

Budget Sensitive

Office of the Minister of Health

Chair, Cabinet State Sector Reform and Expenditure Control Committee

## National Bowel Screening Programme Progress

### Proposal

- 1 That the Committee notes the progress to date, as well as the benefits and challenges of implementing the National Bowel Screening Programme (NBSP).
- 2 That the Committee notes the updated timetable for the National Bowel Screening Programme, which aims to complete the national roll-out in 2019/20 as planned.

### Executive Summary

- 3 The NBSP is currently progressing to be fully implemented by the end of the 2019/20 financial year, giving all New Zealanders, within the eligible age range, access to bowel screening.
- 4 The key components to achieve the rollout of the bowel screening programme are as follows:
  - 4.1 Pilot service model: implementation of the programme during 2017/18 in Hutt Valley, Wairarapa and Waitemata District Health Boards (DHBs), then phased implementation in Counties Manukau and Southern DHBs;
  - 4.2 The interim IT solution: the enhanced pilot IT system with supporting clinical and operational processes, quality assurance and safety monitoring to enable implementation of the first five DHBs whilst the national solution is developed;
  - 4.3 The national service model: national coordination centre, regional centre, clinical and service supports. Phased implementation of the programme in the remaining 15 DHBs;
  - 4.4 The national IT solution: long term solution that supports integration and national programme view. Congruent with NZ Health Strategy 2016 and Government ICT strategy.
- 5 A diagram showing how each of these components has been planned for and is progressing is attached as appendix 1.
- 6 The first two DHBs, Hutt Valley and Wairarapa remain on-track to commence the NBSP in July 2017. Waitemata DHB will transition to the national programme on completion of the pilot at the end of 2017.

- 7 The four regional centres have been identified (Waitemata, Waikato, Hutt Valley and Southern DHBs) and will be fully operational prior to the first DHB in their region commencing screening.
- 8 The procurement process for the National Coordination Centre is underway and the provider will be in place prior to Counties Manukau and Southern DHBs commencing bowel screening.
- 9 The challenge for the NBSP has always been the complexity of rolling-out a programme that is delivered across a large number of organisations in the health sector; is supported by clear accountabilities; an effective information technology (IT) solution; with robust safety and performance monitoring, and quality standards.
- 10 The Ministry of Health (the Ministry) is managing these challenges by running a disciplined and robust project management process that is based on:
  - 10.1 gradually implementing the NBSP across New Zealand with several gateway decision points at which it is possible to pause and assess progress;
  - 10.2 closely supporting each DHB as they develop their implementation business case and then as they build capacity and capability to go live;
  - 10.3 using external expertise to assist in the development of the national IT solution;
  - 10.4 building on lessons learned from the pilot to develop performance indicators, Quality Standards and a monitoring framework for the national programme.
- 11 The most significant challenge to implementation is development of the national IT solution. The Ministry will go to market for the national IT platform (this is expected to be completed between July and October 2017). The first five DHBs will implement the screening programme using the existing IT system from the Waitemata pilot. Taking this approach allows the Ministry to progress the roll-out whilst allowing time for the best technology partner and national IT solution to be found.
- 12 The NBSP timetable will contain a degree of uncertainty until the completion of the procurement process for the national IT solution, recommended by the IT Options Analysis undertaken with Ernst and Young. The timetable for the implementation of the national IT solution will be provided in the technology business case in November 2017 along with any contingent changes to the operational delivery.

## Background

### *The context*

- 13 New Zealand has one of the highest bowel cancer rates in the world. Bowel cancer is the second most common cause of cancer death in New Zealand after lung cancer, with approximately 3,075 new cases registered and 1,252 deaths in 2013. New Zealand has the third highest mortality rate for bowel cancer in the OECD for women and the sixth highest for men.

