Health New Zealand
Te Whatu Ora

MANATŪ HAUORA
MINISTRY OF HEALTH

Briefing

Options for the Budget 2022 bowel screening tagged contingency

Date due to MO:	26 August 2024	**Action required by:**	N/A
Security level:	IN CONFIDENCE	**Health Report number:**	H2024047280
To:	Hon Dr Shane Reti, Minister of Health		
Consulted:	Health New Zealand: ☒	Treasury: ☒	

Contact for telephone discussion

Name	Position	Telephone
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Attachments

Appendix One: Statement from the National Screening Advisory Committee

Appendix Two: Erasmus University modelling

Appendix Three: Summary of assessment of options based on health and equity impacts

Minister's office to complete:

☐ Approved	☐ Decline	☐ Noted
☐ Needs change	☐ Seen	☐ Overtaken by events
☐ See Minister's Notes	☐ Withdrawn	

Comment:

Options for the Budget 2022 bowel screening tagged contingency

Security level:	IN CONFIDENCE	**Date:**	26 August 2024
To:	Hon Dr Shane Reti, Minister of Health		

Purpose of report

1. This briefing responds to your request for further advice on options for the Budget 2022 bowel screening tagged contingency.

Summary

2. Budget 2022 established a tagged contingency to lower the starting eligibility age for the National Bowel Screening Programme (NBSP) for Māori and Pacific peoples from 60 to 50 years old. This was to address inequitable and poorer bowel cancer outcomes for these population groups.

3. You requested advice on what the tagged contingency may achieve if spread across the total population, and for these options to be informed by modelling from Erasmus University Rotterdam in the Netherlands (H2024035455 refers).

4. We provide alternate options for your consideration in this paper. The options are the best identified through the Erasmus modelling in terms of preventing the most additional colorectal cancer cases and deaths, and can be delivered within the tagged contingency funding envelope and planned additional colonoscopies. They are:

    a. Option 1: lower the starting age from 60 to 58 years old for the total population

    b. Option 2 (recommended): lower the starting age from 60 to 58 years old for the total population, and further lower the age to 56 years old for Māori and Pacific peoples

    c. Option 3: undertake an additional one-off screen at 56 years old for the total population (with the next screening occurring when people reach 60 years old).

5. Costs to treat any additional bowel cancers detected through an age extension are not included in the tagged contingency and will need to be resourced through Health New Zealand's (Health NZ's) baseline. This is consistent with the original business case's costing assumptions.

6. While feasible, option 3 is not recommended as it would require significant changes to the core service delivery model and technology (including the need to change the screening interval from 2 years to 4), the programme's messaging,

and would require more time to implement for only marginal benefits in health outcomes.

7. Option 2 is recommended as lowering the age for all to 58 years and lowering it further to 56 years for Māori and Pacific peoples is the option that prevents the most cancers, and deaths, across all populations within the available funding. It also acknowledges the recognised health inequity.

8. Cabinet agreement is required to change the use of and drawdown the tagged contingency (which expires on 1 February 2025). Based on your direction, we will prepare a draft Cabinet paper for your consideration by November 2024, to go to Cabinet in December 2024.

Recommendations

We recommend you:

a) **Note** Budget 22 allocated a tagged operating contingency of $36.141 million over four years to 2025/2026 (and $13.089 million per annum in out-years) to fund lowering the bowel screening age from 60 to 50 years for Māori and Pacific peoples. **Noted**

b) **Note** the original proposal for a tagged contingency under Budget 22 aimed to address an acknowledged health inequity with Māori and Pacific peoples having not benefited from the current bowel screening programme to the same extent as other ethnicities. **Noted**

c) **Note** that a lower starting age for Māori and Pacific peoples has already been introduced as a pilot in three districts and an evaluative implementation in those districts has been undertaken. **Noted**

d) **Indicate** your preferred option for repurposing the Budget 22 tagged contingency:

   i. Option 1: lower the starting age from 60 to 58 years old for the total population **Yes/No**

