National Screening Advisory Committee (NSAC) National Screening Unit (NSU)		
Minutes Wednesday 12 May 2021		
Venue	Miramar Golf Links, Wellington	
Start time	1000hrs	
NSAC members present	Dr Carol Atmore Sheila Beckers Dr Karen Bartholomew Professor Barry Borman Gerardine Clifford-Lidstone Pania Coote (Chair) Professor Jackie Cumming John Forman Dr Gary Jackson Dr Caroline McElnay Professor John McMillan Dr Jane O'Hallahan (Deputy Chair) Dr Pat Tuohy Dr Nina Scott	
Other attendees	**NSU** Anne McNicholas Dr Sally Thomas Dr Dougal Thorburn	
Apologies	Professor Mark Elwood Stephanie Chapman	

Item	Subject and summary
1.	**Welcome, apologies and introductions** The Chair and Deputy Chair welcomed Sheila Beckers, Gerardine Clifford-Lidstone and Nina Scott to NSAC.
2.	**Declaration of conflicts of interest** Conflict of interest register tabled.

3.	**Meeting minutes and discussion arising**
	• The November 2020 meeting minutes were circulated to NSAC members in December 2020 and subsequently published on the NSU website.
	Lung cancer screening
	• The November 2020 minutes included NSAC's consideration of lung cancer screening. NSAC's overall position was supportive of the development of lung cancer screening while noting that the NSU must prioritise the delivery of outstanding programme initiatives.
	  • At this May 2021 meeting it was noted that while there are competing priorities with other screening programmes, some lung cancer screening developmental work will proceed in parallel to proposed New Zealand lung cancer screening research initiatives.
	The National Cervical Screening Programme (NCSP) introduction of primary HPV screening, and implementation of non-invasive prenatal screening (NIPT) for antenatal screening of Down syndrome (trisomy 21) and other conditions
	• The November 2020 meeting minutes noted NSAC's frustration at the failure of the Ministry to implement a number of screening initiatives that are supported by expert advice and which NSAC has formally endorsed, including primary HPV screening and NIPT.
	  • At this May 2021 meeting:
	  ○ NSAC applauded the recent announcement that the NCSP will introduce primary HPV screening with the option of self testing during 2023. However, the two-year timeframe was regarded as too long with work to introduce this change sooner encouraged.
	  ○ NSAC noted that the NSU hopes to re-establish inclusion of NIPT in its work programme.

4.	**Upcoming reforms of the health and disability system**
	Wide-ranging discussion took place on the following areas.
	• National screening programmes including:
	  • the importance of public health literacy to enable informed discussion particularly understanding concepts of harms, benefits, overdiagnosis and cancer inequities
	  • that there are difficult concepts underpinning screening eg, understanding the difference between population-wide benefits versus personal benefits from a screening programme, and also that screening is offered to healthy people without symptoms of particular condition
	  • a need for innovative resources (eg, pictorial materials), science communication expertise & writing groups (with an equivalent group needed for Māori health), and lead experts or commentators (potentially a lead agency to support screening); noting the number of advocacy groups in play and that political buy-in is critical to driving decisions even when the mechanism to address a health service issue is obvious

