National Screening Advisory Committee (NSAC) National Screening Unit (NSU)		
Minutes Wednesday 23 November 2022		
Venue	Mercy Centre, Wellington	
Start Time	10:00	
NSAC members present	Dr Carol Atmore (by video conference) Dr Karen Bartholomew Professor Barry Borman Stephanie Chapman Gerardine Clifford-Lidstone Pania Coote (Chair) Professor Mark Elwood John Forman Dr Gary Jackson Professor John McMillan Dr Kate Neas Dr Jane O'Hallahan (Deputy Chair) Dr Nina Scott Dr Pat Tuohy	
Other attendees	**Te Whatu Ora** Jon Herries Dr Rebekah Roos Dr Eng Toh	**Te Aka Whai Ora** Dr Rawiri McKree Jansen **University of Otago** Dr Melissa McLeod
Apologies	Sheila Beckers	

Item	Subject and summary
1.	**Welcome, apologies and introductions** The Chair opened with a karakia timatanga and welcomed attendees. Apologies were received from Sheila Beckers. A round of introductions was given. **Declaration of conflicts of interest** Conflict of interest register was tabled. **Meeting minutes and discussion arising** • The July 2022 meeting minutes were circulated to NSAC members in August 2022. *Spinal Muscular Atrophy (SMA) screening* It was noted that in addition to the points recorded in the July minutes, NSAC had a robust and wide-ranging discussion about SMA screening prior to making their recommendation.
2.	**Terms of Reference Annual Review** The Terms of Reference need to be updated to reflect the National Screening Unit moving from the Ministry of Health to Te Whatu Ora (Health New Zealand). NSAC members felt that future membership should reflect the new health structures, for example, a member from Te Aka Whai Ora would be appropriate. The section 'Work Plan Development' should be clearer about the process for identifying topics for NSAC to consider. A link to the National Health Committee's Criteria for Screening, should be added under the 'Principles' section. It was noted that NSU's ongoing work on Te Tiriti partnerships and co-governance could impact on NSAC's future membership and terms of reference. Action: Secretariat to update the Terms of Reference and circulate to members for approval.
3.	**Lung Cancer Screening** *The NSU gave an update on progress towards a national Lung Cancer Screening programme:* Lung cancer screening is likely to be the next new screening programme implemented in New Zealand. The NSU and Te Aho o Te Kahu are working in partnership on preliminary work to assess health system requirements for lung cancer screening. This work will then progress to preparation for a business case for funding of demonstration sites which will roll out to a national programme. This will happen after provisional research findings from Māori-led research, including a trial of lung cancer screening underway in the Waitemata and Auckland districts, led by Professor Sue Crengle. Further research by Dr Jason Gurney and his research team is also underway, focusing on causes of existing inequities in lung cancer survival. Lung cancer screening must be designed to be pro-equity from the outset with Māori leadership over the programme to achieve high and equitable Māori participation. NSAC members noted that there have been international developments in lung cancer screening, including the UK National Screening Committee recommending targeted low-dose CT lung cancer screening (June 2022). Australia's Medical Services Advisory Committee (MASC) have also recommended a targeted national lung screening programme (Application 1699, July 2022).

