Beyond the call – the social return on investment of *1737 Need to Talk?*

Measuring the social return on investment of the *1737 Need to Talk?* Mental health support line run by Whakarongorau Aotearoa

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Acknowledgement

We would like to thank the team from Whakarongorau for the close cooperation throughout the project and the inputs which facilitated our analysis. We would also like to thank all participants of the panel discussions. Your inputs were important in testing assumptions and estimating the Social Return of Investment of 1737.

Executive summary

Whakarongorau Aotearoa engaged Sapere to evaluate the social return on investment (SROI) of the *1737 Need to Talk? Mental health support line (1737)* over the financial years 2025 to 2030.

Every $1 invested in 1737 results in a social return of $9.3

Using a conservative modelling approach for benefits, we estimate a social return of between $9.34 and $10.30 for every $1 invested in 1737 over a projected period of 5 years. Social benefits comprise of the estimated number of avoided fatal suicides, averted non-fatal suicide attempts, brief interventions and referrals for the respective populations. Costs comprise of staff, technology and other costs.

Our projections build on the following scenarios:

- **Scenario 1 – Status quo:** Workforce and productivity remain unchanged, with 22.84 FTE allocated to 1737 calls, spending 71 per cent of their time on calls.
- **Scenario 2 – Increase FTE:** Additional funding from 2026 increases workforce by 10 per cent (two more FTE), while productivity remains at 71 per cent.
- **Scenario 3 – Increase productivity:** Efficiency gains from technology allow staff to spend 85 per cent of their time on calls by 2030 (+14 percentage points), without increasing the size of the workforce.
- **Scenario 4 – Increase productivity and FTE:** A combination of scenarios 2 and 3, where there is additional workforce funding and investment in technology.

Base case estimation results for the scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Net present value of investment	**$224.29 m**	**$241.17 m**	**$247.31 m**	**$266.22 m**
SROI ratio	**9.34**	**9.60**	**10.03**	**10.30**

Executive summary

We model the SROI of 1737 in a structured and systematic approach:

1. Identification of service user risk groups and associated outcomes.
2. Identification of a base case and the 1737 projection scenarios.
3. Projection of future service user risk groups, constrained by scenarios.
4. Using a decision tree model, estimation of the net present value of the SROI from 1737 over a five-year period.
5. Sensitivity analysis of key input parameters.

Sensitivity analysis indicates robustness of our results: the SROI ratio ranges between 7.01 and 14.05

We test the sensitivity of our base case to key input parameters, such as discount rates, deadweight, displacement cost, disability-adjusted life years and the Value of a Statistical Life Year. The table shows the lower and upper bound of the SROI ratio for each scenario.

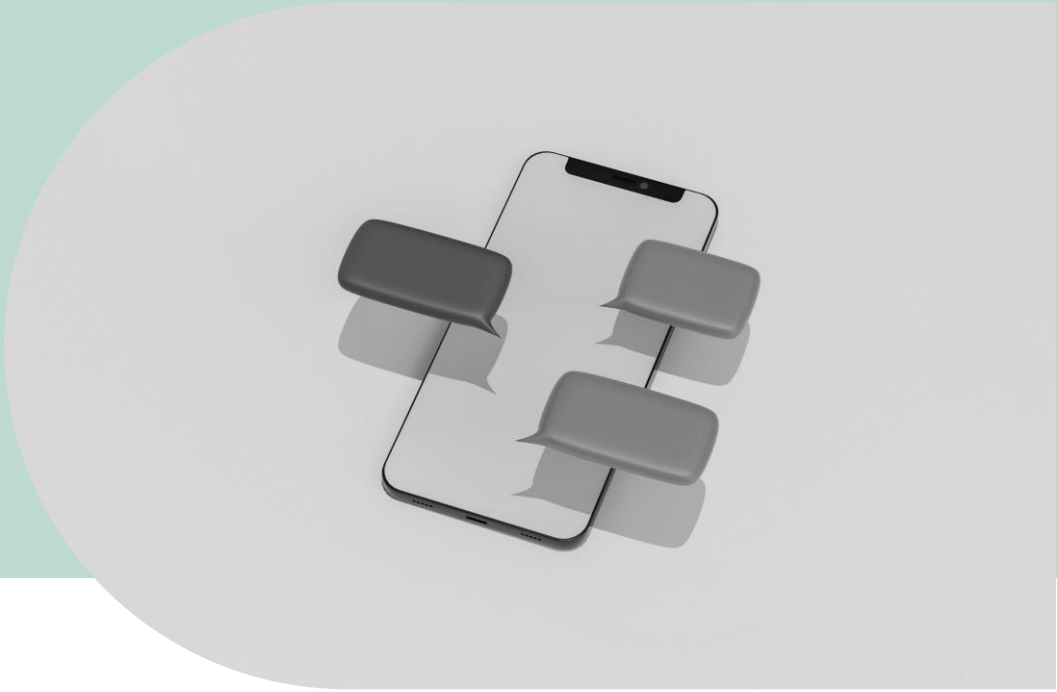
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Lower bound	7.01 : 1	7.20 : 1	7.52 : 1	7.73 : 1
Upper bound	12.75 : 1	13.09 : 1	13.68 : 1	14.05 : 1

We estimate that 1737 prevents about 1 per cent of all fatal and non-fatal suicide attempts a year in New Zealand

Our analysis suggests that interventions through 1737 prevent approximately five to six suicides and 156 suicide attempts per year, representing an estimated 1 per cent reduction in fatal and non-fatal suicide attempts a year in New Zealand. As 1737 is a leading mental health support service in New Zealand, we believe this estimate reasonably reflects its impact.

Evidence from other studies indicates that our valuation of social benefits from non-fatal suicide attempts and fatalities is conservative, as many studies have applied significantly higher values. Therefore, it is more likely that we have underestimated the SROI of 1737 rather than overestimated it.

Introduction



Context

1737 Need to Talk?

*1737 Need to Talk? (*1737) is a key mental health helpline in New Zealand, operated by Whakarongorau.

1737 provides free, confidential support for people experiencing mental health distress, crisis, or suicidal thoughts. The helpline is available 24/7 and is staffed by trained professionals who offer immediate support including brief counselling, peer support, care plan development, self-care strategies, and referrals to other services.

1737 has received over 80,000 calls and texts in the year 2024, making it one of the most frequently used mental health helplines in New Zealand.

While 1737's core service model focuses on services users with mild to moderate mental health conditions, over the past years demand has shifted to more complex and high-risk service users.

Research question

Whakarongorau engaged Sapere to provide an independent and robust answer to the research question:

- What is the social return on investment (SROI) of 1737 (calculating the SROI over the financial years 2025 until 2030)?

Report structure

The report starts with an overview of the methodology used to address the research question, followed by the findings from the logic model review, the review of data and reports provided by Whakarongorau, and the rapid literature reviews.

Next, it presents an outline of the modelling approach, including the base case assumptions, the modelled future scenarios, and the findings of the SROI calculation from the base case modelling.

Finally, it presents the sensitivity analysis followed by a contextualisation of the research findings, the discussion of the limitations of the research approach and the conclusion.

Note: References in brackets are numbered according to alphabetical order. We provide a full list of references at the end of the report.

Definitions of key concepts used in the report

Value of a statistical life/year (VOSL/Y): The VOSL is a measure of society's willingness to pay to reduce the risk of death. In New Zealand it is developed in the transport context to assign a monetary value to the social cost of a fatality. The VOSLY converts the VOSL from the value of a fatality to the value of a single year of life. Where we use this approach, we do not value any other avoided costs, such as ambulance call outs, productivity losses, medical costs, grievances, etc. Otherwise, we would end up double counting the impact of outcomes. We use VOSLY and VOSL to quantify the impact of 1737 on avoided fatal and non-fatal suicides, and for the impact of brief intervention and safety plan outcomes. This approach has been used in published peer-reviewed publications (15).

Quality-adjusted life year (QALY): A QALY is a measure used in health economics to assess the value of health interventions. It combines both the quantity and quality of life into a single metric. One QALY represents one year of life in perfect health.

Disability-adjusted life year (DALY): A DALY is a measure used in public health to quantify the burden of disease and disability. It reflects both years of life lost due to premature death (YLLs) and years lived with disability (YLDs). One DALY represents one lost year of 'healthy' life due to disease, disability, or premature death.