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	• that getting ahead of health disinformation is difficult, with immunisation another example • that health prevention activities are traditionally a lower priority than other health services. • Health and disability system reforms including: • that they can be viewed positively as an opportunity to re-set and address screening related issues • that external/academic voices can contribute to commentary/scrutiny around screening • being wary of a halo effect where all screening is seen as a good thing and harms not considered • development and positioning of consumer voices in the new system and potential for a less ivory tower approach • that engagement with iwi is necessary, for example, through the iwi chairs forum (potentially via Hei Āhuru Mōwai) • anticipation that the Māori Health Authority will prioritise health areas and will have strong links with the Public Health Agency • importance of engagement with Pacific leaders and providers • that large gaps remain around guideline development in New Zealand • that the location of NSU within new structures is not yet known, with concern expressed regarding the risk that NSU policy and operations will be separated. **Action** NSAC will consider more information on the proposed health structure changes at the next meeting, in order to better understand them and to identify potential opportunities for NSAC to affect changes in screening going forward. For example, NSAC could report its recommendations directly to the Minister of Health, as happened prior to the current model where NSAC reports to the Ministry's Deputy Director-General Population Health and Prevention, and the Chief Medical Officer.
5.	**Atrial Fibrillation (AF) screening** **1.** Dr Sally Thomas presented a review of AF screening, international research and recommendations, and provided a preliminary assessment against New Zealand's screening criteria. **Atrial fibrillation (AF) is the most common cardiac arrhythmia and is associated with an increased risk of stroke, cardiovascular disease, cognitive impairment and death.** • It may be paroxysmal, persistent or permanent and can be symptomatic or asymptomatic. • Prevalence is estimated worldwide at two to four percent of all adults, but is much higher in the elderly. • Māori have a higher AF prevalence; Māori and Pacific have an onset around 10 years earlier and higher overall risk of stroke at diagnosis. • There is concern regarding increasing ad hoc implementation of AF screening as part of cardiovascular risk assessment, with some mistakenly believing it is required by new national cardiovascular risk assessment guidelines. • Screening for AF in people without symptoms appears to meet a number of criteria for an organised screening programme. However, robust evidence is lacking on benefits relative to harms of treatment outcomes in screen-detected AF. • The burden of AF and relation to stroke risk is not fully understood and progression of the condition in screen-detected AF is unknown. • Stroke risk and behaviour of screen-detected AF in comparison with clinically detected AF remains unknown.

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	Preliminary consideration against New Zealand's screening criteria *Suitable candidate for screening?* • Important health problem - common with high associated morbidity and mortality. • Inequitable outcomes for Māori and Pacific adults. • Asymptomatic stage with a recognised disease marker - an irregular pulse. • Clear treatment pathways for symptomatic AF and strong evidence treatment reduces stroke risk. However • Current understanding of risks primarily based on symptomatic AF not asymptomatic. • Evidence for asymptomatic AF is based on incidentally identified AF. *Suitable test?* • Pulse palpation, modified blood pressure monitors or handheld single-lead ECGs. • In those with an irregular pulse, a subsequent 12-lead ECG confirms diagnosis (gold standard). However • Wide variability amongst primary care clinicians in identifying an irregular pulse and a low probability that someone with an irregular pulse actually has AF. • Poor interpretation of diagnostic ECGs by primary care clinicians with wide variability. • Increasing number of pulse detection devices available but not all validated. *Effective and accessible treatment or intervention?* • Oral anticoagulants recognised as effective in symptomatic AF where there is an appropriate risk factor assessment. However • Known risk of major bleeding with oral anticoagulants. • Undertreatment of symptomatic AF using existing pathways, particularly for Māori. • No robust evidence for treatment benefit in asymptomatic paroxysmal AF. • Progression of paroxysmal AF to persistent or permanent AF is unclear. • Current stroke risk scores not validated for those with a low burden of AF, leading to potential overtreatment. *High quality evidence that screening is effective?* • Evidence exists on screening effectiveness in detecting AF, but no robust data on outcomes (stroke, cardiovascular disease, mortality etc). • Improved awareness, education & practice in primary care maybe as effective at detecting AF. • Two large randomised controlled trials (RCTs) underway looking at screening and outcomes in UK & Sweden. *Do benefits outweigh harms?* • Screening tests and any subsequent diagnostic ECG appear well tolerated. • Very low rate of incidental findings on ECGs requiring further invasive tests. • Uptake of oral anticoagulants where appropriate is high. • Definite risk of harm (major bleeding) from treatment but benefits considered to outweigh risks in symptomatic AF. However • Not clear if screen-detected AF will behave in same way as symptomatic. • Incomplete understanding of burden of AF and its relation to stroke risk, and current risk scores based on symptomatic AF. • Relatively poor sensitivity and specificity for primary care clinician testing and diagnosis with risk of under- and overtreatment.