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	The NSU is also working with Dr Melissa McLeod (University of Otago Wellington) and Te Oranga Pukahuhu to model the health system costs and resources needed to implement lung cancer screening. *Dr Melissa McLeod joined the meeting to give an overview of the lung cancer screening model:* The model is a macro-simulation model of two-yearly low-dose CT screening for lung cancer in the New Zealand population. The model follows a closed cohort of individuals (aged 50 years and over in 2018), over their lifetime. It compares their health and the costs to the health system of lung cancer screening compared to no screening. The main model outputs are Health Adjusted Life Years (HALYs), health system costs, cost-effectiveness (measured as Incremental Cost-Effectiveness Ratio or ICERs) and measures of health equity for Māori and non-Māori, with and without screening. The model allows the user to change any settings and look at the impact on model outputs. The model will also allow inputs to be adjusted to reflect new evidence in lung cancer screening (eg, changes in lung cancer incidence and mortality rates and emerging evidence from the Waitemata and Auckland districts lung cancer screening trial). Dr McLeod reported the key findings from the scenario modelling: • low-dose CT lung cancer screening is likely to be cost-effective in the New Zealand setting, even taking into account implementation costs • there are greater health gains for Māori than non-Māori, even when lower life expectancy and high co-morbidities are included • there were variable equity findings – for HALYs, equity improved but for lung cancer mortality, inequities were either unaffected or worsened • lung cancer screening should shift diagnosis to an earlier more treatable cancer stage, but people who already have advanced cancer don't survive • we would expect that inequities for local stage lung cancer should decrease or disappear with screening – with good guidelines and monitoring. NSAC members asked Dr McLeod a range of questions about the model. NSAC members raised the issue of incidental findings and the resource implications of these. They also suggested that the elimination of inequities in lung cancer survival (early stage) could be a specific target of the screening programme. The model of care for lung cancer screening needs to include value-add eg, screening other whānau members and checking people are up to date with other cancer screening and providing smoking cessation advice. A national screening programme for lung cancer is not yet government policy and does not have allocated funding for planning and implementation. However, the lung cancer screening model will allow the NSU and Te Aho o Te Kahu to estimate the health system costs and resources required for a targeted national lung cancer screening programme. The Chair thanked Dr McLeod for her work on the model and for her informative presentation to NSAC members. **Action:** A further update on lung cancer screening will be provided at the next NSAC meeting.
4.	**Artificial Intelligence (AI) in Screening** The NSU gave a brief update on a Breast Screening and AI research project with Victoria University of Wellington and Amazon Webservices (AWS). The aim of the research is to use AI to read breast images (mammograms). An advisory group has been set up with representation from NSU (Maree Pierce) and Ministry of Health (Dean Rutherford). An initial meeting took place in July.

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	Jon Herries (Emerging Health Technology & Innovation, Data & Digital, Te Whatu Ora) and Dr Rawiri McKree Jansen (Chief Medical Officer, Te Aka Whai Ora) joined Dr Karen Bartholomew (Director Health Outcomes, Waitematā and Te Toku Tumai Districts) to give a presentation on developments in AI (Machine Learning) and cancer screening. *Overview of Artificial Intelligence:* • AI analyses complex data in order to recognise patterns • Computer algorithms can learn complex associations • AI-based technologies can potentially be used in screening • AI can be used in cancer screening for early detection (from images), but also in diagnosis and management (cancer staging) and in monitoring (changes over time) • AI has broad and narrow application – narrow AI can be used in detection and diagnosis and broad AI could have other applications such as appointment scheduling and automation of QA activities • Potential benefits of AI include – improved quality of screening, reduce workforce requirements, improve efficiency, reduce delays in decision making • Potential harms of AI include – overdiagnosis (especially for breast cancer – false positives), algorithmic bias (may give importance to spurious associations eg, place of screening), uncertainty about how clinicians will interact with AI. *Breast screening and AI:* • Computer-assisted detection (CAD) has been used in breast screening since the late 1990s in the USA, however no national programmes use it (only available in private hospitals in USA, Scandinavia, and Mexico) • Breast screening will always miss cancers due to human error and/or image quality (there will also be true misses - interval cancer/rapid growth – not visible previously) • There are different models for the role of AI in breast screening – it can be used at different stages in the pathway (eg, as a pre-screening