Exponential smoothing algorithm (ESA): The ESA is a time series forecasting method that gives more weight to recent observations while still considering past data. It is used for smoothing noisy data and predicting future trends.

Net Present Value (NPV): A financial metric used to assess the value of an investment or programme by calculating the present value of its expected cash flows. It compares the value of money today to the value of that money in the future, thereby considering factors such as inflation, risk, and the time value of money. NPV is calculated by summing the present values of all future cash inflows and outflows, using a discount rate.

Overview of social return on investment framework

Definition of SROI

SROI is a framework for measuring and valuing the social, environmental, and economic impact of an intervention. It captures the broader value of the intervention for individuals, communities and society.

SROI relies on four concepts to refine impact measurement of an intervention:

Concept	Explanation	Our approach
Displacement	**A positive impact of the intervention shifts an issue elsewhere rather than solving it.** Example: A mental health hotline reduces pressures on emergency departments, but some service users may be referred to face-to-face counselling or crisis teams, increasing waiting times for those services.	Displacement effects are unlikely to occur in the context of 1737. Referring to the example, 1737 callers are already waiting for support, but not receiving it. As such, 1737 fills a supply gap in the health system rather than displacing existing services. Furthermore, waiting times for mental health services are already long and missing targets (11)—it is unlikely that 1737 worsens the situation. We confirmed the validity of this assumption in the third clinical/service support panel session
Attribution	**How much of the impact can be credited to 1737 versus other contributing factors.** Example: If a caller's improved mental health is partly due to ongoing therapy, medication, or support from family, then only a portion of their improvement can be attributed to the phone line.	We base our modelling on peer-reviewed literature which estimated the isolated impacts of telehealth on outcomes for brief interventions and suicide risk. As such, only impacts resulting from 1737 are estimated.
Deadweight	**Outcomes that would have happened anyway, even if 1737 did not exist.** Example: If 30 per cent of callers would have sought help from other mental health services (such as a GP or another helpline), that percentage of positive outcomes needs to be subtracted from the total impact.	We account for this effect using information provided in the feedback survey which specifically asked respondents to state what they would have done had 1737 not been available to them.
Drop-off	**Over time, the lasting impact of an intervention may decline**. Example: A caller might feel immediate relief after a crisis call, but without ongoing support, their mental health could deteriorate again.	We account for this effect in our estimation. For brief interventions, the quality-adjusted life years (QALYs) used to estimate social value reflect the short-term impact reported in the literature, which suggests the effect fades after four weeks. For the impact of the service on suicide attempts and fatal outcomes, we use a study which modelled the longer-term impacts of a mental health line on suicide risk (18). Compared to other literature we have identified this study provides a lower risk reduction estimate for helpline support in this high-risk population. In our valuation of non-fatal suicide attempts, we again assume that their impact on social and health outcomes is short-term, averaging one year. This approach is consistent with an existing study (3).

Methodology

Outline of our research approach

Stage 1: Logic model assessment and refinement

The logic model outlines the chain of effects from investments in 1737 made by Whakarongorau to the intended outcomes.

To ensure its validity, we reviewed the developed model with Whakarongorau and its clinician/service support panel.

The logic model forms the foundation for SROI analysis, identifying the key outcomes that need to be considered and valued.

Stage 2: Data assessment and rapid literature review

Activities included:

- Data review of 1737 user call data, a mental health service user feedback survey, and recent financial data provided by Whakarongorau.
- A review of reports and documents provided by Whakarongorau.
- Two rapid literature reviews: the first review focused on outcomes resulting from telehealth and brief interventions, and the second on outcomes related to single therapy sessions.

Identified literature provided data inputs for the model development and SROI estimation.

Stage 3: Model development and SROI estimation

Following the findings from research stages 1 and 2, we build in this research stage the model, which accounts for different classes of at-risk users of the service.

The model is designed to be forward-looking from the base year (financial year 2025) until the financial year 2030.

Forward projections are constrained by supply; therefore, the projection of future service provision is supply-driven. Variations in supply are accounted for in the model through scenario analysis.

A sensitivity analysis is conducted to assess the key assumptions underpinning the different scenarios.

Stage 1: Review of the logic model

Logic model of *1737 Need to Talk?*

The logic model outlines the chain of impact of 1737, starting with the inputs for 1737 tracing through to the outcomes. It details the activities and associated outputs resulting from these inputs, as well as the short-, medium-, and long-term outcomes for service users, the healthcare system, and society. These outcomes are crucial for understanding the broader impact. We further use identified inputs, activities and outputs to guide the modelling of the SROI impact of 1737. We have validated the logic model in consultation with the clinical and service support panel.

Inputs	Activities	Outputs	Short/medium term outcomes	Long-term outcomes
• Funding • Trained counsellors • Communication channels • Partnerships with mental health services/community organisations	• Care plan development • Referral to other services • Signposting to other services • Brief 1:1 counselling • Peer support • Self-care strategies	• Number of calls • Percentage of users receiving referrals • Number of brief counselling sessions provided • Number of peer support sessions delivered • Number of self-care strategies or support plans created	**Users** • Relief from distress / anxiety; improved mental health and well-being; avoidance of crises or harmful behaviour • Awareness of services; access to tailored self-care services **Healthcare system** • Reduced pressure on health system e.g. pressure on GPs and other healthcare providers • Streamlined access to mental health services **Society** • Increased access of mental health support • Enhanced productivity • Improved family/whanau relationships and cohesion	**Users** • Sustained improvement in mental health • Increased resilience and self-efficacy **Healthcare system** • Cost savings due to reduced service demand, **Society** • Reduced suicide rates, • Increased economic output

Stage 2: Data assessment and rapid literature reviews

We assessed three datasets

1737 Call data from 2017 until end of year 2024

- Call data was crucial for our analysis. We inform present FY2025 risk groups, the predicted risk groups, and the associated outcomes from this data.
- While call data for the FY2025 was only available until December 2024, we infer for January to March 2025 trends from past data.

Feedback survey 2020-2024

- We inform the deadweight resulting from 1737. We do so by systematically coding the open text feedback question, "*if this service had not been available, what would you have done instead?*" into a binary category: 'alternative support/service available' or 'no alternative support/service available.'

Financial data FY2025

- We use the FY2025 data to inform the cost of running 1737 (i.e. the investment) and the total full-time equivalent (FTE) active in providing frontline service.

We conducted two rapid literature reviews

- **The first review** focused on general telemedicine mental health interventions, their impacts on primary health and secondary societal (economic and health system) outcomes.
- **The second review** focused specifically on brief interventions, following advice from the first clinical/support service panel meeting.

Following the rapid reviews, we conducted additional targeted searches in grey literature. We further received and reviewed documents from Whakarongorau and a specific list of literature provided by one expert.

Key findings

Data assessment

- The 1737 data provided a strong foundation for modelling its SROI.

Rapid literature reviews

- Our review of the literature and documentation showed that there is limited evidence on the health and economic impacts of helplines and brief interventions.
- However, the identified evidence is sufficient in complementing the data to estimate the SROI of 1737.
- Identified and used literature from our review is described on slide 22, *Our base case modelling assumptions*.
- Key findings relate to DALY values for fatal and non-fatal suicide attempts, QALYs for brief interventions, and population prevalence values enabling the modelling of decision probabilities.

Stage 3: Outline of our modelling approach

Decision tree modelling

We use decision tree modelling to estimate the social benefits of 1737, accounting for factors such as deadweight, attribution, and drop-off.

- The modelling builds on outcome and risk grouping.

While 1737 operates as both SMS and call service, we discussed and agreed with Whakarongorau that our analysis does not differentiate for the type of service delivery.

Forward projections based on constrained supply

Excess demand for the 1737 service is evident. The average waiting times per call have increased over time and were approximately 13 minutes in January 2025, with 56 per cent of calls abandoned due to the wait time (Whakarongorau CallStats). We find that average contact times are consistent in the last three years (about 22 minutes).

Future societal benefits arising from 1737 are thus a function of constrained supply, rather than demand which is ever increasing.

Future scenarios of supply are defined based on:

- productivity changes over time
- FTE direct service user support.

