

Closing the gap: the call for government-funded annual health checks for intellectually disabled New Zealanders

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Intellectually disabled New Zealanders die much earlier than other New Zealanders, for preventable reasons

In 2023, Aotearoa New Zealand's oldest advocacy organisation for intellectually disabled people, IHC, released a large research report containing quantitative data about the health and wellbeing of intellectually disabled New Zealanders. This report, titled *From Data to Dignity: Health and Wellbeing Indicators for New Zealanders with Intellectual Disability*, used Stats NZ's large, linked database, the Integrated Data Infrastructure (IDI), to find the intellectually disabled population and compare their outcomes across a number of domains to that of the general population.¹ Identification of the intellectually disabled population in the report relied on multiple data sources from the IDI, including hospital records, mental health services, disability support and education data, focussing primarily on individuals with moderate or severe intellectual disability who access support services.

This report shows that intellectually disabled people have the highest mortality risk of any group, with a life expectancy of up to 22 years shorter than the general population.¹ They are 2.7 times more likely to be admitted to the emergency department, 3.6 times more likely to be admitted to hospital for a condition that could have been avoided and have higher rates of lung disease, heart disease, diabetes, cancer and mental health conditions.¹

IHC's report also included details about the particular health inequalities of the intellectually disabled Māori population due to the higher rates of intellectual disability within the total Māori population. Māori with intellectual disabilities face significant health inequalities, including a life expectancy 12–14 years shorter than the

general Māori population. They are 1.63 times more likely to have coronary heart disease, 1.26 times more likely to have chronic obstructive pulmonary disease, nearly 3 times more likely to have mood disorders, almost 2 times more likely to visit the emergency room or hospital for injury care and over 2.5 times more likely to be hospitalised for preventable conditions than other Māori.¹

The increased mortality of the intellectually disabled population is not just due to worse health—research shows people with intellectual disabilities have much higher mortality, even adjusting for other conditions.² One effective intervention that could address this is government-funded comprehensive annual health checks for the intellectually disabled population.

Annual health checks may lower the risk of early mortality for intellectually disabled people by up to 35%

A meta-analysis of 28 controlled trials about the usefulness of targeted annual health checks for the geriatric population showed that those checks had the effect of reducing the early mortality risk by between 14% and 35%.³

The intellectually disabled population have things in common with the geriatric population such as highly prevalent unrecognised health conditions, impaired communication and cognition/recall difficulties.^{4,5} Intellectually disabled people also have a risk of early mortality up to three times greater than people in the general population and high levels of avoidable mortality.^{6,7}

This evidence suggests that a similar health check programme for intellectually disabled individuals could reduce their risk of preventable and premature mortality by approximately 35%. To illustrate potential outcomes, Table 1 shows how varying levels of effectiveness in reducing

Table 1: Different levels of assumed effectiveness of annual health checks.

Assumed effectiveness	Deaths avoided	
1%	3	
5%	15	
10%	30	
14%	42	Plausible range
20%	60	
25%	75	
30%	90	
35%	104	
40%	120	
45%	134	
50%	149	

mortality risk for intellectually disabled people could translate into the number of deaths avoided. These estimates use data about the deaths of intellectually disabled New Zealanders extracted from the IDI, ensuring they reflect real-world demographics and health outcomes.

Implementing health checks could save up to 104 lives per year

Based on this evidence and the mortality data from the IDI, we estimate that implementing health checks in Aotearoa New Zealand will save 104 lives a year.

To get this figure, we used data from the IDI about the deaths of intellectually disabled people in 2018. We compared the number of deaths in the intellectually disabled population to the total population of intellectually disabled people to come up with the rate of deaths. We did the same with the general population.

We then calculated the difference in the rate of death for intellectually disabled people and the general population (Figure 1). The rate is for deaths per thousand people. This then provided us with a figure showing the excess deaths per thousand that the intellectually disabled population experience.

To model the impact of health checks on the death rate for the intellectually disabled population we reduced this excess death rate by 35%. Then we used this new rate to calculate how many

intellectually disabled people would die per year compared to how many actually died in 2018.

This showed us that in 2018, 104 intellectually disabled people would not have died if we were able to lower the risk of mortality by 35%.

