Scottish Equity in Screening Strategy 2023-2026

Scottish Government
Riaghaltas na h-Alba

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Contents

Introduction

Stark inequalities exist within Scotland's national screening programmes. These inequalities are unfair and avoidable and – despite effort in recent years – have not improved meaningfully.

We face a number of challenges. In particular, our knowledge of where inequalities exist, and for whom, remains unacceptably limited. Some groups of people can experience barriers to participation, and our understanding of such barriers and how to address them is incomplete. We also lack evidence of our impact to mitigate against inequalities in screening.

This doesn't mean that there has been no progress in recent years. In terms of national interventions, the greatest impact on inequalities has been the introduction of the faecal immunochemical test (FIT) in the Scottish bowel screening programme in November 2017. The FIT provides a more acceptable screening test for participants, and this has led to an increased uptake in bowel screening by men, and a slight reduction in the gap in uptake between those living in more deprived areas and more affluent areas. However, despite this, bowel screening continues to have the lowest uptake of all screening programmes. There is no one single thing that will address persistent inequalities.

At a local level, the impact of interventions by NHS Boards is likely to have resulted in positive changes to screening inequalities. However, the quality of evidence associated with local intervention makes it difficult to document impact, and to make the case to scale up interventions more widely across the country.

There is much to do, but we benefit from an engaged and committed community of professionals across the screening landscape. This first *Equity in Screening Strategy,* which has been produced in collaboration with all of those with an interest, sets out our vision to achieve equity for those eligible for screening. We document five areas where we think action is needed and we describe the outcomes we want to achieve.

This is a complex issue and success will only be achieved through incremental improvements and a sustained focus over the longer term. Progress will require leadership, collaboration and ambition, and this work must be a priority for Scotland's national screening programmes, and for everyone who supports them. Everyone involved, across the full screening pathway, must acknowledge the issue, understand the challenge, and take evidence-based approaches to better support those people who will benefit the most.

Gareth Brown, Scottish Director of Screening

Who "we" are

This strategy uses the terms 'we' and 'our' throughout to refer to the organisations involved in delivering screening in Scotland. These organisations include Scottish Government, NHS Boards, NHS National Services Scotland, Healthcare Improvement Scotland, Public Health Scotland, Local Authorities and Health and Social Care Partnerships. The third sector, independent sector, and academic organisations are also involved in supporting screening and have important contributions to make towards tackling inequalities.

This strategy outlines how 'we' as a screening system will address inequalities, to achieve our vision of equity in access to screening. We must work together to achieve our vision and long-term outcomes. We must also engage people from under-served groups in our approach.

Different organisations will take the lead on delivering aspects of the strategy. The Strategy Action Plan (appendix 1) provides further detail on this.

To successfully reduce inequalities in screening there needs to be long-term change at all levels, with a multi-agency effort.

Vision

Our vision is for equity in access for all eligible people, across the full screening pathway.

Our long-term outcomes

The strategy was produced by a group of people from the screening system coming together to form a reference group. We identified five priority themes where action to tackle screening inequalities and improve equity of access is needed. For each of these themes we have identified the outcomes we must deliver to achieve our vision.

The five priority themes we identified are:

- Communications, engagement, and learning
- Access to screening
- Data collection and monitoring
- Research and evaluation
- 'Overarching issues'

We will achieve our vision by delivering on six long-term outcomes:

- **Outcome 1a:** All eligible people are aware of the relevant national screening programmes, understand the benefits and harms of screening, and can make an informed personal choice with regards to their engagement across the screening pathway.
- **Outcome 1b:** Professionals working to support the national screening programmes are knowledgeable of the inequalities that exist across the screening pathway and use effective interventions to reduce inequalities.
- **Outcome 2:** We have a strategic approach to identifying, addressing, and removing barriers to participants across the screening pathway.
- **Outcome 3:** We collect and use data on a wider range of person characteristics to strengthen our understanding of where inequalities exist across the screening pathway.
- **Outcome 4:** We ensure action to reduce inequalities in screening is evidence-based and have a robust and consistent approach to evaluating the impact of interventions.
- **Outcome 5:** We have a whole system approach to tackling inequalities in screening. Reducing inequalities is recognised by all as a priority and is supported by the screening governance groups and the commitment of all partners.

Context and background

National population screening programmes

Screening is a way of identifying people who appear healthy but who may have a higher chance of having a disease or condition[1]. Screening aims to detect early signs of a condition, enabling earlier treatment and improved health outcomes. Screening also provides better outcomes for the health service, by reducing demand on services associated with more serious or later-stage disease.