triage tool to save resource). AI could also be used in cervical screening (eg, on photographic images from handheld colposcopy) and lung cancer screening (will need AI due to shortage of radiologists). *Breast screening and AI research project – Victoria University and AWS* The Ministry of Health was approached by Victoria University of Wellington to supply anonymised mammogram DICOM images and associated screening and outcome data, in partnership with Amazon Web Services (AWS). The purpose of the project is to understand whether an algorithm could be developed to assist in the reading of mammograms in clinical practice. There are existing tools in place to anonymise images, but this type of project has not been done before and a consent process was not considered when images were collected. Although some research into the social and cultural licence to conduct this research has been carried out, the move of relevant departments from the Ministry of Health to Te Whatu Ora means that governance and policy around this project needs to be re-considered. It was noted that NSAC has an interest in AI and screening –particularly future developments in AI and the potential impact on current screening and future screening programmes. Need to consider social licence for use of AI and medical/legal implications. Needs to be acceptable to screening participants. NSAC members had a discussion on issues relating to AI and screening, including: • the need for a Māori oversight/governance group • the need to ensure that NSU/Breast Screening Aoteoroa defines their objectives in relation to the project • AI is potentially very useful, with the potential to save money and alleviate workforce issues, but is still mostly unproven

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	• If there is public support for the use of AI in screening, what would be the best project to test its usefulness? • AI project needs a home but that may not be NSU. NSAC members agreed that this was an important area for NSAC to keep up to date with and agreed to keep this item on the agenda for the next meeting. **Action:** AI and screening will be an item for the next NSAC meeting in 2023.
5.	**National Bowel Screening Programme age extension** NSU gave an update on the National Bowel Screening Programme (NBSP) age-extension for Māori and Pacific that was approved for funding in June 2022. The age-extension will initially be rolled out in Waikato and Tāirawhiti Districts, and it is estimated that this will lead to approximately 130 extra colonoscopies in Waikato and 40 in Tāirawhiti (and once the age extension has been rolled out across New Zealand this could result in an additional 1,300 colonoscopies per year). The governance for this work is in the process of being established and will include members from Māori Monitoring and Equity Group (MMEG) and Hei Āhuru Mōwai. It will have a similar model to the National Cervical Screening Programme Action and Advisory Group. There will also be a working group to address ethnicity data quality issues. Issues with ethnicity data apply to other screening programmes and work is being done with other Te Whatu Ora groups (eg, Immunisation Team) to improve the ethnicity data and ensure that Māori and Pacific people are identified correctly and invited to take part in NBSP. Work is also being done to increase colonoscopy capacity to meet the anticipated increased demand due to age-extension. NSAC members raised concerns about how the age-extension for Māori and Pacific people was being rolled out. They urged that the roll-out be structured as a national programme, not a District by District pilot. A model of care and plan to adapt the model of care across the motu is needed. Stephanie advised that a Māori evaluator has been appointed and will be announced shortly. **Action:** A meeting between NSU and Māori advisors (Pania Coote, Nina Scott, Gary Thompson, and Sue Crengle) will be scheduled as soon as possible to discuss appropriate oversight of the age-extension roll-out. **Action:** A further update on the NBSP age-extension will be provided at the NSAC meeting in 2023.
6.	**National Cervical Screening Programme – Parliamentary Review Committee Report** The Health Act 1956 (Part 4A, Section 112O) states that a review of the National Cervical Screening Programme (NCSP) must occur every three years. The scope of the 2022 review was limited to eight areas, reflecting that NCSP is currently transitioning to an HPV primary screening programme, offering self-testing and updating the screening pathway. The Parliamentary Review Committee (the Committee) has made 31 recommendations that cover a range of topics including: accessibility, Te Tiriti o Waitangi, elimination of cervical cancer, integration of community-based screening, and integration of primary care and colposcopy services, the effectiveness of monitoring and evaluation, co-governance and clinical governance, clinical quality assurance in colposcopy services, workforce capacity and capability, colposcopy workforce capacity and human papillomavirus (HPV) primary screening. The Committee reaffirmed the recommendation of the 2018 PRC Report that all people should receive free cervical screening to align it with other cancer screening programmes in Aotearoa and recommends appropriate funding processes are pursued to achieve a fully-funded cervical screening programme by 2024.