Estimation of future decision probabilities

Future decision probabilities are estimated using existing 1737 call data from FY 2018 to FY 2025. An exponential smoothing algorithm is applied to assign greater weight to more recent data, thereby accounting for shifts in service demand and supply.

Estimating benefits and costs at present values

Net present value calculations are performed by discounting future values over a five-year estimation period.

We present the SROI for different scenarios

We present SROI outcomes across four scenarios, supported by sensitivity analyses of key input parameters.

Stage 3: Modelling approach – categorising 1737 outcomes

We categorised recorded outcomes from call data into four distinct groups. The selection and grouping of outcomes were discussed and validated in consultation with the clinical and service support panel. The grouping is crucial for our modelling approach and the valuation of outcomes.

1 Brief intervention/safety plan	2 Break glass/emergency service	3 Referral/signposting	4 Other/unknown
• *General support* • *Brief intervention* • *FACT Intervention* • *Set up call backs* • *Risk-safety plan completed* • *Risk-no safety plan completed* • *Support plan/safety plan*	• *Break glass* • *Break glass - emergency services (no consent)* • *Emergency services (consent)* • *Break glass - emergency services ambulance (no consent)* • *Emergency services ambulance (consent)* • *Police and child protection (OT) with consent* • *Break glass-emergency services police (no consent)* • *Emergency services police (consent)* • *Break glass-police and child protection (OT)*	• *Referral to internal service* • *Signpost to external service* • *Signpost to other service* • *Other professional* • *Referral to external service* • *Dr - GP* • *Family/whanau support/referral* • *MH & A* • *F2F counselling* • *Resources provided* • *Warm transfer to crisis* • *External service/professional* • *Child protection - OT (consent)* • *Child protection - OT (no consent)* • *DHB acute MH (CAT)*	• *Hang up/wrong number/prank* • *Other* • *Unknown* • *No contact made* • *SU didn't engage* • *Frequent caller* • *No response required* • *Service capacity (busy SMS) no risk present* • *No answer* • *Hang up* • *Sex grat/abusive* • *SU stopped engaging - GENS* • *Wrong number* • *Abusive caller* • *Supportive chat (regulars)* • *Declined advice* • *Prank call* • *Sex grat* • *Outside NZ* • *Dr – failed to contact* • *Interaction spilled* • *#* • *Followed existing support/management plan* • *Set up new support/management plan*

Stage 3: Modelling approach – categorising risk groups

The following outlines our approach for categorising the 1737 service user population into risk groups.

- We discussed the ranking of risks, where reported, in our initial clinical / service support panel session. We further validated the grouping of risks in consultation with the clinical and service support panel as presented below.

Risk algorithm

For individuals who have reported risks (or in the case of break glass/emergency service, also outcomes), we select the risk group based on the following algorithm:

Break glass/emergency service > suicide ideation; harm to others; self-harm > abuse

- This implies an order of preference, where, for example, an individual coded with suicide risk, abuse, and break glass will be allocated to the break glass/emergency risk group.

The risk ordering leads to two primary risk groups:

1. Break glass/emergency services
2. High-risk population (suicide ideation; harm to others; self-harm)

Note: Following discussions in the second clinical/service support panel session, abuse is excluded from these groups and is instead included in other/unknown.

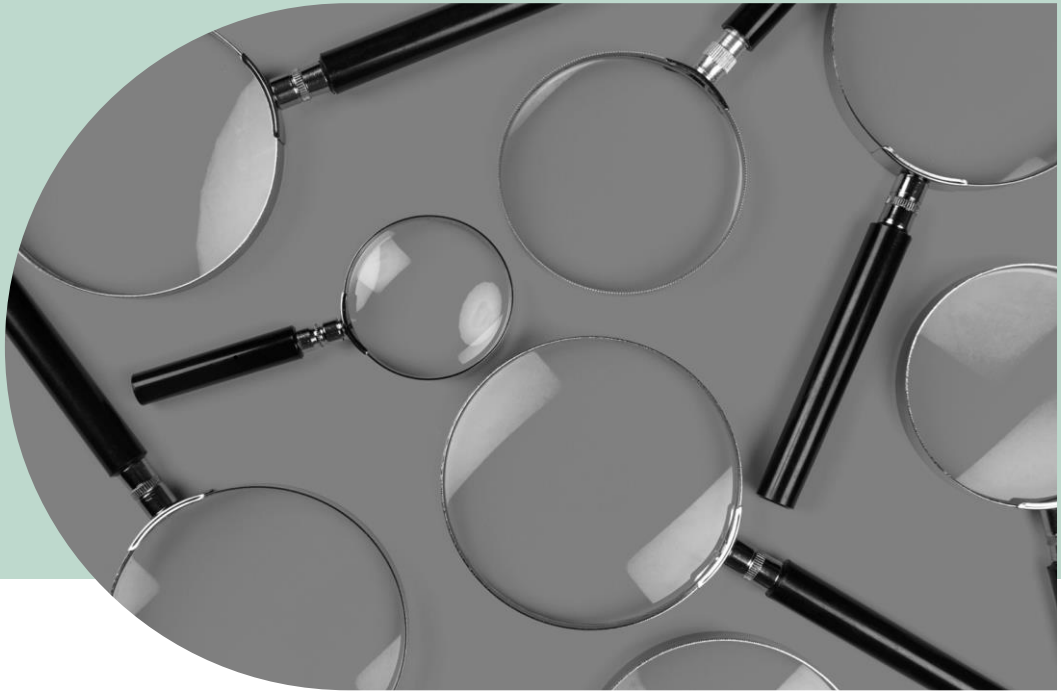
No risk population

- Individuals not coded in a risk group and without an outcome of break glass/emergency service are categorised as non-risk population and do not have an outcome of other/unknown.

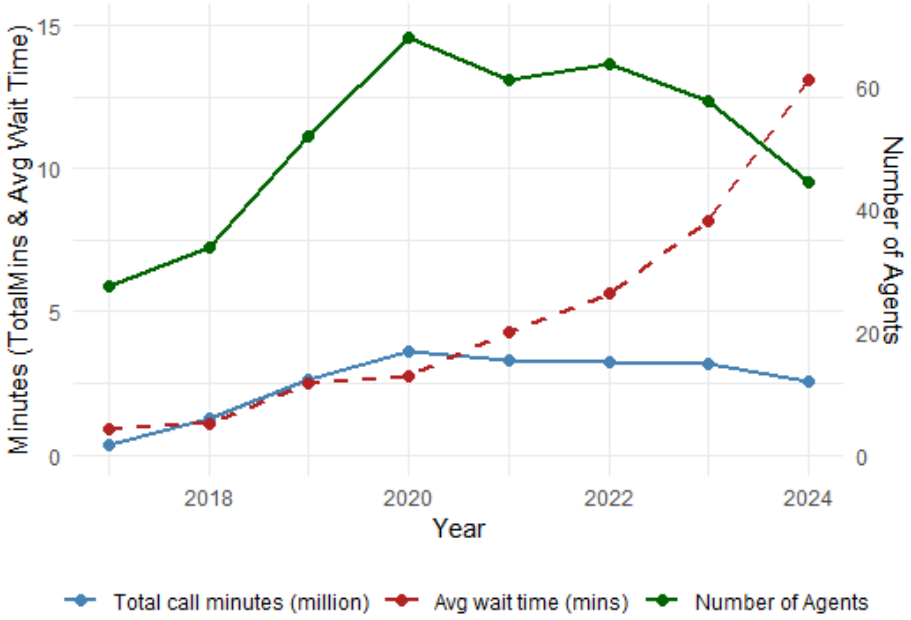
Other/unknown

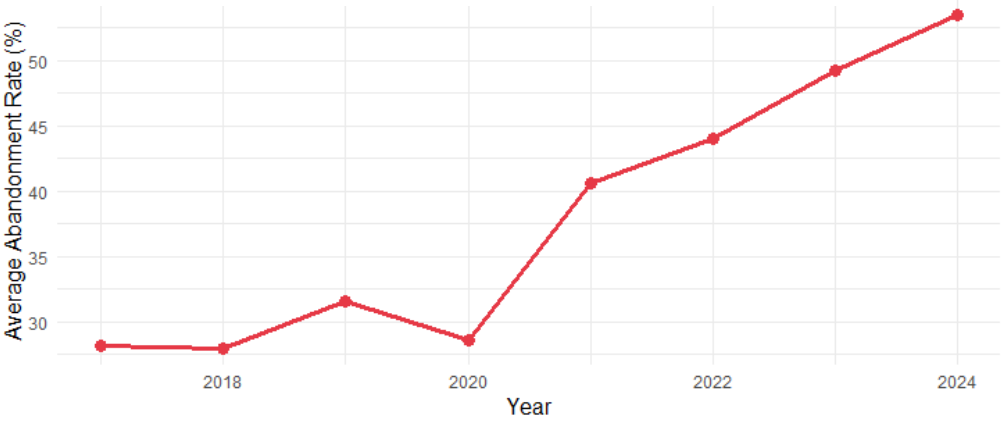
- Other/unknown relates to the remainder of the population (i.e., those with no risk and an outcome of other/unknown OR abuse OR suicide ideation with an outcome coded as other/unknown).