There are currently six national population screening programmes delivered in Scotland (see Table 1 below). These programmes have been introduced based on recommendations from the UK National Screening Committee. Each screening programme proactively invites people who, on the basis of age and sex, have a higher risk of the disease or condition.

Individuals can decide not to engage in a screening test, or to withdraw from interventions at later stages in the pathway after screening. This decision should be a personal informed choice. This means, a person should have access to accurate, evidence-based information in a format which meets their needs.

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[1] NHS Inform, '*Screening*' (2022), Introduction to screening in Scotland | NHS inform [accessed 06 June 2022].

Table 1: Overview of the Scottish national screening programmes by eligible population and screening interval

National Screening Programme	Eligible Population	Screening Interval
Scottish Abdominal Aortic Aneurysm (AAA) Screening Programme	All men and people assigned male at birth aged 65	One-off screen
Scottish Bowel Screening Programme	People aged 50 to 74 People aged 75 and over can request a screening test but will not be routinely invited	Every 2 years
Scottish Breast Screening Programme	Women and people assigned female at birth aged 50 to 70 Those aged 71 to 75 can self-refer for breast screening. To note, due to the effect of COVID-19 on screening capacity, self-referrals are temporarily restricted to those aged 71-75 years and those aged 71 and over with a history of breast cancer.	Every 3 years
Scottish Cervical Screening Programme	Women and people with a cervix, aged 25 to 64	Every 3-5 years depending on findings
Scottish Diabetic Eye (DES) Screening Programme	People aged 12 and over with type 1 or type 2 diabetes	Every 1-2 years depending on findings
Scottish Pregnancy and Newborn Screening Programme	Pregnant women and people who are pregnant. Various tests from before 10 weeks, through to between 18 to 21 weeks. Newborn babies. Various tests within the first days and weeks.	Various one-off screens including some with a two stage process

Screening includes both a 'screening pathway' and a 'treatment pathway' (Figure 1). Screening programmes invite people from an eligible population for a screening test. Depending on the outcome of that test, some people will then be invited for a

diagnostic test as the final step in the screening pathway. Following a positive diagnosis, an individual is then referred into the treatment pathway. Individuals must complete their journey through the screening and treatment pathways to improve health outcomes.

It is important to understand that inequalities can occur at any point along the screening or treatment pathways.

Figure 1: The stages or components of the screening and treatment pathways
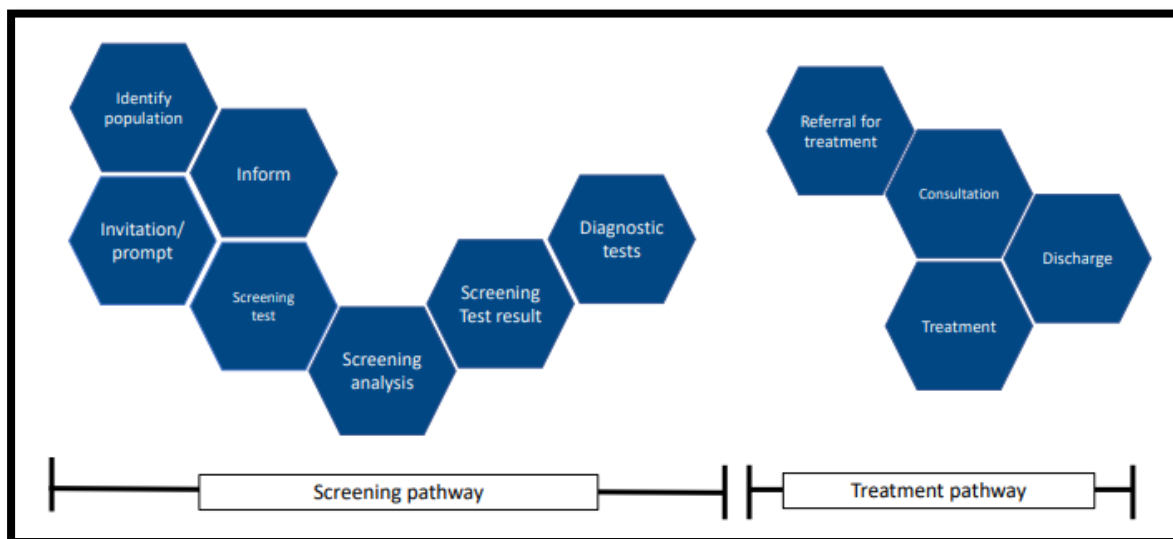
Source: National Services Scotland (2022), A guide to National Population Screening in Scotland.