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	NSAC members noted the recommendations will have a significant impact on GPs. NSU noted that co-design work is underway as part of the HPV implementation and that primary care will still have a role in cervical screening, but that role may change. NSU also noted that the HPV implementation will occur in phases. Phase 1 includes the change to the new HPV primary test and a new Register. Phase 2 will extend the delivery of NCSP with the current workforce and Phase 3 will extend the delivery more widely with utilisation of additional workforces. NSAC members noted that some GP services (eg WellSouth) already provide free cervical screening and it would be good to have a stocktake to determine where services are already free. Guidance to primary care is needed. NSU advised that a GP has recently joined the Clinical team to work on this aspect of programme delivery. NSAC members noted that the opportunity to work with Māori Health providers without GPs (nurse only) to deliver cervical screening should not be missed. **Action:** Invite Heather Came to present recommendations of the PRC Report to NSAC members at the next NSAC meeting. **Action:** A further update on the HPV primary test implementation will be provided at the next NSAC meeting.
7.	**Māori Monitoring and Equity Group - Update** An update on the work being undertaken by the Māori Monitoring and Equity Group on the co-governance model was provided. Phase 1 of this work included a consultation process regarding what is meant by governance and partnership, as well was concepts of co-governance. This involved a literature review, survey, and key informant interviews. It was noted that the purpose of co-governance is to provide a community voice, Māori representation and ultimately to deliver mana-enhancing screening services. Phase 2 of this project will consider how we implement the proposed changes to NSU governance arrangements. It was recognised that this could require legislative change. Next steps include stocktake and review of all of the current advisory/working groups across the NSU screening programmes with the intent to establish co-partnership groups. This will reduce the number of NSU advisory groups working in isolation and enhance a co-design approach to all screening programmes. An example of the model being tested is the newly formed NCSP equity and advisory group that is co-chaired by a member of MMEG. It was noted that the sustainability of advisory groups is dependent on adequate funding. It is likely that a separate entity could be formed (this could be MMEG or it could be a different group). NSU noted the progress made towards increasing the number of Māori staff. There is also a Te Tiriti and Equity rōpū and regular Ako (learning) series covering topics relevant to Te Tiriti and Equity in screening and the wider health system. **Action:** A further update on the MMEG and NSU co-governance project will be provided at the next NSAC meeting.
8.	**Future NSAC work programme** Topics that will be on the NSAC agenda in 2023 include: • Spinal Muscular Atrophy (noting Pharmac decision to fund an SMA treatment) • Non-invasive prenatal testing (NIPT) • Lung cancer screening • HPV primary test implementation and NCSP PRC review • BSA review

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	• Bowel Screening age-extension • Artificial Intelligence and screening NSAC members discussed how the NSAC work programme was agreed and how items were prioritised. It was noted that while priorities were developed with NSAC, that NSU didn't always have the resources to look at all the items prioritised by NSAC. NSU is an operational group and the support available to NSAC is limited. However, issues that are considered outside of NSACs remit do get handed over to other responsible parts of the health system. NSAC members felt it would be useful to have two columns in the work programme document – one for an NSAC priority ranking and one for NSU priority ranking. They also felt they needed more time (outside of the regular NSAC meetings) to consider the work programme in more detail. **Action:** NSAC will meet for workshop on NSAC priorities in May 2023.
9.	**Other business** NSAC members discussed an approach to encouraging staff from Te Aka Whai Ora, Te Aho o Te Kahu, NSU and the screening workforce to be up to date with their screening. This could also include smoking cessation advice, being up to date with immunisations and Hepatitis C testing. The Chair thanked John Forman for his service to NSAC as a consumer representative and noted his term with NSAC is coming to an end.
	Meeting dates: 2023: 30 March, 27 July, and 23 November. Meeting closed at 15:45hrs.