There is robust international evidence about the benefits of the annual health check for this population

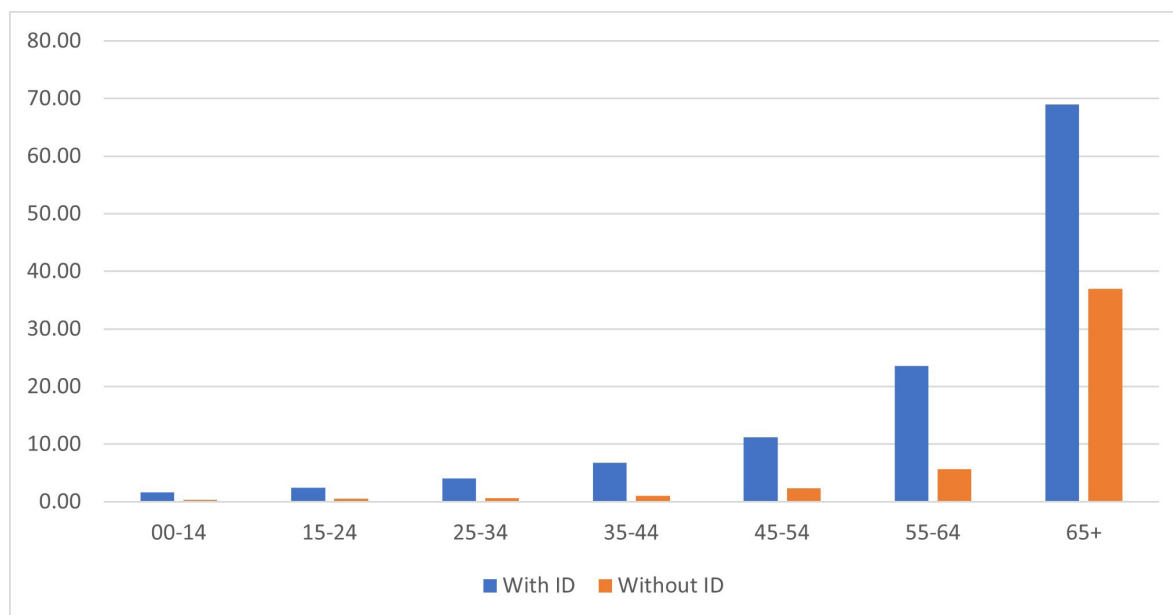
Gold-standard randomised controlled trials in Australia have created an evidence base that shows health checks for the intellectually disabled population improve health.^{4,5}

Some well-evidenced outcomes are:

- A 60% increase in new diagnoses, with 2.54 additional health problems identified⁴
- A 27% reduction in potentially avoidable hospitalisations²
- A 20% reduction in emergency department admissions for intellectually disabled people with severe health needs²

Annual health checks will ease pressure on hospitals, saving money and reducing wait times

A consistent finding of evaluations is that health checks shift intellectually disabled people

Figure 1: Rate of death for the general population and the intellectually disabled population.**Table 2:** Costs and benefits of annual health checks.

Health check cost	
One visit with practice nurse to run through, check and order tests	\$60
60-minute patient co-payment for GP (per person) after test results returned	\$147
Estimated increase in health costs due to use of health check (per person)	\$70 ⁸
Total health check cost (per person)	\$277
Current intellectually disabled pop	47,000 ¹
Total cost of health check for cohort (annual)	\$13m
Benefit of annual health check—reduce PAH	
Number of PWID who had a PAH in 2018	8,460 ¹
Annual cost of PAH for this cohort	\$63m
Cost saved if PAH reduced by 26%*	\$16.5m

GP = general practitioner; pop = population; PAH = potentially avoidable hospitalisations; PWID = person with intellectual disability.

*The 26% reduction figure is based on the 26% fall in emergency department admissions for ambulatory care sensitive conditions for practices in the United Kingdom that had high health check participation.²

Table 3: Sensitivity analysis.

Assumption	Total cost	Cost-benefit ratio
Total cost of health check without existing subsidies	\$21.5m	\$0.77
Total cost of health check if no nurse visit/two GP visits	\$16.6m	\$0.99
Total cost of health check if no increase in other medical costs	\$10.2m	\$1.65

GP = general practitioner.

Table 4: Cities with the highest numbers of intellectually disabled people.¹

Region	Approximate pop	% of ID pop nationwide
Auckland	10,300	26.7%
Hamilton	1,824	4.7%
Dunedin	1,398	3.6%
Tauranga	1,218	3.1%

pop = population; ID = intellectually disabled.

away from hospitals and towards primary care.² Since intellectually disabled people are heavy users of emergency departments,^{1,3} this will lower demand and wait times for emergency departments. Identifying treatable conditions earlier will allow more efficient prioritisation of specialist assessment and treatment.