How the strategy has been developed

A great deal of national and local NHS work has been undertaken to address inequalities in screening in the past. Often though, this has lacked dedicated and sustained system-wide leadership, and that lack of leadership has affected the momentum for tackling inequalities at scale across screening programmes.

In 2022, National Screening Oversight (NSO) – which was established in early 2020 to provide oversight, assurance, and direction to Scotland's national screening programmes – identified an opportunity to provide greater direction and leadership to reducing inequalities in screening.

NSO engaged key stakeholder and partner organisations in a reference group to discuss how best to drive improvement in inequalities, and the production of this strategy and separate action plan (appendix 1). Representation included Scottish Government, NHS Boards, third sector organisations and academic institutions (appendix 2).

The reference group met five times between July 2022 and April 2023 and identified five priority areas for improvement and action:

- Communications, engagement, and learning
- Access to screening
- Data collection and monitoring
- Research and evaluation
- 'Overarching issues'

The theme of 'overarching issues' was discussed by the reference group. The remaining four priority areas were explored in more detail by four corresponding sub-groups. Sub-groups met on several occasions between October and December 2022 to agree a range of actions needed to address the main challenges to uptake and engagement across the screening pathway.

For all five sub-themes, long-term outcomes have been agreed (as set out above), detailing what we will need to deliver if we are to achieve our vision.

Data and evidence have played a central role to the development of this strategy. Public Health Scotland has provided valuable insight into the published data. Systematic reviews have provided the published evidence, together with some Scottish research studies.

NSO carried out an equality and fairer Scotland impact assessment (EFSIA) with partner organisations to help us consider the likely effects of the strategy on different groups eligible for screening. A copy of the EFSIA is available on request.

In collaboration with the reference group and sub-groups, NSO has written this strategy and separate action plan. The National Screening Oversight Board (NSOB) will be responsible for overseeing the implementation and delivery of these.

Understanding inequalities in screening

Health inequalities

Health inequalities are the observable differences in the health of individuals or groups within a population. Some people use 'inequalities' to signify differences between groups and 'inequities' to signify unjust differences between groups. 'Inequality' is the more commonly used term and has been adopted throughout the strategy to mean unfair, and avoidable, systematic differences in health or health access between groups.

In the Scottish screening programmes, we want to achieve equity of opportunity to access screening, and equal benefit from screening for all eligible individuals.
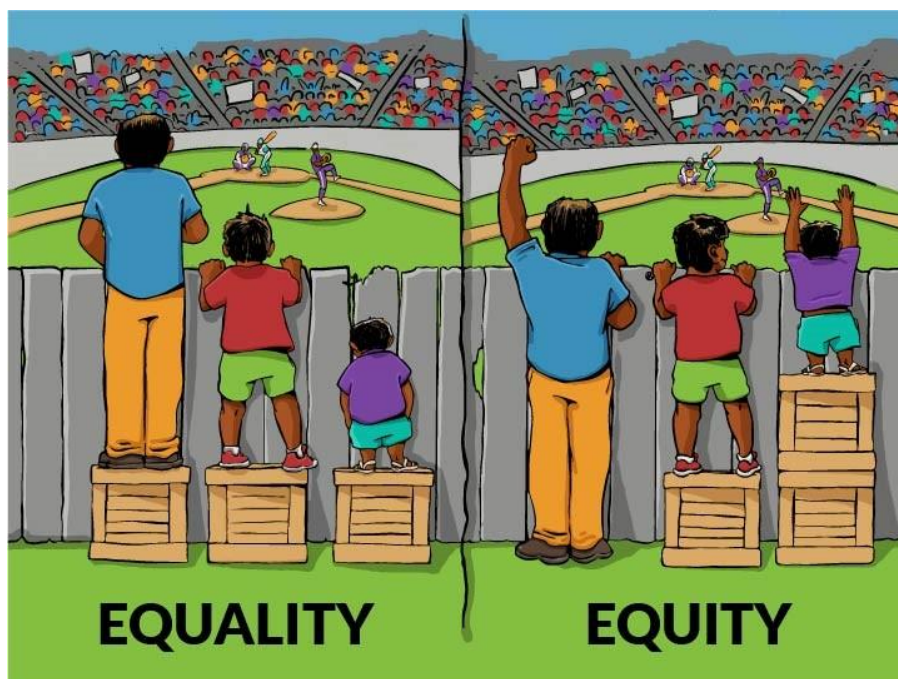
Source: Interaction Institute for Social Change: Angus Maguire

The existence of health inequalities in Scotland means that not everyone enjoys an equally high standard of physical and mental health. This is clearly demonstrated by differences in life expectancy for example. People's physical and mental health is influenced by factors such as housing, education, employment, and income. Systematic variation in these factors forms social inequalities, which are drivers of health inequalities. These factors are largely beyond an individual's control, yet they can lead to disadvantage, and limit some people's chance to live longer and healthier lives. Health inequalities are unfair and avoidable.