- 14 A person's risk of developing bowel cancer rises steeply from 0.6 percent at age 50, to 5.6 percent by the age of 75 years. The number of cases diagnosed each year in New Zealand is therefore expected to increase as our population ages.
- 15 There is a strong association between the stage (extent) at which bowel cancer is diagnosed and eventual survival. Those with localised disease (earlier stage) at diagnosis have a 95 percent chance of a five year survival. Those with distant spread (metastases, later stage) have only a 10 percent five year survival rate. New Zealanders are more likely to be diagnosed with advanced stage cancers than people in Australia, the United States of America and the United Kingdom. Screening in New Zealand is predicted to increase early stage cancer detection from 13 to 39 percent.
- 16 The primary objective of bowel screening is to reduce the mortality rate from bowel cancer, by diagnosing and treating bowel cancer at an earlier, more treatable (and less costly to treat) stage. An additional objective is to identify and remove pre-cancerous advanced adenomas (polyps) from the bowel before they become cancerous, which can, over time, lead to a reduction in bowel cancer.
- 17 International evidence shows that organised national bowel screening is cost effective, reduces the number of deaths from bowel cancer, and over time reduces the number of people who are diagnosed with the disease. New Zealand is one of the only OECD countries without a national bowel screening programme.

#### *Investment in Bowel Screening from 2011*

- 18 A bowel screening pilot has been running in the Waitemata DHB since 2012, which has provided valuable information about screening in the New Zealand context. Budget 2015 provided additional funding of \$12.4 million to extend the pilot to December 2017. This built on the \$24 million invested in the pilot between 2011 and 2015.
- 19 In addition, the Government has invested over \$15.6 million to assist in reducing DHB colonoscopy waiting times since 2013/14, together with another \$4 million made available to DHBs in 2016/17. Nationally, the number of New Zealanders waiting longer than clinically recommended for a colonoscopy dropped 55 percent from 9310 in January 2014 to 4151 in January 2017. The number of colonoscopies performed in 2016 is ten percent higher than 2015 (from just over 36,000 to almost 40,000 colonoscopies).
- 20 Budget 2016 allocated \$39.3 million over four years for the establishment of the National Bowel Screening Programme [CAB-16-MIN-0189.14]. This funding was for the initial implementation to enable set-up of: Hutt and Wairarapa DHBs; the National Coordination Centre; the four Regional Centres; the enhanced pilot IT system to enable it to support Waitemata, Hutt and Wairarapa DHBs; training; and overall programme management.
- 21 The contingency of S9(2)(f)(iv) for Vote Health for the capital component of the National Bowel Screening Programme expired on 1 February 2017. The Cabinet Social Policy Committee agreed to an extension of the contingency expiry date to 1 February 2018 [SOC-17-MIN-0003]. This aligns the contingency with the procurement

process for the national IT solution and its business case to be submitted in November 2017.

- 22 The National Bowel Screening Programme is seeking funding in Budget 2017 of s9(2)(f)(iv) over four years for the operational costs of service delivery across the 20 DHBs. It is expected that Ministers will consider the options of how funding for bowel screening is allocated as part of Budget 17 discussions.