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	Health care system capable of supporting the screening pathway? • Accepted guidelines and pathways in place in New Zealand for symptomatic AF. • Majority of eligible patients attend their General Practice within a 12-month period but inequitable access for Māori and Pacific. • NSU has capability and experience to develop, monitor and evaluate screening pathways. • Simple, low-cost index test readily available in primary care. However • Most appropriate methods, frequencies and strategies not yet established. • Significant undertreatment of symptomatic AF currently. • Wide variability between primary care clinicians and relatively poor performance may impact on secondary care involvement. *Consideration of social and ethical issues?* • Limited currently including for New Zealand, particularly for different populations. • Large RCT in Sweden found reduced screening uptake in lower socio-economic areas which improved when alternative centres closer to home were offered. • Known inequities in Māori access to primary care, risk assessments and prescribing of oral anticoagulants • Current evidence based predominantly on risks in non-indigenous populations and in primary care settings. *Consideration of cost-benefit?* • Cost-effectiveness demonstrated through modelling analyses. • Opportunistic screening may be most cost-effective. • Computerised algorithms may be most cost-effective. • Targeting of high-risk groups may be more cost-effective. However • Cost-effectiveness varies depending on country and health care setting. • Studies have assumed screen detected AF will benefit from treatment in the same way as non-screen detected. • No studies comparing screening costs with using resources on education and improvement of detection and management of AF in routine care. **Overseas expert screening committee recommendations** *The UK National Screening Committee does not support a national AF screening programme* • In 2014, following an extensive review of the evidence, the UK Committee recommended against a national screening programme for AF. • In 2018, the UK Committee undertook a rapid review of new evidence from 2011 onwards. • They concluded that pulse detection by palpation or the use of a modified automated blood pressure device by a practice nurse in primary care would be appropriate screening tests, and screening was likely to be cost-effective (both opportunistic and systematic). • However, key criteria for screening were not met and the Committee continued to recommend against screening based on: o evidence gaps around the relative risks of stroke for different types of AF o lack of robust evidence on effectiveness of treatments on outcomes in screen-detected AF or on benefits of screening over routine practice. *The US Preventive Services Task Force (USPSTF) concludes there is insufficient evidence to assess the balance of benefits and harms of screening for AF with electrocardiography (ECG) and recommends against screening.* • In 2018, the USPSTF reviewed evidence for screening adults 65 years and older.

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	• The USPSTF review included 17 studies comprising RCTs, prospective cohort studies and systematic reviews. None of the studies focused on outcomes or harms comparing screening with no screening. Concluded that:
	  • evidence of poor interpretation of ECGs by primary care physicians with risks of overtreatment
	  • clear evidence of risk of major bleed with oral anticoagulants
	  • evidence that risk of bleed outweighed by benefits in stroke reduction in treatment of symptomatic AF, but no robust evidence for asymptomatic or screen-detected AF.
	• The USPSTF is currently undertaking an updated evidence review of AF. Their April 2021 draft evidence review conclusions are similar to the previous review, that is, there is little evidence to evaluate screening benefits and harms, and no trials have assessed the benefits and harms of anticoagulation treatment among screen-detected populations.
	
	Professional body recommendations
	
	• European and Australian professional bodies recommend AF screening predominantly as opportunistic screening in those 65 years or older using pulse palpation or single-lead handheld ECG followed by diagnostic ECG in screen positive.
	• The 2018 Australian clinical guidelines for the diagnosis and management of atrial fibrillation have been endorsed by several professional bodies within Australia.
	• The Stroke Foundation in New Zealand has adopted the Australian AF clinical guidelines. They are also available on the website of the Heart Foundation of NZ along with the 2020 European guidelines.
	• The Stroke Foundation New Zealand offers free heart rhythm checks using a hand-held ECG device for all Māori and Pacific adults 55 years and over, and all non-Māori non-Pacific adults 65 years and over as part of its mobile blood pressure check service. Information is available on the Stroke Foundation NZ website.
	