   OR

   ii. Option 2 (recommended): lower the starting age from 60 to 58 years old for the total population, and further lower the age to 56 years old for Māori and Pacific peoples **Yes/No**

   OR

   iii. Option 3 (not recommended): undertake an additional one-off screen at 56 years old for the total population (with the next screening occurring when people reach 60 years old) **Yes/No**

e) **Note** if you choose not to proceed with any of the options, or the original purpose, the tagged contingency will expire on 1 February 2025 with the funding returning to the centre. **Noted**

f) **Note** Cabinet agreement is required to change the scope of the tagged contingency to implement option 1, 2 or 3. **Noted**

g) **Direct officials,** if option 1, 2 or 3 is chosen, to prepare a draft Cabinet paper by November 2024 on repurposing the tagged contingency in line with your preferred option. **Yes/No**

h) **Agree** to officials providing further advice on additional activities to improve screening participation rates for Māori and Pacific peoples. **Yes/No**

i) **Note** Māori and Pacific peoples (aged 50-59 years old) in the three pilot districts are expected to continue to be invited to participate in bowel screening every 2 years. **Noted**

j) **Agree** to meet with health officials to discuss this briefing further. **Yes/No**

Dr Diana Sarfati
Director-General of Health
Ministry of Health
Date: 23 August 2024

Hon Dr Shane Reti
Minister of Health
Date:

Options for the Budget 2022 bowel screening tagged contingency

The National Bowel Screening Programme aims to detect bowel cancer at an earlier and more treatable stage

1. Bowel cancer is the second highest cause of cancer death in New Zealand. Incidence and mortality rates vary by demographic group, with incidence increasing with age. Māori and Pacific peoples have a higher proportion of bowel cancer diagnosed before the age of 60 years and lower 5-year survival rates compared to other ethnic groups.

2. The National Bowel Screening Programme (NBSP) aims to prevent and detect cancer at an earlier and more treatable stage by providing government-funded bowel screening every two years to people aged 60 to 74 years.

3. The NBSP is having a positive effect overall, with 2,505 cancers detected from the programme's inception in July 2017 to July 2024. At least one third of these have been at the earliest stage, where there is greater than 90% chance of 5-year survival. In addition, at least a fifth of the 34,069 people who proceeded to a colonoscopy after a bowel screening test were found to have advanced polyps that are associated with an increased likelihood of progressing to bowel cancer. This has positive implications for the health system, with significantly less resource required to treat early-stage cancers than late-stage disease.

In Budget 2022 a tagged operating contingency was established to lower starting eligibility for the NBSP to 50 years for Māori and Pacific peoples

4. Budget 2022 [CAB-22-MIN-0129 refers] established a tagged operating contingency of $36.141 million over four years to 2025/2026 (and $13.089 million per annum in outyears) to fund lowering the bowel screening age from 60 to 50 years for Māori and Pacific peoples.

5. This age extension aimed to address an acknowledged health inequity, that a higher proportion of bowel cancer occurs in Māori and Pacific peoples at an earlier age (before they are eligible for screening). The overall younger age structure of these populations and lower life expectancy means that there is a greater benefit for screening these population groups at a younger age. Modelling also showed that bowel screening is cost effective for Māori from 50 to 74 years old.

6. Cabinet approval has not yet been sought to drawdown the tagged contingency, which expires on 1 February 2025. Drawdown of the funding was planned to occur following a small-scale roll out in three districts – Waikato, Te Pae Hauora o Ruahine o Tararua Midcentral and Tairāwhiti. These districts were chosen as a

significant proportion of their population are Māori or Pacific peoples, and they had capacity to take on the additional work required, including providing additional colonoscopies.

7. An external evaluation of this small-scale roll out has provided insights into improving participation rates for Māori and Pacific peoples aged 50 to 59 years old and for those aged 60-74; and what might be required if age extension is pursued. This includes prioritising Pacific-led engagement with Pacific communities, using a range of methods to reach individuals and whānau, and further support for Māori health providers.