A 2022 review by The Health Foundation[2] reported improvements in life expectancy, and inequality, in Scotland through the 2000s. A period of stagnation then follows through the 2010s, and inequality in life expectancy widens.

Average life expectancy in Scotland is significantly lower compared to other parts of the UK and Western Europe[3]. Furthermore, people in the most affluent areas in Scotland experience more years of good health than those in the poorest areas. Men in the most affluent areas experience 23.8 more years of good health, and women experience 22.6 more years[3].

Health inequalities are complex, persistent, and deeply entrenched in our society. They are not inevitable and can be addressed through societal and political actions across all the social factors that shape health and wellbeing. Addressing the

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[2] Finch, David., Wilson, Heather, and Bibby, Jo. 'Leave no one behind, the state of health and health inequalities in Scotland'. *The Health Foundation* January 2023. <Leave no one behind - The Health Foundation> [accessed 01 February 2023].

[3] Public Health Scotland, '*What are health inequalities*' (2021), <What are health inequalities? - Health inequalities - Public Health Scotland> [accessed 01 September 2022].

fundamental causes of health inequalities – the unequal distribution in society of income, wealth, and power[4] - is outwith the scope of the strategy. We can however address inequalities in access to and experience of the screening pathway.

Under-served groups

Health inequalities are experienced by a range of groups. Throughout the strategy we refer to 'under-served'[5] groups of people. By this, we mean people who experience social inequality, stigma, discrimination, or a lack of opportunity, which makes it difficult for them to make an informed choice or to access screening. Often, people fall into more than one under-served group at the same time.

Under-served groups may find that communication of the benefits and harms of screening do not meet their individual needs. They may experience barriers which make it more difficult to access screening and diagnostic services or to benefit from the later treatment pathway.

Examples of those groups identified as under-served include those living with severe mental illness, people with learning disabilities, those experiencing homelessness, in prison or institutions, asylum seekers and refugees or those from gypsy and traveller groups. And, more broadly, people living in socioeconomic deprivation. The more disadvantaged an individual's social position, the worse their health. This is known as the social gradient in health[6].

Under-served groups also include people who share one or more of the nine protected characteristics of the Equality Act 2010[7].
- Age
- Disability
- Gender reassignment
- Pregnancy and maternity
- Race
- Religion or belief
- Sex
- Sexual orientation
- Marriage and civil partnership.

Lower uptake of screening by a population sub-group, including those listed above, may increase inequalities. If any one sub-group is less likely to engage with the full screening pathway, this could lead to differences in health status between different groups.

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[4] Public Health Scotland, '*Fundamental causes, the primary causes of health inequalities in Scotland*' (2021), <Fundamental causes - Health inequalities - Public Health Scotland> [accessed 06 June 2022].

[5] Note: We have chosen to write 'under-served' in this way to avoid this being misread as 'undeserved'

[6] Marmot, Michael., Goldblatt, P., Allen, Jessica, et al. 'Fair Society, Healthy Lives: the Marmot Review: strategic review of health inequalities in England post-2010'. *Institute of Health Equity* 2010. <Fair Society Healthy Lives (The Marmot Review) - IHE (instituteofhealthequity.org)> [accessed 03 September 2022].

[7] *Equality Act 2010'* (c.1) [online] <Equality Act 2010 (legislation.gov.uk)> [accessed 08 August 2022].

Public bodies have a legal requirement to protect individuals from discrimination and unfair treatment and promote fair and equal access and opportunities. We must minimise the barriers and ease access for under-served groups in screening.

Inequalities in the Scottish screening programmes

National screening programmes aim to identify and invite all eligible people to engage in the same high-quality pathway. Screening standards outline a national minimum level of service to deliver person-centred, safe, and effective care. Some aspects of the current screening standards incorporate addressing inequalities. We know however, that some individuals and groups may still experience additional barriers, which can result in inequalities in access and outcomes.

There are complex reasons why people do not engage in screening. These can also vary between and within different individuals and groups. People can experience barriers at any point in the pathway and may do so more than once.

Research provides some insight into the barriers to screening[8]. Where and how screening is delivered can be a barrier. Service level barriers include resource and capacity issues and the knowledge and skills of the screening workforce. The way screening is delivered can also create barriers for people with different needs, where the system does not meet these. Individual level barriers include limited fluency in English, cultural beliefs, anxiety surrounding the process and result, perceptions about eligibility, previous experience of the health system, and transport costs. Physical and learning disabilities, age and severe mental illness are other examples of barriers people may face.