Findings



Supply constrains call volume despite demand





Between 2017 and 2020, the number of agents who are available to take calls increases to be able to keep up with the growing demand for the service.

The number of call operators begins decreasing from 2022 onwards due to a temporary uplift in resourcing in response to increased demand during the COVD pandemic, resulting in a shortage of supply

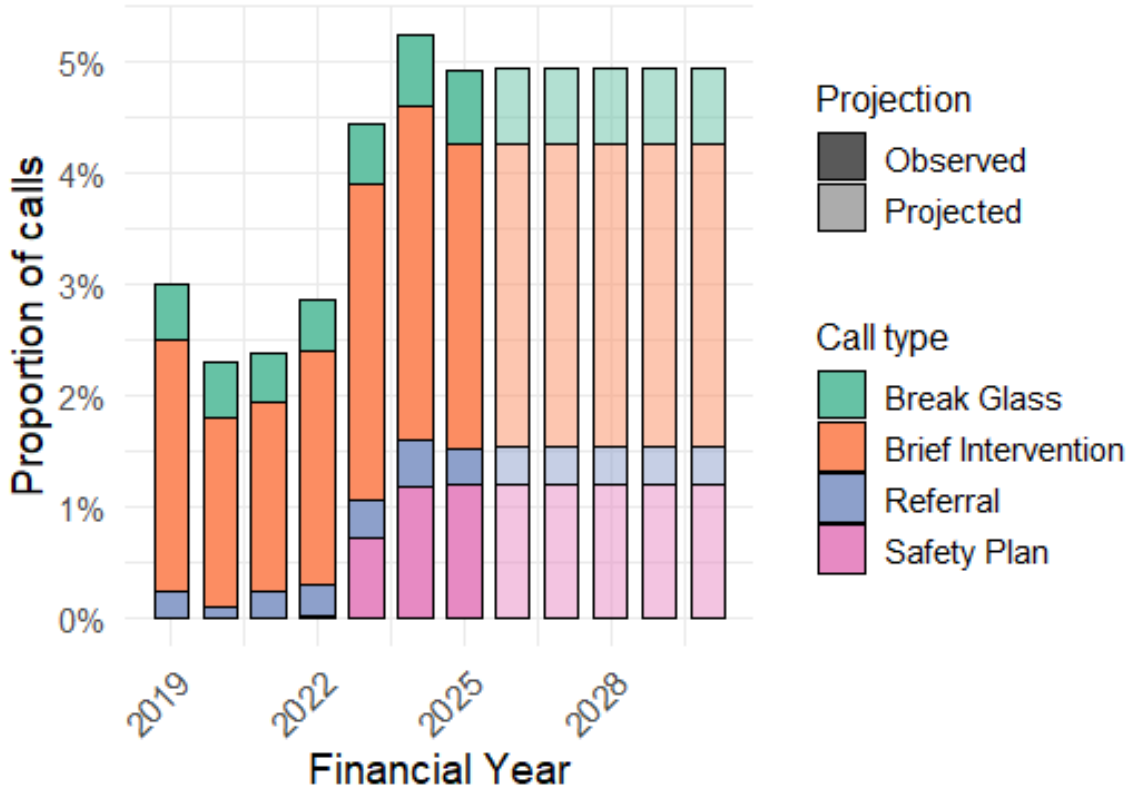
The shortage corresponds to significantly longer wait times, as well as significantly higher abandonment rates. More than 50 per cent of calls were abandoned in 2024.

We understand that agents can take on up to four SMS conversations at any given time.

We therefore model future demand as a function of available supply and projected proportions. We have assumed the same number of call operators for one scenario and vary the call operators for two other scenarios.

The proportion of calls that are high risk is increasing

Number of unique high-risk callers as a proportion of total calls



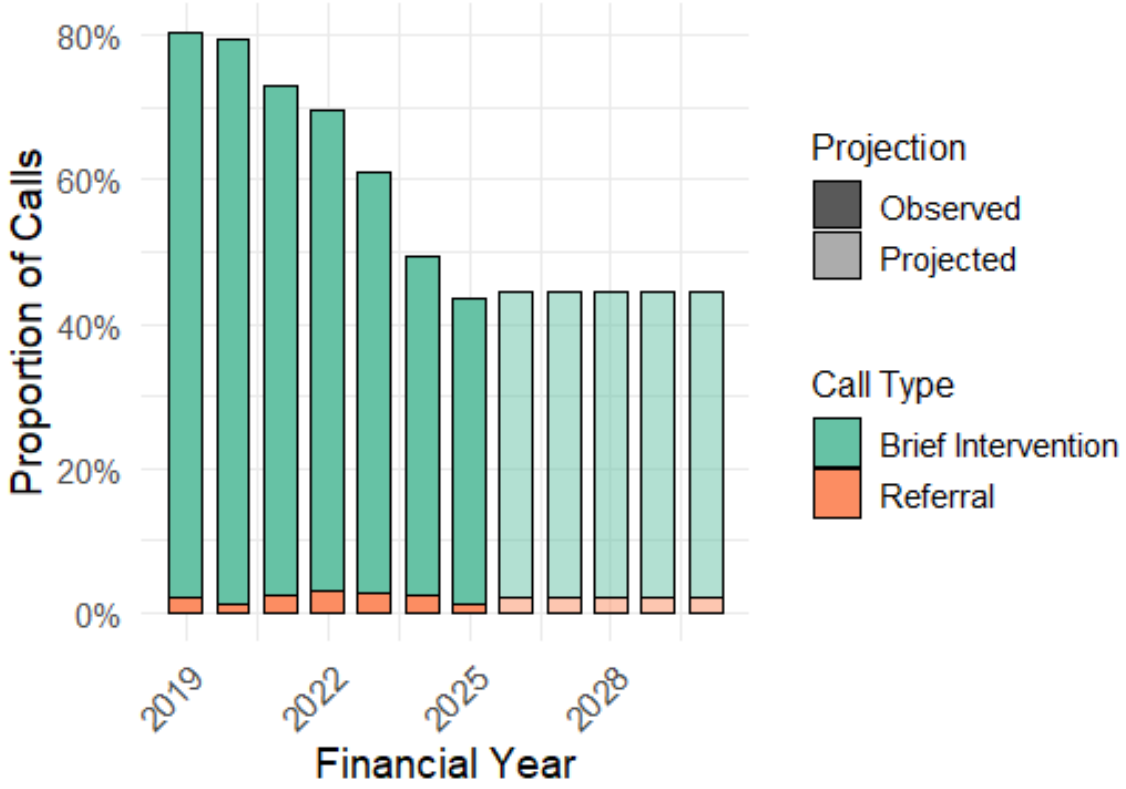
The proportion of high-risk calls that 1737 receives has been increasing over time.

- Unique break glass callers increase from 0.5 per cent in FY2019, to 0.67 per cent in FY2025.
- The proportion of callers that receive a brief interventions fluctuates throughout the analysis period, hovering around 2 to 3 per cent of all calls.
- Less than 1 per cent of callers receive a referral.
- The proportion of callers that undergo a personalised safety plan increased from 0 per cent in FY2019, to 0.001 per cent in FY2022, to more than 1 per cent in FY2025.

We use an exponential smoothing algorithm to forecast the future proportions of high-risk callers. This puts more weight on more recent observations.