	New Zealand Ministry of Health guidelines
	
	• In 2018, the Ministry of Health published updated guidelines on Cardiovascular Disease Risk Assessment and Management for Primary Care. AF is mentioned only where an established diagnosis exists as an additional risk factor in assessing overall cardiovascular risk.
	
	Review conclusions
	
	• Limited robust evidence on benefits relative to harms of treatment outcomes in screen-detected AF.
	• The progression of paroxysmal AF and the relationship of AF burden to stroke risk are not fully established.
	• Stroke risk and behaviour of screen-detected AF in comparison with clinically detected AF remains unknown.
	• Wide inter-operator variability in AF detection and interpretation of diagnostic ECGs within primary care with relatively poor performance overall.
	• Randomised controlled trials underway overseas which may help to clarify areas, but results are likely to be at least five years away.
	• Evidence suggests raising awareness of AF amongst primary care clinicians, improving management of known AF and improving organisational practice within primary care may reduce relative benefits of screening.
	• Rapidly developing field with new technology including computerised algorithms, use of biomarkers and improved understanding of the condition.
	• Further research into AF screening in different populations in New Zealand would be useful. This could include prevalence of AF and atrial flutter in different populations; appropriate age of onset for screening by ethnicity and gender; acceptability of screening and screening settings.

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	2. Dr Karen Bartholomew gave a presentation outlining AF screening research within the abdominal aortic research (AAA) programme at Waitemata DHB and Auckland DHB and provided preliminary findings. **Summary of preliminary findings** • AF screening was introduced as part of the 2017-2018 AAA Pilot Extension with aims including assessment of ethnic-specific prevalence of undiagnosed AF in the AAA screening population and exploration of follow-up and treatment of newly diagnosed AF. • New AF prevalence (no history of AF but in AF at screening) was 2% in Māori (2.6% in men and 1.1% in women) and 1.8% in non-Māori (1.3% in men and 2.8% in women). • The pilot in Pacific is yet to be completed but early results (noting low numbers) indicate the overall new AF prevalence is also around 2%. • Of those with a history of AF, and in AF at screening, dispensing of the anticoagulant dabigatran was highest in Māori (48.6% vs 40% in non-Māori); and with warfarin included was higher than expected (86.9% in Māori versus vs 76.7%in non-Māori). • However, only 40% of Māori and 50% of non-Māori with a newly detected AF were subsequently started on dabigatran, with further research required to determine the reasons. • Next steps include completion of the Pacific study, analysis of the whole AF dataset, completion of follow-up, and assessment of Māori and Pacific AAA risk prediction and planning of Northland studies. **NSAC discussion regarding AF screening included:** • results from European RCTs are required to help determine if AF screening in people without symptoms causes more harm than benefit, for example, increased bleeds caused by anticoagulants • potential confusion created by terminology of symptomatic/asymptomatic AF with suggestion that using terms detected/undetected may be a better approach • ultimately risk stratification is needed when detecting AF, that is, the risk of stroke; however, the burden of AF may be more relevant to outcome as brief AF episodes found by chance may not have a significantly elevated stroke risk regardless of subsequent risk stratification • AF screening can't be cost effective if it isn't first shown to be effective. Effectiveness isn't detection (which is the first step for all screening); it is improving outcomes (ie stroke reduction) but this has not yet been demonstrated. While there are cost effectiveness modelling studies, these are either based on detection with various assumed benefits or assume a specified stroke reduction benefit • the BNP (N-terminal pro-brain natriuretic peptide) blood test to determine risk of stroke in those with AF has real potential going forward • international research indicates that improving the systematic processes/structures in primary care will provide better AF outcomes • achieving optimal consistent treatment of known AF is important, however development of treatment/management guidelines are outside NSU scope • international research cannot answer a range of questions for New Zealand Māori and Pacific populations, with the need to identify research questions for New Zealand to answer before or when the international research comes in, especially since Māori AF prevalence is higher and there is earlier onset for Māori and Pacific • potential for broader research questions re screening to be taken to the HRC. **NSAC conclusions regarding AF screening** • AF screening clearly does not meet the New Zealand criteria for a national screening programme. • This finding aligns with international expert screening committee findings, that is, the USPSTF and UK National Screening Committee.