#### *Operation of the National Bowel Screening Programme*

- 23 The screening test is mailed to invited participants from the National Coordination Centre and can be undertaken by participants in their own home. The participant returns the test to a laboratory, if the test result is positive their general practitioner will discuss with the participant about a referral to colonoscopy for further investigation. It is anticipated that seven percent of participants will be referred for a colonoscopy.
- 24 The NBSP is planned to be fully rolled-out by the end of the 2019/20 financial year. The full implementation will include a sustainable national service delivery model and an information technology (IT) solution.
- 25 Hutt Valley and Wairarapa DHBs will be the first of the 20 DHBs to provide bowel screening from July 2017. Waitemata DHB will transition to the national programme at the end of the Pilot in December 2017. Counties Manukau and Southern DHBs will commence bowel screening late in the 2017/18 financial year. The remaining 15 DHBs will follow over the course of the next two financial years.
- 26 The DHB roll-out order was re-assessed in October 2016 based on DHB capability and capacity, IT readiness, cancer incidence and percentage of eligible and priority population. One indicator of capacity is the DHBs monthly report to the Ministry on the Colonoscopy Wait Time Indicators, which enables the Ministry to monitor progress. From the analysis it was evident that some DHBs required more preparation time to be able to implement a safe screening programme. The Ministry is working with those DHBs identified as needing further support to be ready for the NBSP.
- 27 The DHBs were re-ordered by financial year to align more closely with standard business operation, whilst still meeting the overall timeframe agreed by Cabinet in August 2016 [SOC-16-MIN-0108]. The DHBs were advised of the revised roll-out order in November 2016.
- 28 Implementing the NBSP is a complex process with a number of inter-related components. The timeline proposed is dependent on the ability of each DHB to provide clinically safe and appropriate services. Each DHB's ability to implement will be continually assessed, with a final readiness assessment three months prior to going live. The DHB will be supported in their implementation planning, however if the DHB is not ready, the go live date will be altered and may extend the completion date of full NBSP implementation.
- 29 Health Workforce New Zealand has developed a workforce plan to ensure there is sufficient workforce capacity to deliver the NBSP. The Ministry has put a number of strategies in place, based on its workforce modelling, to increase clinical resources including increasing the number of gastroenterology and surgical trainees, as well as

training a small cohort of nurse endoscopists. The workforce modelling predicts that there will be sufficient workforce at the completion of implementation in 2020 to manage colonoscopy demand.

- 30 The four regional centres have been identified (Waitemata; Waikato; Hutt Valley and Southern DHBs) through collaboration and agreement with each region's DHB Chief Executives. These four regional centres will be fully operational prior to the first DHB in their region commencing bowel screening. The regional centres will support their region's DHBs as they: (1) build the necessary capability and capacity; and (2) implement a safe, quality bowel screening service.
- 31 The Regional Centres will support the NBSP to ensure high quality, timely delivery of diagnostic and treatment services. They will be a key part of NBSP clinical leadership to support the quality and safety of the programme.
- 32 The procurement process for the National Coordination Centre is underway. It will invite participants, mail test kits and advise of test results, as well as providing call centre services for participants. The National Coordination Centre will be in place prior to Counties Manukau and Southern DHBs commencing bowel screening. Waitemata DHB will expand its coordination centre function in the interim for Hutt and Wairarapa DHBs.

#### **Benefits of the National Bowel Screening Programme**

- 33 As outlined in the programme business case and agreed by Cabinet in August 2016 [SOC-16-MIN-0108], the NBSP will, once fully implemented across all DHBs:
  - 33.1 invite over 700,000 people, aged 60 to 74 years, every two years to participate in screening;
  - 33.2 achieve an expected participation rate of 62 percent, and that annually 210,000 people will return the screening kit, 9,300 will have colonoscopy and 500-700 will have cancer detected.
- 34 The benefits of the NBSP will not be fully realised for some time after the programme is implemented nationally. In the early stages of the screening programme there will be an increase in bowel cancer incidence as cases are detected earlier than they would have been without screening. This will not be associated with an increase in mortality and will be a key safety indicator of the early performance of the NBSP.

#### *Measurement of the benefits*

- 35 Benefits from NBSP will be measured through the:
  - 35.1 reduction in bowel cancer mortality, subsequent reduction in the incidence of bowel cancer and an increase in the five-year survival rate;
  - 35.2 number of Quality Adjusted Life Years (QALYs) saved across the target population;

- 35.3 savings in the cost of cancer treatment (early detection reduces the cost of treatment and increases life expectancy) will outweigh the cost of implementing and running the NBSP;
- 35.4 flow on service improvements from the quality standards required for bowel screening services;
- 35.5 contribution to economic growth, from an increase in the paid workforce (estimated at S9(2)(f)(iv) over 20 years).