The proportion of calls that are no risk is decreasing

Number of no risk calls as a proportion of total calls

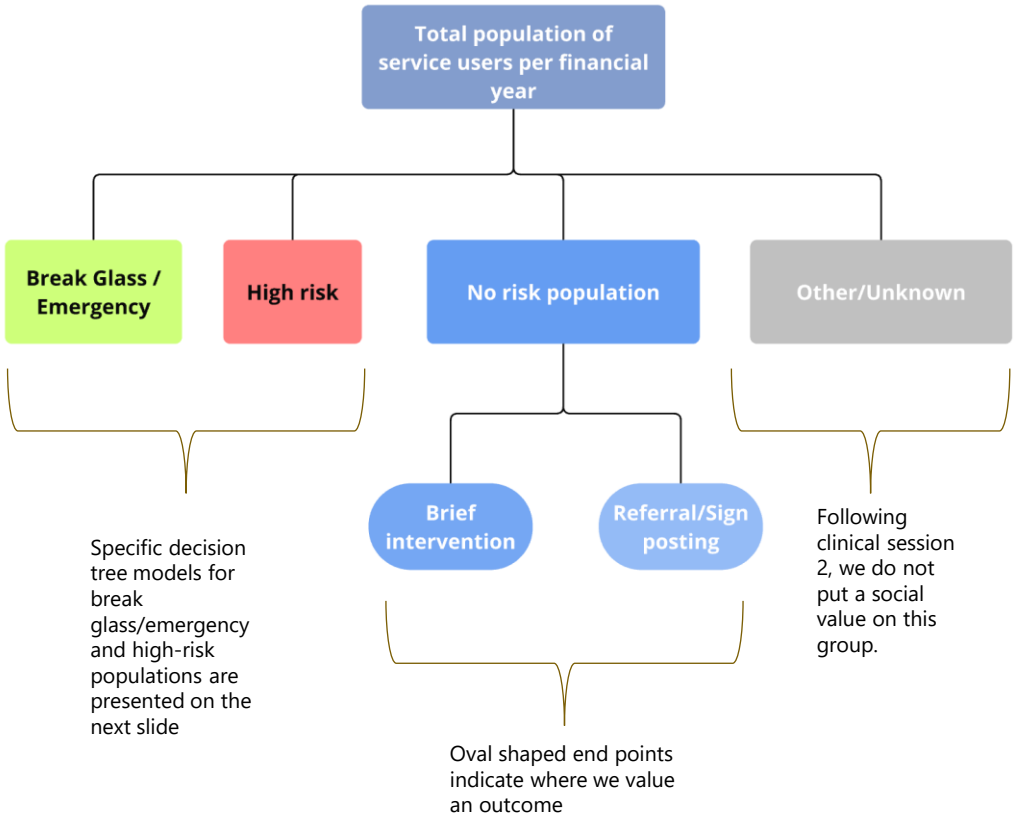


The proportion of no risk calls that 1737 receives has been decreasing over time.

- This is largely attributable to the declining number of brief intervention calls, which dropped from 78 per cent in FY2019 to 42 per cent in FY2025.
- The proportion of no risk calls that result in referrals is relatively small and volatile, at around 1 to 2 per cent during the analysis period.

We use an exponential smoothing algorithm to forecast the future proportions of low-risk calls, which has an inverse relationship to the proportion of calls from high-risk callers as we move through the analysis period.

Decision tree model to estimate the SROI of 1737

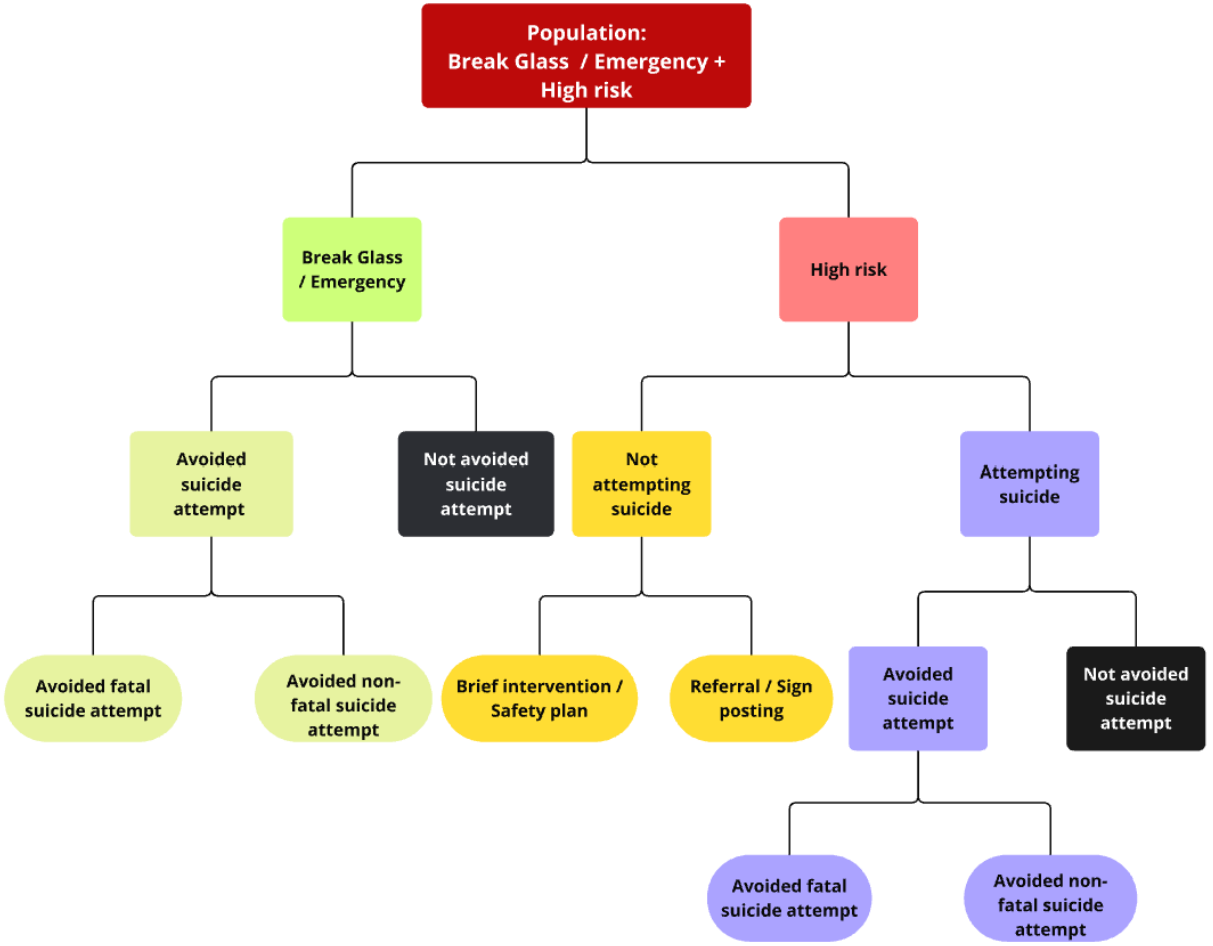


Note: colours indicate different groups.

We use a decision tree model to estimate the social return on investment.

- We categorise the total population of service users into four groups.
  - For the FY2025, we can inform those from 1737 call data.
  - For projections we apply an exponential smoothing algorithm (ESA) over FY2018 to FY2025 call data to calculate probabilities. ESA values more recent observations higher, reflecting recent changes in 1737.
- For **no risk populations**, we value two outcomes: brief intervention and referral/signposting.
  - **Brief intervention**: We estimate the social value of the intervention by combining the literature-informed QALY value of a brief single session times the VOSLY times the deadweight.
    - This provides a complete estimate of social willingness to pay for health improvements. The approach does not necessitate considering productivity or whanau/family effects, as this would be double counting the impacts.
  - **Referral/sign posting AND brief intervention**: We value the relief on health system impact by applying the equivalent value of a HIP session.
    - We permit multiple-service use in a financial year, to allow population need of repeat referral and brief intervention support.
    - We note that frequent callers are in the other/unknown group following advice in the second clinical/service support panel session.
- Other/unknown are not valued.
- Our approach to valuation of outcomes was discussed and validated in clinical sessions two and three. The valuation of brief intervention is an addition by Sapere.