You requested options focusing the tagged contingency across the total population

8. You requested advice on what the tagged contingency may achieve if spread across the total population. We advised [HR2024035455 refers] that it is not currently feasible to lower the screening age to 50 years for the total population due to constraints and pressures on colonoscopy services. We offered to provide further advice once modelling on a range of scenarios for the NBSP had occurred. This briefing provides that further advice.

9. In this briefing we have used 4-year and 25-year periods to illustrate the shorter-term and longer-term cost impacts, respectively, of the options discussed.

There are risks with altering the scope of the tagged contingency

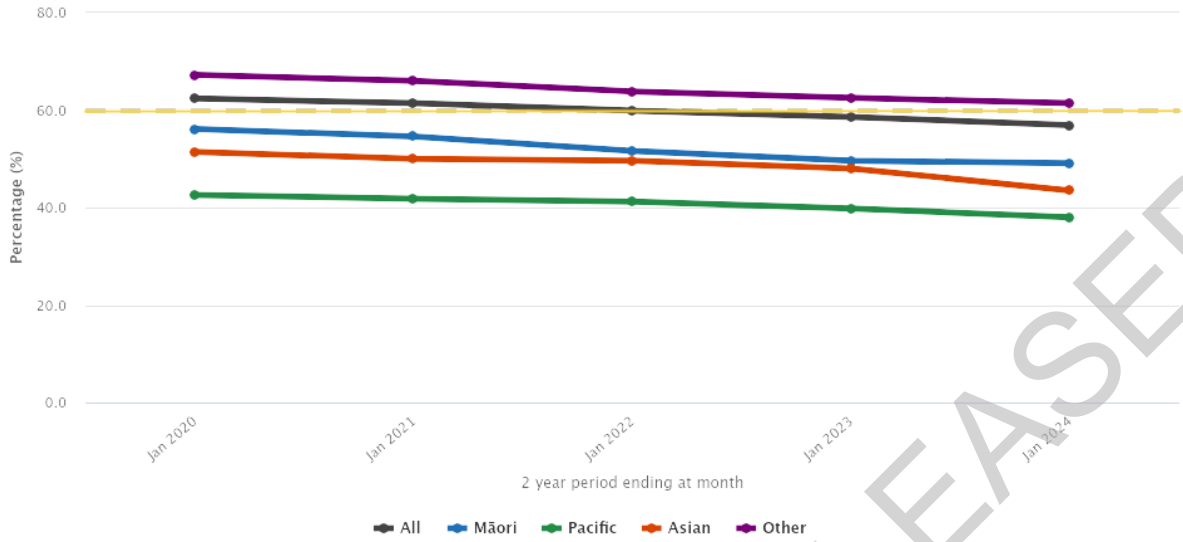
Upholding our obligations under the health sector principles of the Pae Ora Act 2022, and achieving the expectations outlined under the GPS

10. To give effect to the health sector principles of the Pae Ora Act 2022, Māori must be actively protected from the harms of cancers including bowel cancer. Māori must receive equitable access to and outcomes from bowel cancer prevention, screening, diagnosis, and treatment.

11. The Government Policy Statement (GPS) on Health 2024-2027 sets an expectation for improved access to bowel screening, unfair differences in health needs and outcomes to be addressed, and to achieve a 60% participation target amongst Māori and Pacific peoples aged 60-74 years old.

12. This target is not currently being met. NBSP participation rates have declined in recent years, worsened overall due to the COVID-19 pandemic, with current overall participation rates at 56.9% and low rates amongst Māori (49.1%) and Pacific peoples (38.0%) (see figure 1 below).

Figure 1: NBSP Participation rates by ethnicity



13. Māori and Pacific peoples have not benefited from screening to the same extent as other ethnicities due to currently low screening rates, the higher proportion of bowel cancer diagnosed before the age of 60 years, and the lower 5-year survival rate compared to other ethnicities.