#### IT challenges to implementation

- 36 The Ministry received provisional advice in March 2017 that there is a market for the required national IT solution. Because procurement of a technology partner and proposed solution will take time, the NBSP is going to utilise the interim IT solution to support programme rollout across at least the first five DHBs whilst the national IT solution is established.
- 37 In 2016, the Ministry engaged Accenture New Zealand to undertake an independent external review to evaluate the requirements, scope, overall delivery approach (including options analysis), assumptions and risks associated with the national IT solution and the programme. The purpose of this review was to provide assurance to decision makers and investors, given the complexities and challenging implementation timeframe associated with the programme.
- 38 The review found that the proposed delivery approach was sound but further work was required to validate the proposed national IT solution, delivery approach and plan to mobilise the programme. The Accenture review recommended utilising the interim IT solution for roll-out of the first six DHBs whilst the national IT solution was progressed.
- 39 The interim IT solution will comprise the enhanced pilot IT system, as well as clinical and operational processes, quality assurance and safety monitoring. This enhanced pilot IT system may require additional resources which could have an impact on the funding needed. This will be identified in the IT business case, anticipated to be submitted to joint Ministers of Finance and Health in November 2017.
- 40 There are various options associated with the use of the enhanced pilot IT system and the Ministry has contracted Ernst and Young (EY) to undertake due diligence of the interim system beyond the first three DHBs (Waitemata, Hutt Valley and Wairarapa). This is pivotal to maintaining roll-out momentum for the next two DHBs (Southern and Counties Manukau) while assuring the clinical safety and effectiveness of the programme. The due diligence will also provide insight to the extension requirements of the interim system for those DHBs who are due to roll-out at the beginning of the 2018/19 financial year. The interim system does not enable a nationally integrated NBSP. DHBs on the interim IT system will be migrated to the national IT solution at the appropriate time.
- 41 Following the recommendations from the Accenture review, the Ministry engaged EY to undertake a market scan and options analysis for the national IT solution. Although the final report back to the Ministry from EY is due late March 2017, early findings indicate that:

- 41.1 a number of different IT solutions may meet the NBSP technology needs, with technology partners in the market able to offer these IT solutions;
  - 41.2 the Ministry would need to complete a procurement process to secure the national IT solution for the NBSP;
  - 41.3 technical work will be required by the Ministry, DHBs and their technology partners to establish interfaces to the national IT solution for information sharing.
- 42 Based on this advice, the Ministry is preparing an open Registration of Interest process to begin in late April 2017. The Ministry anticipates that the second stage of the procurement process will be a closed request for proposal with shortlisted potential partners. The national IT solution business case will be presented to the joint Ministers of Finance and Health as soon as possible after the procurement process has completed, anticipated to be November 2017.
- 43 Going to market for the national IT solution provides options about how and what is delivered. It is anticipated that the initial development of the national IT solution will take twelve-months from identification of the preferred technology partner. The implementation of NBSP in the final 15 DHBs is therefore anticipated to occur over eighteen months. The Ministry believes that this shorter timeframe is achievable with the experience gained from rolling-out the first five DHBs and the support role provided by the Regional Centres to their region's DHBs.
- 44 To minimise the impact of the national IT solution development on the programme, the national IT solution implementation business case has been separated from the DHB, National Coordination Centre and four Regional Centres implementation business case which will be submitted in June. The national IT solution business case is due to be submitted for approval by the joint Ministers of Finance and Health in November 2017. This ensures that the momentum for implementation can be maintained without reliance on the national IT solution.

#### *Risk and assurance*

- 45 The Ministry will maintain the assurance plan to reflect changes in the risks and mitigations associated with the NBSP. The assurance plan will be endorsed by the GCIO.
- 46 Monitoring agencies will continue to be engaged through the life of the NBSP, including through Gateway reviews, independent programme monitoring and the GCIO ICT Assurance team.