Table 2 gives the central scenario for a benefit analysis of free health checks for the intellectually disabled population based on the best available data,² including Aotearoa New Zealand's Treasury's CBAX tool for the healthcare costs. This supports our view that annual health checks are likely to be fiscally positive.

Using the figures above we came up with a cost-benefit ratio of NZ\$1.31 for every dollar spent. Table 3 provides a sensitivity analysis for the results in Table 2. In particular, it relaxes assumptions about the health check cost. In all scenarios, except where existing subsidies provided to the intellectually disabled population are counted as new expenditure, the cost-benefit ratio is positive or almost even.

Under some assumptions listed in Table 3 the cost-benefit analysis is almost cost neutral or negative, but the benefit figure is a very conservative figure that does not include the benefits of:

- Reducing risk of mortality
- Reducing emergency department admissions

for intellectually disabled people with severe health conditions

- Reducing hospital admissions for ambulatory care-sensitive conditions
- Any other quality of life benefits that have been connected to the health checks, including improved control of seizures and weight, reduction in self-reported pain and falls and the resolution of psychiatric issues due to the discovery of underlying physical health problems^{2,9}

We know how to implement (and evaluate) this

Universal health checks for intellectually disabled people have been implemented in Australia and the United Kingdom since 2007, providing a proven and pragmatic model that could be adapted for Aotearoa New Zealand. While some service providers in Aotearoa New Zealand currently offer health checks, limited funding makes widespread implementation challenging.

The experiences of other countries and local providers offer valuable insights into the investment required, suggesting that such a programme could be introduced efficiently. Health checks are effective in identifying health conditions early, reducing hospital admissions and lowering rates

of premature mortality.

Using the IDI, it would be possible to monitor and evaluate the impacts of implementing health checks, such as improvements in health outcomes and reduced healthcare costs. An initial rollout could focus on regions with higher populations of intellectually disabled people, as research has identified where these communities are concentrated.¹

IDEA Services, Aotearoa New Zealand's largest service provider for intellectually disabled people, has been funding annual health checks for many years and healthcare staff within the organisation have streamlined the process for delivering these checks.

The health check could initially be piloted through a staggered rollout in a selection of the cities listed in Table 4. Using the code to identify the intellectually disabled population developed for the *From Data to Dignity* report within the IDI, baseline health data for intellectually disabled individuals in these areas could be extracted, providing insights into their current use of health services. These baseline metrics would enable robust monitoring and evaluation of the pilot's impact over time. Additionally, one or more comparable regions could be selected as control groups to strengthen the evaluation by providing a basis for comparison.

Conclusion

Annual health checks for intellectually disabled people are a proven intervention. With evidence showing they could prevent over 100 deaths a year and significantly reduce hospital admissions within Aotearoa New Zealand, these checks would not only improve health outcomes but also relieve pressure on emergency departments and cut healthcare costs. The successful models in Australia and the United Kingdom demonstrate that these checks are both feasible and fiscally positive. Now is the time to act—investing in annual health checks can help close the health gap and ensure better, longer lives for one of Aotearoa New Zealand's most vulnerable populations.

Limitations

Patients with milder intellectual disabilities who are not known to health services were not identified by the IDI research and therefore not included in this cost-benefit analysis. Similarly, the intellectually disabled Pacific population is small due to the health requirements of Aotearoa New Zealand's immigration laws, and this has led to potentially atypical results for the Pacific intellectually disabled population, and so data about this population are not included.

COMPETING INTERESTS

Shara Turner is a full-time employee of IHC New Zealand, advocating for intellectually disabled people, and is a member of the New Zealand division committee of the Australasian Society of Intellectual Disability.

Conal Smith is a director and shareholder of Kōtātā Insight Limited, and is a member of the OECD expert advisory board on the measurement of subjective wellbeing.

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IHC is an organisation that supports people with intellectual disabilities by advocating for their rights, providing a variety of housing and work options and supporting families.

Kōtātā Insight is a multidisciplinary research organisation with expertise in economics, social psychology and statistics, utilising both quantitative and qualitative methodologies.

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<https://nzmj.org.nz/journal/vol-138-no-1609/closing-the-gap-the-call-for-government-funded-annual-health-checks-for-intellectually-disabled-new-zealanders>

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