Data shows that the offer of screening is not taken up equally by all people in Scotland. Those with a higher chance of developing a condition are often less likely to engage in screening[9]. For example, those living in more deprived areas, those living with a physical or learning disability, those from Black, Asian, or other minority ethnic groups, and men are less likely to take up an offer of screening. The uptake of screening varies both within and between each screening programme. We also know that some people are less likely to complete the screening pathway or engage in treatment after the initial screening test, but we do not understand why. These gaps in the data and research need to be addressed to help us better understand who is most at risk of experiencing inequalities in screening and how to implement evidence-based interventions and actions to best address these.

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[8] Robb, Kathryn A. 'The integrated screening action model (I-SAM): A theory-based approach to inform intervention development', *Preventative Medicine Report*, 23.101427 (2021) <The integrated screening action model (I-SAM): A theory-based approach to inform intervention development - ScienceDirect>.

[9] Office for Health Improvement and Disparities, 'Population screening: review of interventions to improve participation among underserved groups', *UK Gov*, 27 January 2022. <Population screening: review of interventions to improve participation among underserved groups - GOV.UK (www.gov.uk)> [accessed 14 September 2022].

Our knowledge of inequalities in screening continues to develop. The more we understand, the better we can improve access across the pathway for everyone.

The COVID-19 pandemic will likely have exacerbated existing screening inequalities[10]. Due to limited collection of screening inequalities data however, the impact of the pandemic on inequalities in the Scottish screening programmes is largely unknown at this point. More broadly, the effect of the pandemic on inequalities was significant and the impact was unevenly spread across society[11]. Delivery of the Scottish screening programmes was significantly impacted. As, in response to the pandemic, Scottish Government paused all screening programmes, except for Pregnancy and Newborn, on the 30th of March 2020. Service delivery resumed between June and October 2020 and varied between programmes.

Data gaps

At a national level, there is a significant gap with regards to inequalities data for the pregnancy and Newborn screening programmes. Data is not available at a national level for all components of the programme and therefore no national reports are produced to identify and monitor inequalities. Some inequalities data is available at NHS Board level, although there is a lack of clarity regarding what data is available across all NHS Boards.

For DES, key performance indicator (KPI) reports have not been available since 2019, due to IT system challenges. This has resulted in a gap in knowledge of recent inequalities data and trends. Provisional data is now available for 2021-2022, although the report is still being refined to reflect the change in screening interval from 1 to 2 years for low-risk participants. In the absence of validated data this has not included in the Strategy. The Diabetic Eye Screening (DES) IT system has a live feed from the clinical management system SCI Diabetes where information such as ethnicity is recorded. This allows uptake by ethnicity to be examined, although consistency and accuracy of capturing and reporting ethnicity data can be problematic.

For the remaining screening programmes, analysis of screening uptake at a national level is only possible for age, sex, and deprivation. Although some NHS Boards have managed to obtain richer data, data intelligence on other characteristics, e.g., ethnicity, language, disability, or homelessness, this is limited and is mostly unavailable.

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[10] Campbell, Christine, Sommerfield, Tasmin, Clark, Gavin, et al. 'COVID-19 and cancer screening in Scotland: A national and coordinated approach to minimising harm'. *Preventive medicine* 151 (2021) <COVID-19 and cancer screening in Scotland: A national and coordinated approach to minimising harm - ScienceDirect> [accessed 12 September 2022].
[11] The Scottish Parliament, 'Health Inequality and COVID-19 in Scotland', (2021), Health inequality and COVID-19 in Scotland | Scottish Parliament [Accessed 29.06.2022].

Inequalities can occur at any point along the screening pathway. There is a significant gap in analysing data for inequalities beyond initial uptake, with very limited knowledge of data collection, access or reporting at these later points.

These data gaps mean we are unable to quantify the full extent of screening inequalities that exist across the Scottish screening programmes.

Inequalities in uptake of screening

Uptake of screening is one indicator of performance of the national screening programmes. Differences in uptake are observed across the programmes[12,13,14,15].

Uptake by deprivation

People living in the more deprived areas in Scotland are less likely to participate in screening (Figure 2), which can contribute to board-level differences in uptake. The inequality gap in uptake from the least deprived areas to the most deprived areas is 16.5% in AAA screening, 20.9% in bowel screening, 18.8% in breast screening and 10.6% in cervical screening[12,13,14,15].