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	NSAC recommendation regarding AF screening • NSAC will maintain a watching brief of the evidence for AF screening, international research and evolving guidelines. • NSAC encourages further research into AF and screening within different population groups in New Zealand.
6.	**NSU equity strategy** Dr Dougal Thorburn (NSU Public Health Medicine registrar) sought NSAC advice on development of the NSU's Te Tiriti o Waitangi and Equity Strategic Plan, including the formation of a project governance group. Considerations to date have included key strategies, action plans and Ministry initiatives such as the: • He Korowai Oranga and Whakamaua: Māori Health Action Plan 2020-2025 • Ola Manuia: Pacific Health and Wellbeing Action Plan 2020-2025 • Ministry of Health's Te Tiriti o Waitangi Framework • Population Health and Prevention Directorate: Te Tiriti and Equity Programme • Waitangi Tribunal Service and Outcomes Kaupapa Inquiry - WAI2575 • New Zealand Disability Strategy • Health and Disability System Review and White Paper. **Discussion included:** • that the NSU's Māori Monitoring and Equity Group (MMEG) does not currently provide a formal update to NSAC and this gap could be closed • the NSU's focus has been equity of access and outcomes • it is critical to identify what needs to happen to ensure equity going forward given major changes currently happening in health system; NSU service delivery must continue whatever the ultimate health system structure and where the NSU is located • importance of Māori governance, co-design, NSU recruitment strategy and Māori Directorate engagement • NSU must prioritise recruitment of Māori staff • the need to consider existing programmes as well as new programmes (future directions) • that while the WHO Wilson and Jungner screening criteria do not specify equity, a number of New Zealand's screening criteria consider equity in their supporting narrative • agreed a NSU Equity Strategic Plan is necessary and the model of thinking needs to change with inclusion of system thinking • suggested the NSU undertake a Te Tiriti audit as provides a good starting place to identify non-compliance, and can then identify actions • the ultimate deliverable / outcome described as: • New Zealand people having access to high quality preventive services, including screening, that aligns with their reality. That is, get the service at the right time in the right way and delivered in a way that enhances the mana of the person and family in a family-centred way - in their community and in a way that works for them. • a member's observation that under the United Nations Declaration on the Rights of Indigenous Peoples, people have the right to develop their own programmes with delivery through their own institutions, and the State has responsibility for funding • Māori models of care are not at the forefront of services. Their facilitation is through the workforce; and commissioning at the community level is required.