#### *Programme schedule challenges*

- 47 The Ministry has updated the NBSP timetable, assuming that implementation will be complete in the 2019/20 financial year. This timetable has been designed to maintain the number of DHB's coming into the NBSP each year, and support the enabling workstreams of IT, National Quality and Policy Standards, and the monitoring framework.

- 48 The NBSP timetable will contain a degree of uncertainty until the completion of the procurement process for the national IT solution. The timetable for the implementation of the national IT solution will be provided in the technology business case in November 2017 along with any contingent changes to the operational delivery.

Table 1 - The revised timetable for the National Bowel Screening Programme implementation

Milestone	August 2016 Business Case	Revised date
FY2017/18 – DHBs 1 to 3		
1.1	DHBs 1-3 Business Case	August 2016
1.2	Budget bid for NCC, Regional Centres, rollout to all 20 DHBs	October 2016
1.3	Procurement of NCC	February 2017
1.4	Gateway 4: DHB 2 and 3 service readiness	April 2017
1.5	Interim programme system available for DHBs 1-3	May 2017
1.6	DHBs 2 and 3 implemented	July 2017
1.7	DHB 1 transitions from Pilot to NBSP	January 2018
1.8	National Coordination Centre implemented	January 2018
1.9	Regional Centres in place	January 2018
FY2017/18 – DHBs 4 to 5		
2.1	DHBs 4 and 5 business case to joint Ministers for approval	March 2017
2.2	Gateway 4: DHB 4 and 5 service readiness	November 2017
2.3	Interim programme system available for DHBs 4 and 5	January 2018
2.4	DHBs 4 and 5 implemented	By June 2018
FY2018/19 – DHBs 6 to 14		
3.2	DHBs 6 to 14 business case to joint Ministers for approval	December 2017
3.3	Gateway 4: DHB 6 to 8 service readiness	November 2017
3.4	Interim programme system available for DHBs 6 to 8	January 2018
3.5	DHBs 6 to 8 implemented	By June 2018
3.6	DHBs 9 to 14 implemented	By December 2018
FY2019/20 – DHBs 15 to 20		
4.2	DHBs 15 to 20 business case to joint Ministers for approval	December 2017
4.3	DHBs 15 to 20 implemented	By December 2019
National IT solution		
5.1	Technology options analysis	March 2017
5.2	Open Registration of Interest	June 2017
5.3	Closed RFP with shortlisted providers	September 2017
5.4	Technology business case to joint Ministers for approval	November 2017



### *Participation rates and equity*

- 49 The equity issues identified for the NBSP are similar to equity issues identified in other screening programmes, and access to health services generally.
- 50 The Ministry, using the pilot data, has identified points along the programme pathway where participation rates and equity may differ dependent on age, gender, ethnicity, and residential area. The Ministry will work with the DHBs to encourage participation by Māori, Pacific people, and those living in the most deprived areas.
- 51 The Ministry is developing key indicators for the NBSP based on lessons learnt from the Pilot and other screening programmes. The indicators will include measures about participation rates, and results that can be searched by age, ethnicity, or deprivation measures.
- 52 The Ministry, working with the DHBs, has communications material to inform and encourage participation in the programme. DHBs will be able to adapt the communications material for their communities.

### *No other assistance is required*

- 53 The high-profile nature of the NBSP requires careful risk management across the Corporate Centre (The Treasury, the GCIO and MBIE), as well as its regular reviews.
- 54 The Treasury is engaged with the Ministry about the NBSP through its Vote Health team, the Better Business Case process, the Gateway reviews, and the Major Projects Team.
- 55 Because of the significant IT investment, the Ministry is in regular contact with: the GCIO to ensure alignment with the Government ICT Strategy; and the Ministry of Business, Innovation and Employment (MBIE) about procurement processes to ensure that due process is followed.
- 56 The Ministry has reported that the level of support it is receiving from The Treasury, the GCIO and MBIE is sufficient to support the implementation of the NBSP.