In cervical screening, women aged 50-64 years have a greater difference in uptake by deprivation than any other age group (15.7% between the least and most deprived compared with 6.8% in women aged 25–49-years).
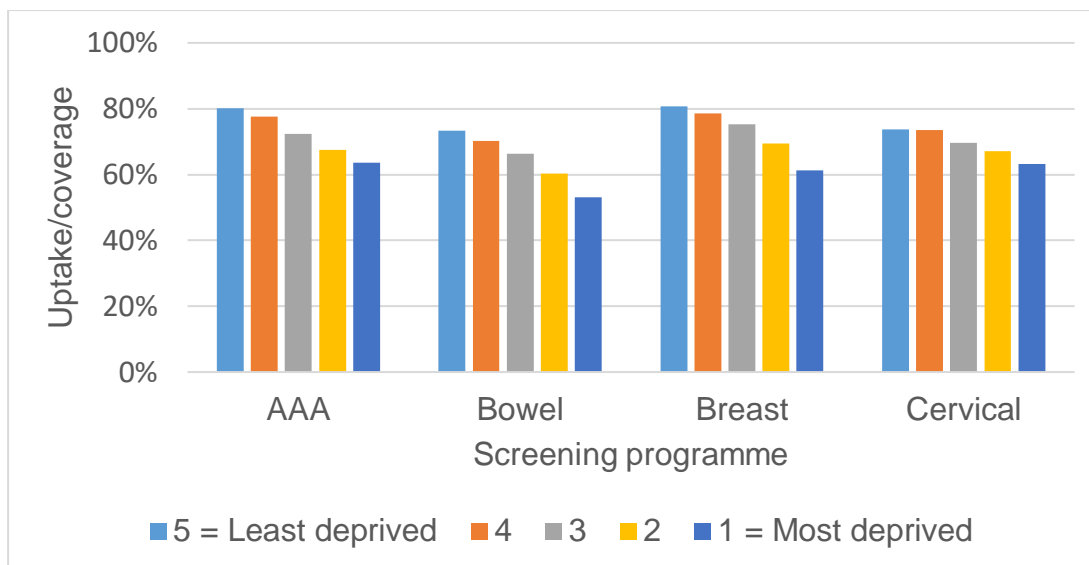
Figure 2: Screening uptake by deprivation quintile and screening programme

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[12] Public Health Scotland, 'Scottish Abdominal Aortic Aneurysm (AAA) screening programme statistics', *Public Health Scotland* 07 March 2023. < https://publichealthscotland.scot/publications/scottish-abdominal-aortic-aneurysm-aaa-screening-programme-statistics/scottish-abdominal-aortic-aneurysm-aaa-screening-programme-statistics-year-ending-31-march-2022/ > [accessed 16 May 2023].

[13] Public Health Scotland, 'Scottish bowel screening programme statistics', *Public Health Scotland* 21 February 2023. <https://publichealthscotland.scot/publications/scottish-bowel-screening-programme-statistics/scottish-bowel-screening-programme-statistics-for-the-period-of-invitations-from-may-2020-to-april-2022/ > [accessed 16 May 2023].

[14] Public Health Scotland, 'Scottish breast screening programme statistics', *Public Health Scotland* 25 April 2023. <https://publichealthscotland.scot/publications/scottish-breast-screening-programme-statistics/scottish-breast-screening-programme-statistics-annual-update-to-31-march-2022/> [accessed 16 May 2023].

[15] Public Health Scotland, 'Scottish cervical screening programme statistics', *Public Health Scotland* 05 October 2021. <https://publichealthscotland.scot/publications/scottish-cervical-screening-programme-statistics/scottish-cervical-screening-programme-statistics-annual-update-to-31-march-2021/> [accessed 01 September 2022].

Source: Public Health Scotland, latest publication

Screening test positivity by deprivation

Differences in positive screen results are observed by deprivation. For example, in AAA screening, men from the most deprived areas have a higher rate of positive results (1.8%) compared to men from the least deprived areas (0.9%), although they are less likely to participate in screening. Bowel screening exhibits a similar trend, with analysis undertaken at the introduction of FIT screening showing a positivity of 4.3% in the most deprived and 2.4% in the least deprived quintile[16].

Following a positive screen result, individuals will be offered diagnostic tests to confirm if they have the condition for which they are being screened. Our understanding of inequalities at later points in the screening and treatment pathways is more limited than for uptake. Despite this we know that inequalities exist. For example, in bowel screening, analysis of programme data shows that, in those with a positive test, those from the most deprived quintile are 8 percentage points less likely than those from the least deprived to attend for colonoscopy13 above[13].

