [33]
- Increasing the number of PGY1 positions to match the number of medical graduates

This will ensure that the goal of reducing New Zealand's reliance on international graduates and to build a sustainable workforce to meet New Zealand's health care needs can be achieved.

Overall Ratings

Value for Money[2]	Strategic Alignment[3]
4	3

1 Rate your level of confidence in the assumptions and evidence as high (green) if based on significant research and evaluations that is applicable, medium (amber) if based on reasonable evidence and data, or low (red) if there is little relevant evidence. Colour the rating box for each impact.

2 For guidance on Value for Money ratings see Budget 2017 guidance section 3.2.2

3 For guidance on Strategic alignment ratings see Budget 2017 guidance section 3.1.5

Summary of monetised results [only fill this out if you have monetised costs and benefits]		
Use ranges for values where appropriate	**Discount Rate**	
	6% real (default)	**3% real (sensitivity)**
Net Present Value (NPV)[4]	196	326
Benefit Cost Ratio (BCR)[5]	21.3	32.8
Return on Investment (ROI) – Societal Total [6]	21.3	32.8
Return on Investment (ROI) – Government[7]	2.4	3.7

Supporting Evidence ***ie, the bibliography***

Ex-post Impact Evaluation Plan ***How will you evaluate (after the programme has been rolled out) what the effect of the programme was, particularly on the impacts listed in Section B?[8]***
Increase in numbers will be monitored and reported on through the Ministry of Health's annual report.

4 **Net Present Value (NPV**) - The NPV is the sum of the discounted benefits, less the sum of the discounted costs (relative to the counterfactual). This gives a dollar value representing the marginal impact on the collective living standards of all New Zealanders of the initiative, in today's dollar terms.

5 **Benefit Cost Ratio (BCR**) - The BCR is the ratio of total discounted benefits to the total discounted costs. A proposal with a BCR greater than 1.0 has a positive impact, because the benefits exceed the costs. The BCR is the same as the Return on Investment Societal Total, unless there are negative impacts in addition to the fiscal cost of the initiative. All negative impacts are included in the denominator for the BCR measure.

6 **Return on Investment (ROI) - Societal Total** - Calculate the ROI by dividing the discounted net change in wider societal impact, including benefits to government, by the discounted cost of the initiative. This can be interpreted as the impact for New Zealanders per dollar the government spends on the initiative, eg, for every $1 the government spends on this programme, New Zealanders receive benefits of $3.

7 **Return on Investment (ROI) – Government** – Calculate the ROI by dividing the discounted net change in impact for the government by the discounted cost of the initiative. This measures the discounted net marginal (fiscal) benefits to the government.

8 More information on this impact evaluation plan is available in the Budget 2017 guidance Section 4

Appendix 1 One-page Intervention Logic

Intervention	Outputs	Outcomes	Impacts Value relative to counterfactual
Increase medical workforce	More medical workforce	More health services provided to meet increasing demand.	Patients receive health services earlier than if there was shortage of medical workforce. This will improve the quality of life for patients and avoid patients having to be on benefits while waiting for treatment
[33]			

Appendix 2 Attach CBAx Outputs Summary

Outputs Summary

Proposal details

Respondent name	HWNZ		
Intervention details	Reducing reliance on international medical graduates and other clinical workforce		
Start year	2017	Total population over 31 Years	836
Period for analysis	31 Years	Discount rate	6%

Summary metrics

Return on Investment, Societal Total (31y)	21.3	Net economic benefit per cohort member (31y)	$ 233,918
Return on Investment, Government only (31y)	2.4	Initiative NPV costs per cohort member (31y)	$ 11,528

Net benefit summary

Unit: 2017 ($m)

Category	5-Year NPV $m	10-Year NPV $m	31-Year NPV $m	2017	2018	2019	2020	2021
Total marginal impact	-	38	205	-	-	-	-	-
Total cost of initiative	(10)	(10)	(10)	(3)	(2)	(2)	(2)	(2)
Net economic benefits	(10)	28	196	(3)	(2)	(2)	(2)	(2)

Word summary/comment field

This is an area to explain key modelling assumptions or anything important individuals looking at the model should know.

Assume a medical graduate can generate at least 1 QALY per annum while other clinical graduates can generate 0.25 QALY per annum. Each graduate will delivery benefits for 25 years after 6 years of post graduate working. Assume at least 50 person will not be on benefits due to health conditions as a result of increase workforce to meet demand for health services.