Advice from the National Screening Advisory Committee and screening sector expectations

14. In April 2019, the National Screening Advisory Committee (NSAC) endorsed the decision to lower the age eligibility for Māori to 50 years, ensuring equitable access to the benefits of bowel screening for this population group. NSAC reaffirms its previous endorsement. For any alternative policy considerations, NSAC recommend a comprehensive reassessment of the latest evidence regarding the optimum bowel screening age ranges. Refer to Appendix One for the full statement from NSAC.

15. The proposal to lower the screening age to 50 years for Māori and Pacific peoples has strong support from the screening sector. The original proposal was advocated for and developed in partnership with Māori and Pacific stakeholders as well as NSAC.

16. In developing this advice, Hauora Māori Services, within Health NZ, voiced their strong concern that both Options 1 and 2 will result in negative health equity impacts compared to the original proposal.

17. Changing from this presents reputational risks for the NBSP and, given the significant degree of stakeholder engagement and advocacy in its development, a likely loss of trust between the programme and Māori and Pacific health providers and stakeholders.

Age extension for Māori and Pacific people has already occurred in three districts and planning for its nationwide implementation has been undertaken

18. Age extension for Māori and Pacific people has already occurred in three districts with advanced planning and sector engagement for a subsequent nationwide roll

out. Alongside this there have been public announcements on the intention to lower the bowel screening age for Māori and Pacific to 50.

19. The sector is likely to oppose any change from the original proposal, particularly to lower the age for the total population rather than for Māori and Pacific peoples.

20. Māori and Pacific peoples aged 50-59 years who are currently eligible for bowel screening through the age extension pilots will need to be 'grandparented' into the NBSP as it is not clinically appropriate to cease screening a population once it has begun.

We have considered a range of potential alternative options

Erasmus University modelled strategies using a validated Microsimulation Screening Analysis

21. In July 2024, Erasmus University Rotterdam in the Netherlands provided detailed analysis on the NBSP using a Microsimulation Screening Analysis (MISCAN) Colorectal Cancer Model (attached as Appendix Two).

22. Using the MISCAN model, Erasmus modelled 110 screening strategies for New Zealand and assessed the benefits (colorectal cancer cases and deaths prevented), colonoscopy demands, and costs of each strategy. The strategies considered were:

    a. lowering the current starting age (to either 58, 56, 54, 52, or 50 years)

    b. undertaking an additional one-off screen (at 50, 52, 54, or 56 years) and

    c. increasing the participation rate for Māori and Pacific peoples currently eligible for bowel screening to 60% (existing NBSP target).

23. These strategies were modelled for the total population; for Māori only; and if a combination of different strategies were used for Māori and non-Māori.

24. Strategies involving lowering the current starting age or undertaking a one-off screen were modelled using a participation rate of 52% for Māori and 60% for non-Māori aged 60-74 years (the participation rates at the time the data was extracted for analysis).

25. Note that participation rates for Māori and Pacific peoples aged 50-59 years in districts where age extension has occurred was 32.2% as of January 2024. This is consistent with experience, both in New Zealand and overseas, that screening participation tends to be lower in younger age groups.

We then assessed which strategies could be implemented within the funding allocated in the tagged contingency

26. Using the Erasmus modelling and the original business case's costing assumptions we have estimated the cost to deliver each proposed option. If a new option is selected, the programme will provide more detailed cost information with future advice. But broadly, the funding will cover programme costs, such as funding for screening kits (including associated postage and

laboratory costs), promotional and community engagement, and the additional colonoscopies required.

27. Costs to undertake additional colonoscopies through an age extension are included in the current scope of the tagged contingency. However, consistent with the original business case's costing assumptions, costs to treat any additional bowel cancers detected are not, and will need to be resourced through Health NZ's baseline.