Uptake by sex [17]

Bowel screening invites both men and women participants. Differences in uptake are observed between sexes, with men having a lower uptake of bowel screening (64.3%) compared with women (69.1%)[13].

Differences in sex also exist later in the bowel screening pathway[13], with women slightly less likely to attend for colonoscopy than men despite being more likely to

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[16] Clark, Gavin., Strachan, Judith A., Carey, Frank A, et al. 'Transition to quantitative faecal immunochemical testing from guaiac faecal occult blood testing in a fully rolled-out population-based national bowel screening programme', *Gut,* 70 *(*2021), 106-113 <Transition to quantitative faecal immunochemical testing from guaiac faecal occult blood testing in a fully rolled-out population-based national bowel screening programme | Gut (bmj.com)> [accessed 12 September 2022].

[17] Note: Sex refers to what is recorded on an individual's Community Health Index (CHI) number, this may differ to how an individual identifies their gender. In the future, we aspire to also collect screening data on gender.

return a test kit initially (73.9% in women vs. 75.0% in men). Women are also less likely to have their screening colonoscopy completed according to programme data (91.9% vs. 95.7% in men). Published evidence from England[18] also shows that women are more likely to have a cancer detected following a negative colonoscopy (a post-colonoscopy cancer) across all referral pathways.

Uptake by age

The eligible population is invited for breast-, bowel-, cervical-, and diabetic eye-screening repeatedly over a defined time period and interval. Uptake of each programme is observed to vary by age group, with younger age groups less likely to participate in screening than older age groups.

Uptake of cervical screening is lowest in women aged 25-29 years (55.4%) and highest in 50–54-year-olds (78.8%)[15]. Uptake of breast screening also increases with age and previous engagement, with those in their first screening round (aged 50-52) having uptake of 76.2%, and those in a subsequent screening round having uptake of 89.2%[19]. Bowel screening exhibits a similar trend, with analysis undertaken at the introduction of FIT screening showing uptake of 57.5% in the 50-54 age group and 71.3% in those aged 65-69[16].

Recent, validated uptake data for the Scottish diabetic eye screening programme is not currently available. UK evidence, however, shows attendance of diabetic eye screening is consistently low in young adults aged 18 to 34 years[20].

Uptake by other groups

We know from the literature that numerous other groups are more likely to experience inequalities in screening. These include:

- certain ethnic groups[21]
- People with physical disabilities
- People with learning disabilities[23]
- transgender people
- people with severe mental illness[24]

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[18] Burr, Nicholas E., Derbyshire, Edmund., Taylor, John, et al. 'Variation in post-colonoscopy colorectal cancer across colonoscopy providers in English National Health Service: population based cohort study', *BMJ* 367 (2019), <Variation in post-colonoscopy colorectal cancer across colonoscopy providers in English National Health Service: population based cohort study | The BMJ> [accessed 12 September 2022].

[19] Unpublished data from the Scottish Breast Screening System

[20] Prothero, Louise., Cartwright, Martin., Lorencatto, Fabiana, et al. 'Barriers and enablers to diabetic retinopathy screening: a cross-sectional survey of young adults with type 1 and type 2 diabetes in the UK'. *BMJ Open Diabetes Research and Care*, 10 (2022) <Barriers and enablers to diabetic retinopathy screening: a cross-sectional survey of young adults with type 1 and type 2 diabetes in the UK | BMJ Open Diabetes Research & Care> [accessed 12 September 2022].

[21] Campbell, Christine., Douglas, Anne., Williams, Linda, et al. 'Are there ethnic and religious variations in uptake of bowel cancer screening? A retrospective cohort study among 1.7 million people in Scotland'. *BMJ,* 10 (2020) <Are there ethnic and religious variations in uptake of bowel cancer screening? A retrospective cohort study among 1.7 million people in Scotland | BMJ Open> [accessed 12 September 2022].

- people in long term care[25].

National data within the Scottish screening programmes is limited mainly to uptake by age, sex, and socioeconomic status. Data on the above under-served groups is not currently collected at a national screening level. UK evidence and data from England's population screening programmes provide some insight on screening inequalities for certain under-served groups, as shown by the following examples.

- Ethnic minority women are more likely to book late for antenatal care and engage less with screening[22]
- Uptake of breast screening is lower in women with a learning disability compared to the general population[23]
- People with severe mental illness (SMI) are 20% more likely not to have participated in cervical screening[24]
- Women in prison are less likely to have had cervical screening[25].