Decision tree for break glass/emergency + high-risk populations



Note: colours indicate different pathways within risk groups

Our decision tree model for break glass/emergency and high-risk populations is described as follows.

Decision probabilities

- Decision probabilities at each node are informed for the FY 2025 from observed caller data provided by Whakarongorau, combined with NZ population statistics on suicide ideation, attempts, and fatal/non-fatal attempts.
- For projections, we use an ESA across FY 2018 to FY 2025 caller data to forecast population and risk group probabilities.
- Oval shaped end points show where we value an outcome.

For break glass/emergency and high-risk populations

- We only use the first reported call of an individual to avoid double counting of impacts, i.e. life years saved in a year. We further apply an impact factor to account for the long-term impacts of the intervention for these individuals.

For avoided fatal suicide attempts

- The social return is calculated using the VOSLY times the DALY averted, adjusting for deadweight and the impact of the telehealth services and the probability of a fatal suicide attempt.

For avoided non-fatal suicide attempts

- We follow a common approach and quantify the DALY averted using the VOSLY and a disability weight for suicide attempt, and account for deadweight loss and the probability of a non-fatal suicide attempt.
- We use a conservative approach assuming that, on average, the suicide attempt only caused a temporal loss of health in the year when the suicide attempt was made.
- This approach has been used in other studies (3,13,15). Since we are using the VOSLY, we do not value other outcomes as we would otherwise double count the impact of 1737 on outcomes.

High-risk populations

- For those individuals who are modelled as not being at risk of attempting a suicide, we also value the impact of outcomes brief intervention/safety plan (similar approach as for no risk populations) and account for deadweight loss.
- We also model the relief impacts on health system for brief interventions and referrals / sign posting (same approach as no risk populations as a comparable service would have needed to provide support). We also account for deadweight loss.

Base case modelling assumptions

Input	Value	Source(s)
VOSL	NZ$ 5,084,129	Half point value of central estimate from CBAx (New Zealand Treasury) (12) The central point is NZ$10,168,258 and, the higher point is NZ$14,790,784. We have used this lower or half point value for a recent project for the Ministry of Health, to model the lower boundary of the VOSL.
VOSLY	NZ$ 116,474.89	Calculated based on CBAX lower point value of the Value of a statistical life year over an average remaining life-expectancy of 43.65 years for the median age in New Zealand (20). The median value is similar to the value used in a previous study analysing the cost of suicide to New Zealand (13).
DALYs lost resulting from a fatal suicide attempt	42.1	Informed from the literature (13); the analysis stems from a New Zealand study analysing the social cost of suicides. Another more recent analysis of the Australian burden of disease study in 2018 estimated the same figure (42.1 years of life lost from suicide and self-inflicted injuries) (1). DALYs are used together with the VOLSY to calculate the value of averting a fatal suicide attempt.
Disability weight for a non-fatal suicide attempt	0.46	Informed from the literature (3); the study used an expert panel from the Netherlands to identify the disability weight associated with a non-fatal suicide attempt. We use the value for one year only (as did the study) to calculate the value of the intervention in avoiding non-fatal suicide attempts. This is a conservative approach, assuming no longer-term health or societal impacts of a suicide attempt beyond one year. A previous study from Australia estimated a similar disability weight (0.45) for self-inflicted injuries (9). The disability weight is used together with VOSLY to calculate the value of averting non-fatal suicide attempts.
Probability of a suicide attempt in the New Zealand population with a suicide ideation	12.5 per cent	We calculate the input using findings from a New Zealand Ministry of Health study on the annual total population prevalence of suicidal ideation (3.2 per cent) and suicide attempts (0.4 per cent) (2). Combined with information of total population figures, we use these rates to calculate the New Zealand population with suicide ideation, and the population with suicide ideation and attempting suicide. From there we calculate the probability of a suicide attempt within the population of suicide ideation. To test the validity of this calculation, we compare it with recent international data. A 2022 CDC study in the USA found that 12 per cent of individuals who experienced suicidal ideation went on to attempt suicide (24)—a figure consistent with our estimates.
Probability of a fatal suicide attempt in the New Zealand population with a suicide ideation	0.4 per cent	Same methodology as above, using confirmed fatal suicide attempts to calculate the probability of a fatal suicide attempt in the population with suicide ideation. To test the validity of our calculation, we compare it with recent international data. A 2022 CDC study in the USA found that 0.4 per cent of individuals who experienced suicidal ideation had fatal suicide attempt (24)—a figure consistent with our estimates.
Probability of a fatal suicide attempt in break glass/emergency population (assumed to be attempting suicide)	3.17 per cent	Same methodology as above, using confirmed fatal suicide attempts over the population attempting suicide to calculate the probability of a fatal suicide among the high-risk population. To test the validity of our calculation, we compare it with recent international data. A 2022 CDC study in the USA found that 3.1 per cent of individuals who attempted a suicide had fatal outcome (24)—a figure consistent with our estimates.
Percentage of suicide attempts, and fatal suicide attempts avoided due to helpline	36 per cent	Informed from the literature (18) which estimated 10-year impacts of a helpline for high-risk suicide populations in Belgium; we note that the estimate is a conservative value. Other studies such as by Gould et al. (2018) (5) found in their analysis of the US national suicide prevention helpline, that avoided suicide attempts are higher (about 52 per cent); however, the follow-up was limited to 6 to 12 weeks from calling the helpline.
QALY of a brief intervention	0.003	Informed from the literature (7). The study looked at the impact of a brief single-session walk-in counselling intervention in Ontario, Canada. The comparator was no intervention / waiting for a formal counselling session. It found that while there is an on average positive impact, the impact fades after a 4-week period.
Value of a HIP-equivalent session for referral/signposting and brief intervention valuation of health system relief	NZ$49	Discussed in clinical and service support panel group from Whakarongorau to use HIP cost to values this input. We proxy HIP cost with the cost for a primary care nurse session reported in CBAX (Treasury) (12).
Discount factor	3.5 per cent	PHARMAC midpoint discount factor (17).
Deadweight loss (service users with an alternative service/support)	43.3 per cent	Calculated from feedback survey from Whakarongorau of their mental health services. We do so by systematically coding the open text feedback question, "if this service had not been available, what would you have done instead?" into a binary category: alternative support/service available, or no alternative support/service available.
Displacement effect	0 per cent	Validated with the clinical and service support panel group from Whakarongorau in the third session.

A conservative approach to modelling the SROI of 1737

A conservative base case to estimate the SROI of 1737

We adopt a conservative estimation approach as our base case, incorporating lower bound benefit values where applicable. Specifically:

- We apply the lower-bound estimate for VOSL
- We do not use the VOSL to quantify the value of tertiary impacts of avoided fatal and non-fatal attempts. For example, we do not estimate the economic value of the avoided increased risk of suicide among family members resulting from an avoided fatal suicide attempt.
- We assume no risk of suicide or ideation in the no risk population, i.e., that 1737 counsellors correctly identified risk groups
- We use the lower boundary of helpline impact estimates on reducing the risk of suicide attempts and fatal suicide outcomes, as informed by the literature
- Instead of valuing life years saved, we adopt a DALY based valuation for avoided fatal suicide outcomes.
- A conservative deadweight adjustment is applied, using 1737 feedback survey—informed deadweight percentages. Notably, *break glass/emergency* and high-risk service users could likely have much lower deadweight loss compared to lower-risk groups.
- To avoid double counting, we limit *break glass/emergency* service users, as well as high-risk callers, to a maximum of one call per financial year.
- We assume that, on average, non-fatal suicide attempts have a short-term impact on health and socio-economic outcomes, lasting for one year.
- We apply population figures to calculate the probability of suicide attempts and suicides among the population with suicide ideation. This will likely provide a lower boundary impact as:
    - There is reason to believe that the probability for helpline callers can be higher than the general population, due to self-selection into using the helpline
    - Population prevalence figures are based on reported suicide attempts and fatal suicide outcomes, and evidence shows that such numbers tend to be underreported (14, 16)
    - We also apply these probabilities to *break glass/emergency* cases, which represent the highest spectrum of risk. The probability of fatal outcomes in this group is likely higher than in the general population with suicidal ideation.