28. Funding from the tagged contingency would also be used to 'grandparent' Māori and Pacific peoples aged 50-59 years who are currently eligible for bowel screening in the three pilot districts. This group would continue to be invited for screening every two years until they reach 60 years old when they will continue with the programme as part of the standard 60 to 74 age range, regardless of whether the original proposal proceeds nationally. This is because it is not clinically appropriate to cease screening a population once it has begun and is in line with the practice followed after the conclusion of the original bowel screening pilot in Waitematā which also screened people from 50 years of age.

Colonoscopy capacity and Information Technology (IT) changes were additional considerations

29. Colonoscopy capacity is a significant consideration as colonoscopy services are currently struggling to meet clinical wait time requirements for symptomatic patients. As of April 2024, only 46% and 57% of non-urgent and surveillance colonoscopies were completed or waiting within the recommended timeframes compared to the 70% target.

30. We have therefore only considered the modelled strategies which would result in additional colonoscopies that are roughly equal to or lower than what was outlined in the original proposal (5,744 over four years). In addition, Health NZ has several initiatives underway to improve colonoscopy capacity. These include developing a new colonoscopy model of care using Faecal Immunochemical Testing as a triage test. This helps facilitate early diagnoses of bowel cancer for those at highest risk which may help avoid unnecessary colonoscopies. However, districts may still need to commission further capacity, either in house or outsourced, to meet the additional demand (noting that funding for additional colonoscopies is included within the tagged contingency).

31. Another key feasibility consideration was whether any significant Information Technology (IT) changes would be required. The NBSP has a population-based IT system known as the Bowel Screening Register (BSR) which tracks the progress of all individuals along the screening pathway and triggers the next activity. The BSR is key to ensuring the delivery of a high-quality screening programme and any changes to the parameters of the NBSP must be implemented through the BSR.

Data on Pacific peoples

32. As there was insufficient population data available on Pacific peoples, these communities were not included in the Erasmus modelling. We estimated the impact of each option on Pacific peoples using population size and programme detection rates for cancer and advanced adenomas.

We have shortlisted three options for your consideration

33. Based on the modelling and taking into account the risks and considerations above, we have shortlisted three potential options for repurposing the tagged contingency. These options are those that prevent the most colorectal cancer (CRC) cases and deaths, can be delivered within the funding allocated in the tagged contingency, and are broadly in line with the additional colonoscopies expected under the original proposal. The options are:

    a. option 1: lower the starting age from 60 to 58 years old for the total population

    b. option 2: lower the starting age from 60 to 58 years old for the total population, and further lower the age to 56 years old for Māori and Pacific peoples

    c. option 3: undertake an additional one-off screen at 56 years old for the total population (with the next screening occurring when people reach 60 years old).

34. The Ministry of Health and Health NZ have assessed and compared these options based on health and equity impacts (CRC cases and deaths prevented), likely stakeholder response, and feasibility of implementation. Appendix three provides a summary of this assessment.

Option 1: lower the starting age from 60 to 58 years old for the total population

35. This option involves adding an additional screening round for the total population. It results in approximately 122,524 additional people potentially eligible for screening over a two-year period compared to the current age range, and 4,927 additional diagnostic and surveillance colonoscopies over four years.

36. This option can be implemented and funded on an ongoing basis using the funding allocated from the tagged contingency (including outyears funding). It is estimated that this option would use about 92% of the available funds over the first four years and around 75% over the entire 25-year period.

Benefits

37. This option has a positive health impact when compared to the current eligibility age. It is estimated to prevent 771 more CRC cases and 566 deaths over 25 years when compared with the current eligibility age, with 161 cases and 117 deaths prevented amongst Māori and Pacific peoples.

38. This option prevents more CRC cases over 25 years compared to option 3 but less than option 2.

39. This option is feasible from a programme perspective as lowering the starting age to 58 years for the total population does not require changes in technology or the service delivery model to be successfully implemented. Findings from the evaluative implementation of the age extension for Māori and Pacific peoples have also confirmed that the BSR is able to lower the screening eligibility age in districts.