Cost summary

Unit: 2017 ($m)

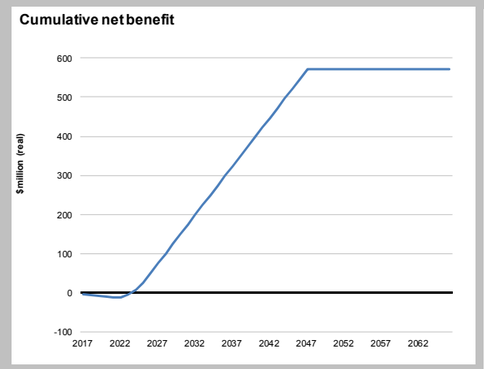
Cost category		31-Year NPV $m	2017	2018	2019	2020	2021
Fiscal cost of initiative							
	Operating expenses	(10)	(3)	(2)	(2)	(2)	(2)
	Capital expenses	-	-	-	-	-	-
	Total fiscal cost of initiative	(10)	(3)	(2)	(2)	(2)	(2)

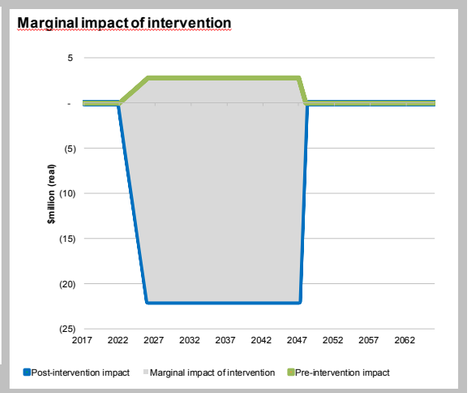
Impact summary

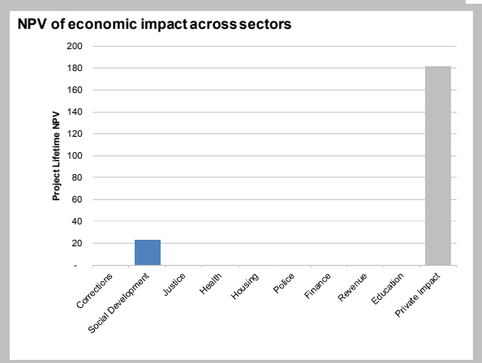
Unit: 2017 ($m)

	Evidence Quality		5-Year NPV $m	10-Year NPV $m	31-Year NPV $m	2017	2018	2019	2020	2021
Impact 1	Medium	Quality-adjusted life year (QALY) gained	-	34	182	-	-	-	-	-
Impact 2	Low	Supported living payment - Generalised	-	4	23	-	-	-	-	-
Impact 3		-	-	-	-	-	-	-	-	-
Impact 4		-	-	-	-	-	-	-	-	-
Impact 5		-	-	-	-	-	-	-	-	-
Impact 6		-	-	-	-	-	-	-	-	-
Impact 7		-	-	-	-	-	-	-	-	-
Impact 8		-	-	-	-	-	-	-	-	-
Impact 9		-	-	-	-	-	-	-	-	-
Impact 10		-	-	-	-	-	-	-	-	-
Impact 11		-	-	-	-	-	-	-	-	-
Impact 12		-	-	-	-	-	-	-	-	-
Impact 13		-	-	-	-	-	-	-	-	-
Impact 14		-	-	-	-	-	-	-	-	-
Impact 15		-	-	-	-	-	-	-	-	-
Impact 16		-	-	-	-	-	-	-	-	-
Impact 17		-	-	-	-	-	-	-	-	-
Impact 18		-	-	-	-	-	-	-	-	-
Impact 19		-	-	-	-	-	-	-	-	-
Impact 20		-	-	-	-	-	-	-	-	-
Impact 21		-	-	-	-	-	-	-	-	-
Impact 22		-	-	-	-	-	-	-	-	-
Impact 23		-	-	-	-	-	-	-	-	-
Impact 24		-	-	-	-	-	-	-	-	-
Impact 25		-	-	-	-	-	-	-	-	-
Impact 26		-	-	-	-	-	-	-	-	-
Impact 27		-	-	-	-	-	-	-	-	-
Impact 28		-	-	-	-	-	-	-	-	-
Impact 29		-	-	-	-	-	-	-	-	-
Impact 30		-	-	-	-	-	-	-	-	-
Impact 31		-	-	-	-	-	-	-	-	-
Impact 32		-	-	-	-	-	-	-	-	-
Impact 33		-	-	-	-	-	-	-	-	-
Impact 34		-	-	-	-	-	-	-	-	-
Impact 35		-	-	-	-	-	-	-	-	-
Impact 36		-	-	-	-	-	-	-	-	-
Impact 37		-	-	-	-	-	-	-	-	-
Impact 38		-	-	-	-	-	-	-	-	-
Impact 39		-	-	-	-	-	-	-	-	-
Impact 40		-	-	-	-	-	-	-	-	-
Impact 41		-	-	-	-	-	-	-	-	-
Impact 42		-	-	-	-	-	-	-	-	-
Impact 43		-	-	-	-	-	-	-	-	-
Impact 44		-	-	-	-	-	-	-	-	-
Impact 45		-	-	-	-	-	-	-	-	-
Impact 46		-	-	-	-	-	-	-	-	-
Impact 47		-	-	-	-	-	-	-	-	-
Impact 48		-	-	-	-	-	-	-	-	-
Impact 49		-	-	-	-	-	-	-	-	-
Impact 50		-	-	-	-	-	-	-	-	-
	Total:		**-**	**38**	**205**	**-**	**-**	**-**	**-**	**-**

Charts







Sheet	Error Status
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Calculations	OK
Impacts	OK
Workbook	OK