To assess the robustness of our assumptions and estimate an upper bound SROI for 1737, we conduct deterministic sensitivity analysis.

Four future scenarios are modelled

Scenario 1 – Status quo

Future workforce remains the same as it is currently, and they maintain their current levels of productivity. In FY2025, there is 22.84 FTE budgeted for 1737 calls, and they spend approximately 71 per cent of their working time on client interactions.

Scenario 2 – Increase FTE, maintain productivity

We assume an uplift in funding from FY2026 allowing for two additional FTE ≈ a 10 per cent increase in workforce availability. Productivity remains at a level of 71 per cent. We assume additional recruitment costs of 15 per cent of the average cost of $88,300 per FTE in FY2026.

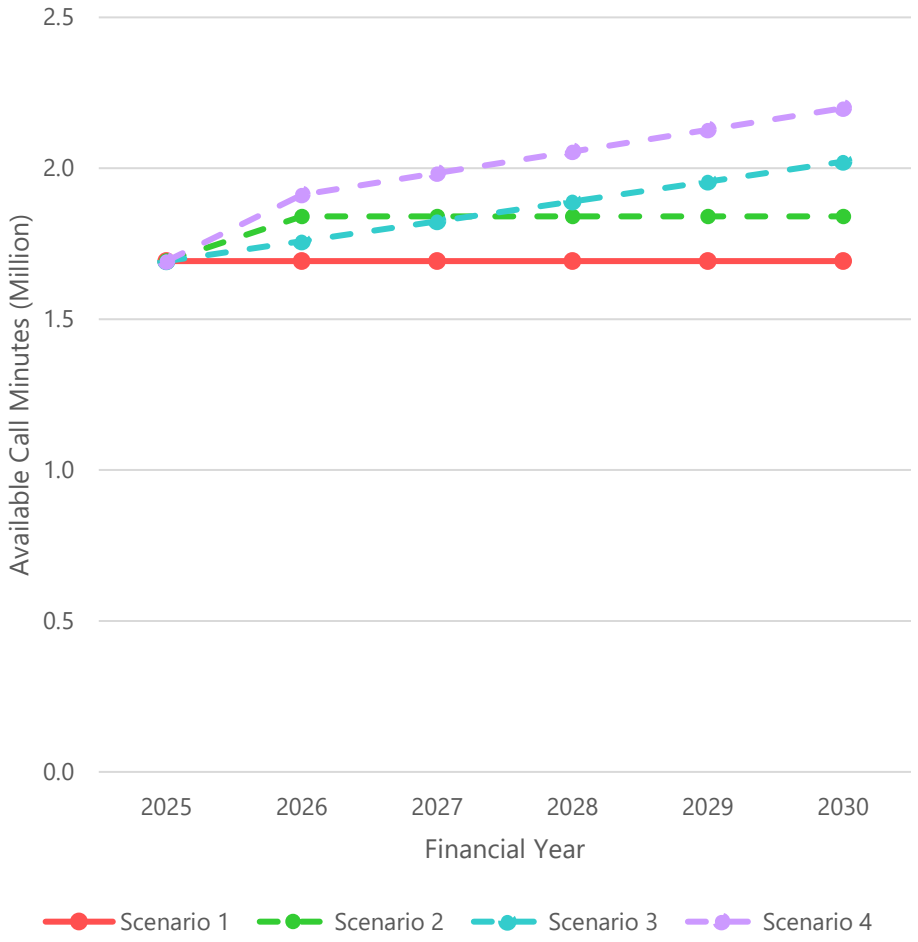
Scenario 3 – Increase productivity, maintain current workforce

Technological improvements in the foreseeable future allow workers to spend more of their working time on calls compared to other tasks, such as administrative tasks or taking notes retrospectively. We assume this would result in an increase of 14 percentage points, or to about 85 per cent productivity by FY2030. We assume an upfront investment of $50,000 in FY2026.

Scenario 4 – Increase productivity, increase FTE

A combination of scenarios 2 and 3, where there is additional workforce funding and investment in technology.

Implications of scenarios on supply



- Supply under the **Scenario 1 (status quo)** remains constant as there is **no additional investment in labour or technology**
- Under **Scenario 2**, **capacity increases**, and the initial increase remains constant over time without efficiency gains
- **Scenario 3** assumes **increasing efficiency gains;** capacity will increase gradually until productivity reaches its optimal point of 85 per cent in FY2030
- The largest gains in capacity come under **Scenario 4,** as **both recruitment of labour and investment in technology occurs simultaneously**. The sharper increase in FY2026 corresponds to two new FTE, while the subsequent gradual increase arises from efficiency gains

Sensitivity analysis

Our sensitivity analysis shows that the SROI for *1737* remains consistently large in value, providing confidence in our estimation results. For example, the SROI varies between 7.01 and 12.75 for Scenario 1. The lowest value of 7.01 applies to a very conservative assumption of 25 per cent displacement effects arising from 1737 on the health system. *Detailed findings and explanations are presented in the appendix.*

Sensitivity analysis	**SROI in Scenario**			
	1	**2**	**3**	**4**
Discount rates (2, 5, 8 per cent)*	9.34	9.60	10.03	10.30
Deadweight: High (+ 10 pp)	8.27	8.49	8.76	9.05
Deadweight: Low (- 10 pp)	10.99	11.29	11.79	12.12
Displacement effect: 25 per cent	7.01	7.20	7.52	7.73
Displacement effect: 10 per cent	8.41	8.64	9.02	9.27
Variation in VOSLY and DALY lost per suicide	12.75	13.09	13.68	14.05

Varying the discount rates does not affect the SROI, as both benefit and cost streams are evenly distributed over time. Any variations in upfront costs have only a marginal impact and are not reflected in the SROI due to rounding.

We test the sensitivity of our base case for each of the four scenarios to key assumptions of inputs that determine the SROI:

Variation in discount rates

- 2 per cent (Central point Treasury, 23)
- 5 per cent (High point: Pharmac, 17)
- 8 per cent (High point Treasury, 23).

Variation in deadweight assumption

- Testing higher and lower boundaries of +/-10 percentage points, acknowledging variation in our deadweight estimate.

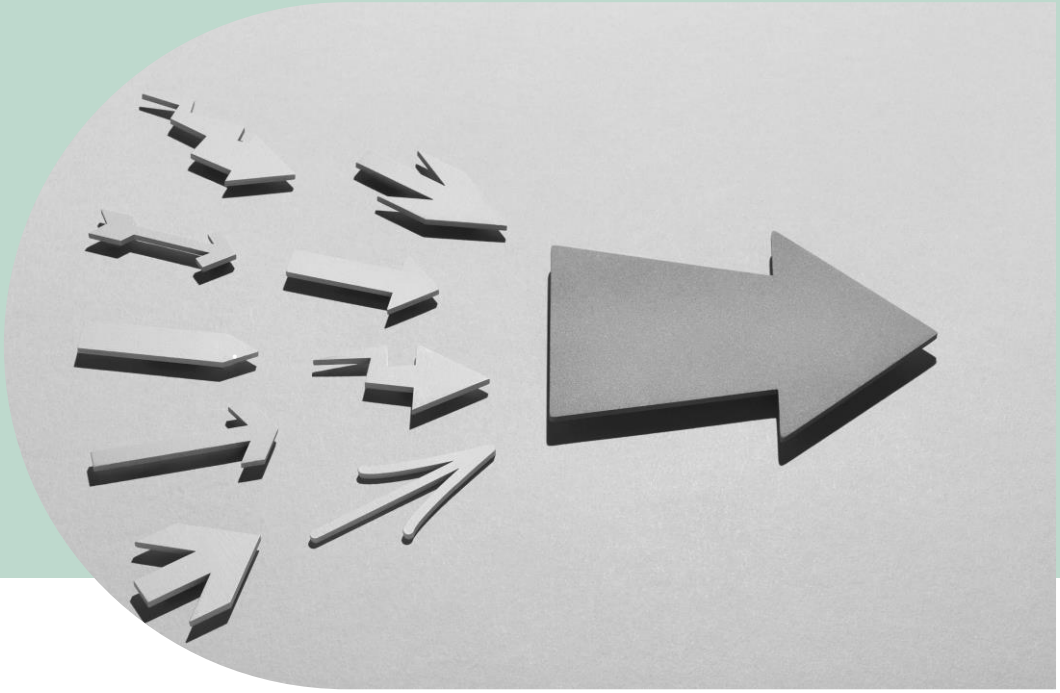
Displacement cost assumption

- We test the impact of 10 per cent (Whakarongorau suggestion) and 25 per cent (10) displacement costs.