Risks

40. This option prevents significantly fewer CRC cases and deaths among Māori and Pacific peoples over 25 years compared to the original proposal and option 2 and does not address underlying inequities regarding the higher proportion of CRC among Māori and Pacific peoples before the age of 60.

41. This option is likely to receive mixed reactions from stakeholders. Some stakeholders may welcome the age extension, whereas others may be unsatisfied with the 2-year age extension and advocate for the bowel screening age to be lowered further.

Option 2: lower the starting age from 60 to 58 years old for the total population, and further lower the age to 56 years old for Māori and Pacific peoples (recommended)

42. This option would add two additional screening rounds for Māori and Pacific peoples and one additional screening round for all others. It results in approximately 143,500 additional people potentially eligible for screening compared to the current age range and 5,816 additional diagnostic and surveillance colonoscopies over four years.

43. This option can be implemented and funded on an ongoing basis using the funding allocated from the tagged contingency (including outyears funding). It is estimated that this option would use about 100% of the available funds over the first four years and around 80% over the entire 25-year period.

Benefits

44. The option has potential to mitigate some of the risks presented earlier as it would acknowledge the recognised health inequity and support both improved overall outcomes and improved equity.

45. This option has a positive health impact when compared to the current eligibility age. It is estimated to prevent 918 more CRC cases and 678 deaths over 25 years when compared with the current eligibility age. This is greater than both options 1 and 3.

46. This option is also estimated to prevent 309 cases and 228 deaths amongst Māori and Pacific peoples which, while less than the original proposal, is significantly more than options 1 and 3.

47. This option is feasible from a programme perspective as lowering the starting age to 58 and 56 years does not require changes in technology or the service delivery model to be successfully implemented. Lowering the age for specific population groups has also already been successfully tested through the pilots.

Risks

48. This option may still attract opposition from the sector and stakeholders as it does not address underlying inequities to the degree that was anticipated through the original proposal to lower the starting age for screening for Māori and Pacific peoples to 50.

49. There may also be opposition to having differential age eligibility for bowel screening by ethnicity. This can be mitigated through clear rationale and communications that this is to address an existing inequity and that Māori and Pacific peoples have a higher proportion of bowel cancer diagnosed before the age of 60 years and lower 5-year survival rates compared to other ethnic groups.

Option 3: undertake an additional one-off screen at 56 years old for the total population (with the next screening occurring when people reach 60 years old) (not recommended)

50. Modelling for a one-off additional screening was requested to see if there were greater benefits for the population compared to progressively dropping the age because of the earlier detection of cancers and removal of adenomas.

51. This option involves offering an additional screen each year for people aged 56 years old, before being offered regular screening every 2 years from the ages of 60 to 74 years old. This would result in approximately 122,524 additional people potentially eligible for screening over a two-year period compared to the current age, and 5,301 additional diagnostic and surveillance colonoscopies over four years.

52. This option can be implemented and funded on an ongoing basis using the funding allocated from the tagged contingency (including outyears funding). It is estimated that this option would use about 92% of the available funds over the first 4 years and around 78% over the entire 25-year period.

Benefits

53. This option has a positive health impact when compared to the current eligibility age range. It is estimated to prevent 679 more CRC cases and 617 deaths over 25 years, with 147 CRC cases and 112 deaths prevented amongst Māori and Pacific peoples.

54. This option prevents fewer CRC cases but more deaths when compared to option 1.

Risks

55. As with option 1, this option prevents significantly fewer CRC cases and deaths among Māori and Pacific peoples over 25 years compared to the original proposal and option 2 and does not address underlying inequities.

56. This option is not comparable with other national bowel screening programmes internationally and would be harder to implement. Moving the first recall period following a screening round from two to four years would require a substantial change in the programme technology (BSR) and service delivery model, likely resulting in a longer timeframe and increased costs to implement compared to option 1.