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7.	**Universal offer of self-testing when the NCSP introduces primary HPV screening.** In July 2019 NSAC endorsed • The offer of self-testing for priority groups when primary HPV screening is introduced. • In principle, the implementation of the offer of primary HPV self-testing to all women. It was noted that the NCSP would seek NSAC's endorsement of the timing of the programme change to include the offer of self-testing to all women. **The universal offer of self-testing is the clear and preferred implementation option from the outset of the programme change to primary HPV screening**. • This approach provides the greatest health gain, supports reduction in the equity gap and aligns New Zealand with international moves towards implementing self-testing for all women. • New Zealand and international research, as well as overseas programme developments related to primary HPV self-tests, have informed this final policy decision to include the offer of the self-testing option to all women when primary HPV screening is introduced. • Self-testing will allow women attending a clinic to either collect a vaginal swab and return it to attending clinical staff for HPV testing; or for a healthcare provider to collect the vaginal swab. Women may also choose to have a speculum examination to allow a cervical cytology sample to be taken for primary HPV testing. • Self-testing provides greater opportunity for opportunistic testing and is a key strategy to achieve equitable access and outcomes for priority populations. When HPV self-testing is first introduced, the NCSP will not post kits for women to take the test at their home as the logistics of this approach requires considerable further work. • To assist in achieving the programme's equity aims, the NCSP also intends to offer increased support services for Māori and Pacific women and a wider package of targeted free screens. • Introducing primary HPV screening with self-testing will provide a level of future-proofing in the face of current and potential future pandemics by enabling screening to continue while reduced face-to-face contact with health professionals is required. **Discussion included:** • expectation that primary HPV screening will reduce cervical screening costs for women when they attend primary care • the potential for the sample to be taken at home (with appropriate support as required) • however, mail out of swabs is logistically challenging and not proposed by the screening programme at this stage. It may be a future option, acknowledging barriers for women who do not access clinical services • self-testing solely in primary care/GP practices was not supported due to barriers/issues that exist for some high need population groups • members agreed that women should have a choice of setting including mail out (similar to mailout kits used by the bowel screening programme, although costly) • HPV test kits sent out on request is one approach, and HPV self-tests should be free like bowel screening • metro Auckland research is proposed for "mail on demand" HPV-self testing as mail out of swabs to all women is too expensive • questioning of how the model for HPV-self testing is being developed? The NCSP must ensure the change is equity positive, which requires that equity is planned in • transition to primary HPV screening includes funding for increased colposcopy capacity and support to screening services • governance structure for programme will include Māori, noting input from the NSU's Māori Monitoring and Equity Group (MMEG) and NCSP advisory groups

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	• NSAC requires assurance there a pro-equity approach will be progressed asking to see the NCSP Project Structure; and suggested the NSU link Hei Āhuru Mōwai into the NCSP development of its approach. **NSAC recommendation** NSAC endorsed the offer of self-tests to all women when primary HPV screening is introduced. **Action:** Provide NCSP primary HPV screening project structure at next NSAC meeting.

8.	**NSU Programme Updates**
	
	The NCSP
	
	• Public consultation is underway regarding the offer of self-tests from the outset of the introduction of primary HPV screening.
	• The change in cervical screening starting age to 25 years.
	  • Monitoring of the cohort of women turning 25 years of age shows the proportion who had their first cervical screen in 2020 and 2021 is well below the achievable standard. The delays in cervical screening during the COVID lockdown periods does not account for the size of the decline. The NCSP is planning to re-launch its social media campaign and message primary care regarding this age-group.
	  • Noted that most recently there has been an overall increase in screening uptake following high profile media coverage of cervical cancer.
	
	The National Bowel Screening Programme
	
	• National rollout continues with the upcoming addition of the West Coast bringing the number of participating DHBs to seventeen.
	• Ongoing issues are occurring in some DHBs with colonoscopy capacity.
	
	The Antenatal and Newborn Screening Programme
	
	• Public consultation for the pulse oximetry screening guideline is underway.
	• Looking to re-start work on NIPT and currently seeking information on the number of NIPTs performed in the private sector.
	
	Hei Āhuru Mōwai has completed position statements on primary HPV screening, bowel screening age-extension and lung cancer screening. Statements are also being prepared on liver cancer (Hepatitis B) and H pylori (stomach cancer) screening.
	
	Action: MMEG will provide updates of its NSU programme considerations at future meetings.

9.	**NSAC 2021/22 workplan** Discussion included: • consideration could be given to additional conditions, such as diabetic retinopathy and gestational diabetes, noting that the UK Screening Committee reviews include these conditions • the Ministry of Health cross-sector working group's development of a draft Hepatitis C National Action Plan, with sign-off anticipated shortly. High risk targeted screening is currently recommended. Universal testing was considered during the Action Plan's development and there is potential for its further consideration. Hepatitis C screening is not managed by the NSU. • a further update on syphilis screening in pregnancy was requested, that is, whether an additional screen is required.

Item	Subject and summary
	Action: List NSAC recommendations in a separate table and add equity prioritisation to the workplan.
10.	**Meeting dates 2021:** Meetings originally planned for 4 August and 24 November will be combined, with the next meeting date to be determined. Meeting closed at 1500hrs.