Discounting VOSLY and DALYs

- We test discounting DALYs and the VOSLY at a 3 per cent discount rate (22). The discounted VOSLY is NZ$204,307.80 and the discounted DALYs are 23.3

Conclusion and limitations



Contextualising our estimates of averted suicide attempts

A first question is whether our estimated number of averted suicide attempts and fatalities can be valid estimates. Below, we provide context to support and interpret these estimates.

Using the latest general population figures from Stats NZ (5,356,700 as of December 2024) (20) and reported prevalence rates of suicide and suicide attempts (2), we estimate that approximately 21,427 suicide attempts occurred in the calendar year 2024, with around 680 resulting in fatalities. While there is no recent data on confirmed suicide attempts in New Zealand, most recent data on confirmed suicide deaths in 2019 reports 679 fatalities (21).

Our analysis indicates that interventions through 1737 helped prevent approximately five to six suicides and 156 non-fatal suicide attempts during this period. This represents an estimated 1 per cent reduction in both suicide attempts and fatalities.

Given that 1737 is a leading mental health support service in New Zealand, we believe this estimate is a reasonable reflection of its impact.

Contextualising our monetary value for suicide/attempts

A second question is whether our estimated monetary value of 1737 is a valid estimate. Below, we provide context to support and interpret these estimates.

We assigned a VOSL of NZ$5 million and a VOSLY of NZ$116,474.89 to calculate the value of avoided fatal suicide attempts and non-fatal suicide attempts. Using the VOSLY, we calculated the DALY value of non-fatal and fatal suicides attempts. The methodology was used in previous research (3,13,15). We value an avoided fatal suicide attempt as about 4.9 million and an avoided non-fatal suicide attempt as NZ$53,578.

Evidence from existing studies suggests that the estimated societal cost of non-fatal suicide attempts is significantly higher than our valuation. An Australian study estimated this cost at an average of NZ$548,606 within the Australian workforce (adjusted for purchasing power parity (PPP) and the consumer price index (CPI) to NZ$) (6). Similarly, a US study valued non-fatal suicide attempts at an average of NZD 259,467.04 (PPP and CPI adjusted to NZ$) (15). Likewise, evidence indicates that our valuation of a suicide is at the lower end of the scale. A 2005 Ministry of Health study estimated the social cost of a suicide at NZ$4.9 million (CPI-adjusted), using a lower VOSL but combining and double counting additional productivity costs (13). In contrast, the US study assigned a substantially higher value of NZ$27.9 million (CPI adjusted to NZD) (15).

Findings from other studies indicate that our valuation of non-fatal suicide attempts and fatalities is conservative, as many studies applied significantly higher values. Therefore, it is more likely that we have underestimated the SROI of 1737 rather than overestimated it.

At what point does 1737 break even?

Using findings from our base case analysis and scenario 1 (status quo) for FY2025, we show below at what point 1737 breaks even for avoiding fatal and non-fatal suicide attempts.

How many lives would 1737 need to save a year to break even?

To break even, 1737 would need to save approximately one life per year. Our estimates suggest that 1737 prevents around 240 DALYs annually by averting fatal suicides, equivalent to saving about five to six lives a year.

How many non-fatal suicide attempts would 1737 need to avoid a year to break even?

To break even, 1737 would need to avoid about 90 non-fatal suicide attempts a year. Our estimates suggest that 1737 prevents around 72 DALYs annually by averting non-fatal suicide attempts, equivalent to avoiding about 156 non-fatal suicide attempts per year.

Conclusion

1737 provides a high social return on investment in its current form

Our findings from the SROI analysis of *1737 Need to Talk?,* indicate that investing in 1737 delivers significant social returns. For every $1 invested, the social return is approximately $9.3. Our analysis suggests that if at least the current level of funding for 1737 is maintained, the service will continue to generate strong social returns on investment in the future.

A funding uplift to increase FTE and technology has potential to further increase the social return on investment

Furthermore, if funding is increased, 1737 has the potential to deliver an even greater social return. The highest social return on investment is achieved with an increase in Scenario 4, modelling a funding uplift to support two additional FTE staff and improved productivity through investment in technology.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
SROI ratio	**9.34 : 1**	**9.60 : 1**	**10.03 : 1**	**10.30 : 1**

Our findings are robust and likely underestimate the SROI of 1737

Results from the sensitivity analysis show that the estimated SROI is robust even under varying assumptions, including a more extreme scenario with a 25 per cent displacement effect. The SROI ratios range from 7.01 : 1 to 12.75 : 1 in the status quo (Scenario 1) and increase to between 7.73: 1 and 14.05 : 1 in Scenario 4, the FTE and technology funding uplift. Since we have tested and used a conservative base case, benefits likely underestimate the SROI of 1737.

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Lower bound ratio	**7.01 : 1**	**7.20 : 1**	**7.52 : 1**	**7.73 : 1**
Upper bound ratio	**12.75 : 1**	**13.09 : 1**	**13.68 : 1**	**14.05 : 1**

Limitations of our research

Our research approach has a few limitations. Below, we discuss the main limitations and their implications for our findings.

- Our analysis uses population prevalence rates for suicide ideation, suicide attempts, and fatal suicide attempts from a study conducted in New Zealand in 2006. While we validate these prevalence rates against more recent US data, a limitation is that we still need to apportion outcomes for 1737 callers to these rates. As such, outcomes are not directly observed. Suicide deaths may be undercounted in official mortality statistics, and self-harm injuries may be underreported in sources based on clinical diagnoses. Therefore, we assume that the used prevalence estimates in this study may be more likely to underestimate rather than overestimate actual rates.
- Our analysis is based on data from Whakarongorau and their counsellors' assessments of 1737 service user risks. We acknowledge the possibility of inaccuracies in risk assessments, including the potential for identifying risk where there is no actual risk of suicidal ideation, or conversely, failing to identify risk where suicidal ideation is present. We consulted Whakarongorau's clinical advisory team. Their feedback indicated that a primary limitation of the current model is a tendency for counsellors to underestimate risk, meaning individuals with suicidal ideation may be incorrectly assessed as low or no risk. Conversely, it is considered highly unlikely for the model to mistakenly identify suicidal ideation where none exists. Therefore, we can state that our study is unlikely to overestimate the service's impact on populations experiencing suicidal ideation.
- In our base-case scenario, we assume that individuals classified as break glass/emergency are at risk of attempting suicide, i.e., not suicide ideation only. This increases the estimated value of the 1737 intervention for preventing both non-fatal and fatal attempts. However, there may be uncertainty surrounding this extreme risk group. It can be considered that break glass cases are overreported to avoid false negatives (i.e., instances where service users are at high risk but not identified as such). However, clarification with clinical advisors from Whakarongorau indicated that this would be a very rare outcome (see point above).
- A limitation of our analysis is the assumption that on average the impact on social returns of avoided non-fatal suicide attempts lasts for a year. This is informed from a study that used similar approach, i.e., quantified the disability weights for non-fatal suicide attempts but concluded that it can only infer them over a one-year period (3).
- Our valuation relies on the VOSL, which significantly influences the results. Only a small proportion of outcomes drive the overall findings, and these outcomes (suicide and non-fatal attempts) are not directly observed. We adopted a conservative approach, using the lower bound of the VOSL, which is approximately 2.5 times the value of a QALY (1 QALY = NZ$45,000). Comparisons with other approaches for valuing suicide prevention and non-fatal attempts indicate that our VOSL is significantly lower.
- Our valuation does not include secondary or tertiary impacts on productivity or the risk behaviours of family members resulting from positive changes in outcomes achieved by the 1737 service. This is a positive effect resulting from 1737 which we do not value.
- We estimate deadweight based on feedback survey data. However, the survey response rate is low, and we cannot directly apportion the findings to different risk groups. Instead, we use an average value across all groups.

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