57. It would require significant public engagement to communicate this change as it undermines and complicates NBSP messaging. Confusion around this messaging could result in further decreased screening participation rates, particularly among communities with low rates such as Māori and Pacific people. A decrease in

participation rates would mean the estimated CRC cases and deaths outlined in paragraph 44 would not be reached.

58. It is also likely to be the least acceptable option for stakeholders, in particular individuals aged 58-59 years old. This age group may perceive the decision as unfair as the NBSP has clear and consistent messaging that the risk of bowel cancer increases with age and that the benefits of bowel screening are seen when individuals are screened every two years. It is likely to result in calls for the immediate inclusion of people aged 58-59 years old as well, which is not feasible within current colonoscopy constraints and the available funding.

Initiatives to improve screening participation rates for Māori and Pacific peoples

59. As noted earlier, the GPS sets an expectation for improved access to bowel screening and achievement of the 60% participation target amongst Māori and Pacific peoples aged 60-74 years old.

60. Modelling from Erasmus estimates that achieving the 60% participation target for Māori and Pacific communities would prevent 244 more CRC cases and 154 deaths over 25 years compared to current participation levels.

61. There are already a range of initiatives underway to improve Māori and Pacific participation rates in bowel screening. In addition to the options presented above, these initiatives could be strengthened or expanded if resources could be freed up or made available (e.g., from any remaining funds in the tagged contingency). Such activities could include:

    a. building on current outreach services and awareness activities
    b. implementing a barcoded kit to allow for opportunistic screening at community events
    c. increasing district community provider resources and funding
    d. expanding the lab drop-off initiative nationally (currently implemented in the Northern region) which allows participants to return test kits at a local laboratory site rather than by return post.

62. Following your direction, we can provide you with further advice on these if requested.

Next steps

63. Cabinet agreement is required to alter the scope of the tagged contingency to fund any of the options provided in this paper.

64. If you wish to proceed with any of the alternative options, we will provide you with further advice (in consultation with Treasury) on what is needed to drawdown the tagged contingency and a draft Cabinet paper in November 2024, for you to take to Cabinet in December 2024.

65. If you do not wish to proceed with any of the options, or the original proposal, the tagged contingency will expire on 1 February 2025 and the funding will return to Crown accounts.

66. We would welcome discussing the options outlined in this paper further with you.

ENDS.

Appendix One: Statement provided by the National Screening Advisory Committee

The National Screening Advisory Committee (NSAC) provides sector leadership and strategic direction for national population-based screening programmes and reviews the evidence for significant changes to current programmes, and evidence for potential new screening programmes. NSAC previously made recommendations concerning lowering the bowel screening age in April 2019 and November 2019. This action came in response to the 2018 report titled "National Bowel Screening Programme: Consideration of the Potential Equity Impacts for Māori of the Age Range for Screening".

In April 2019, NSAC endorsed the decision to lower the age eligibility for Māori to 50 years, ensuring equitable access to the benefits of bowel screening for this population group. In November 2019, NSAC noted:

- its commitment to providing advice that supports the Ministry of Health meeting its obligations under the Treaty of Waitangi to achieve access and outcome equity for Māori in the NBSP.
- the requirement under its terms of reference to provide advice that addresses equitable access and outcomes for all population groups.
- the epidemiological evidence for lowering the screening age for Māori.
- that lowering the screening age for Māori would be the first stage in lowering the age for all the population.

NSAC reaffirms its previous endorsement. For any alternative policy considerations, NSAC recommend a comprehensive reassessment of the latest evidence regarding the optimum bowel screening age ranges. This evaluation should specifically examine the epidemiological data, benefits and harms of any recommendations, and the implications for health equity. Additionally, any modelling or proposed changes must undergo formal reassessment by NSAC.

NSAC remains committed to equity measures and approaches that enhance participation in bowel screening, aiming to maximise benefits within the current age range, particularly for groups with the lowest participation rates.