### **Consultation**

- 57 The Treasury, the GCIO and the Department of the Prime Minister and Cabinet were consulted in the development of this paper. The Ministry of Business, Innovation, and Employment were informed.
- 58 The Treasury commented:
  - 58.1 The Treasury supports the programme's approach to revising the timetable for the rollout of bowel screening, and notes the risk of the compressed timeframe for the rollout to the last 15 DHBs. Ongoing monitoring will focus on supporting the Ministry with business case development and implementation of the programme.

59 The GCIO commented:

59.1 The GCIO supports the programme's approach and will continue to work with the programme. Specific feedback has been incorporated into this paper.

### Financial Implications

60 Budget 2016 approved \$39.309 million for the initial implementation of the NBSP. Budget 2016 also allocated contingency funding of [S9(2)(f)(iv)] for IT development. In February 2017, Cabinet agreed to extend the contingency of [S9(2)(f)(iv)] capital funding to 1 February 2018 [SOC-17-MIN-003].

61 The National Bowel Screening Programme is seeking funding in Budget 2017 of [S9(2)(f)(iv)] over four years for the operational costs of service delivery across the 20 DHBs. It is expected that Ministers will consider the options of how funding for bowel screening is allocated as part of Budget 17 discussions.

62 The budgets are based on the projected commencement of activities and DHB readiness. Changes to timing may require the budget phasing to be amended as part of October/March baseline updates. Any other changes to future funding will be identified in business cases still to be submitted.

### Human Rights

63 The National Bowel Screening Programme does not raise issues under the New Zealand Bill of Rights Act (1990) and the Human Rights Act (1993) because of the proposed age criteria. This discrimination is justified on the basis that the majority of cancers are detected in the proposed age band (as observed by the pilot).

### Legislative Implications

64 There are no legislative proposals in this paper.

### Regulatory Impact Analysis

65 The Regulatory Impact Analysis requirements do not apply to this paper.

### Gender Implications

66 There are no gender implications. Bowel screening will be the first cancer screening programme in New Zealand to apply to both men and women in the age-appropriate population.

### Disability Perspective

67 The design of the NBSP will include provision for people with disabilities who may need assistance to complete tests.

### Publicity

68 There is significant public and media interest in the NBSP. Media statements will be issued, when appropriate, as implementation of the NBSP progresses.

## Recommendations

It is recommended that the Committee:

- 1 **Note** that Cabinet agreed the National Bowel Screening Programme Business Case in August 2016 [SOC-16-MIN-0108].
- 2 **Note** the progress to date of the National Bowel Screening Programme:
  - 2.1 Hutt Valley and Wairarapa DHBs commence bowel screening in July 2017;
  - 2.2 Waitemata transitions from pilot to national programme by end December 2017;
  - 2.3 Progressing establishment of National Coordination Centre, four regional centres and Counties Manukau and Southern DHBs to be operational in second half of 2017/18.
- 3 **Note** the complexity of the implementation of the National Bowel Screening Programme due to the number of inter-related components which is being managed through the phased roll-out to deliver a clinically safe, equitable, effective and high quality screening programme.
- 4 **Note** the revised roll-out approach and timing with completion of the rollout of the National Bowel Screening Programme still planned for 2019/20.
- 5 **Note** the timetable for the implementation of the national IT solution will be provided in the technology business case in November 2017 along with any contingent changes to the operational delivery.
- 6 **Agree** that Cabinet will receive a progress update report on the National Bowel Screening Programme in November 2017 to align with the submission of the national IT business case.
- 7 **Note** the support the Ministry of Health has received from The Treasury, the Government Chief Information Office and the Ministry of Business, Innovation and Employment.
- 8 **Agree** that this Cabinet paper and minuted decisions be proactively released in due course, subject to any material being withheld as necessary as if a request for release had been made under the Official Information Act 1982.

Authorised for lodgement

Hon Jonathan Coleman

**Minister for Health**

Appendix one

National Bowel Screening Programme Implementation - Progress Update: March 2017