Inequalities in cancer incidence and mortality

A deprivation gradient exists for bowel, breast and cervical cancer incidence and mortality. When adjusting for age and sex (where appropriate):

For bowel cancer, incidence[26] is 14% higher and mortality[27] 36% higher in the most deprived vs. the least deprived quintile. Similarly, for cervical cancer, incidence is more than double and mortality more than three times higher in the most deprived vs. the least deprived quintile. Conversely, breast cancer incidence is 7% lower in the most deprived group, though mortality is 14% higher[26,27].

Bowel cancer incidence in men is also around 45% higher than women and mortality is around 50% higher.

[22] Public Health England, 'ANNB screening: identifying inequalities', *UK Gov* 25 August 2021. <ANNB screening: identifying inequalities - GOV.UK (www.gov.uk)> [accessed 08 August 2022].
[23] Public Health England, 'Population screening: reducing inequalities for people with a learning disability, autism or both', *UK Gov* 14 June 2021. <Population screening: reducing inequalities for people with a learning disability, autism or both - GOV.UK (www.gov.uk)> [accessed 06 August 2022].

[24] Public Health England, 'Population screening: improving access for people with severe mental illness', *UK Gov* 23 September 2021. <NHS population screening: improving access for people with severe mental illness - GOV.UK (www.gov.uk)> [accessed 06 August 2022].

[25] Public Health England, 'NHS population screening: improving access for people in secure and detained settings', *UK Gov* 19 March 2021. <NHS population screening: improving access for people in secure and detained settings - GOV.UK (www.gov.uk)> [accessed 06 August 2022].
[26] Public Health Scotland, 'Cancer incidence in Scotland to December 2021', *Public Health Scotland* 28 March 2023. <Cancer incidence in Scotland - to December 2021 - Cancer incidence in Scotland - Publications - Public Health Scotland> [accessed 16 May 2023].
[27] Public Health Scotland, 'Cancer mortality Annual update to 2021', *Public Health Scotland* 25 October 2022. <Cancer mortality in Scotland - Annual update to 2021 - Cancer mortality - Publications - Public Health Scotland> [accessed 16 May 2023].

Addressing inequalities in screening

We must address barriers and facilitate access across the screening and treatment pathway. In doing so, we can reduce inequalities in screening and improve health outcomes.

What works to increase screening uptake in under-served groups?

The evidence

Research tells us some ways to increase access to screening and uptake in under-served groups. A recent systematic review[9] by the Office for Health Improvement and Disparities found strong evidence in support of the following interventions.

- Appointment reminders which include the exact time of the appointment
- GPs identifying those that do not respond and issuing letters to them.

The review also found some evidence in support of annual reminders for non-responders or pre-appointment reminders by post or text message. There was also weaker evidence in favour of interventions such as GP endorsed invitations or telephone reminders for non-responders.

Other research makes recommendations for specific screening programmes. For example, an unpublished systematic review[28] by researchers in Scotland of the 'factors influencing attendance at AAA screening and interventions to reduce inequalities' recommended the following.

- Following an invite for screening, to provide additional support and personal reminders to men less likely to attend
- For services to consider travel time to clinics, especially for men less likely to attend, and public transport use
- To work with colleagues who are also interested in improving men's engagement with healthcare. For example, discussing screening at times when men attend other health or social care services, such as GP or acute hospital services.

For cervical screening, the systematic review[9] by the Office for Health Improvement and Disparities found strong evidence to support self-testing for human papillomavirus (HPV) for individuals who do not respond to a cervical screening appointment within primary care.

Despite this, the evidence-base remains limited for reducing inequalities in all under-served groups. It is important to evaluate interventions to address inequalities in screening and for the findings to be disseminated, to inform effective intervention.

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[28] Davies, Emma., Crilly, Mike., Manson, Paul, et al. 'Factors influencing attendance at Abdominal Aortic Aneurysm (AAA) Screening and interventions to reduce inequalities'. *Unpublished* (2017). <Microsoft Word - 20171114_AAA Inequalities Literature Review (blog.gov.uk)> [accessed 09 January 2023].

Current activities to address inequalities in screening within the Special Health Boards

The Special Health Boards include NHS National Services Scotland, Public Health Scotland, and Healthcare Improvement Scotland. Each works to support screening and deliver system level change to reduce inequalities in screening.

Public Health Scotland develops high-quality information 'for screening awareness' and 'invitation to screen'. It produces these in four core languages - with further translations available on request - as well as easy read, large print, and audio formats. Third sector organisations are included in the development process. The development of accessible information and communications in on-going.

Several national programmes and projects are already happening, which will help address screening inequalities. These include changes to national IT systems to improve engagement with participants (e.g., better use of text messaging). Appendix 3 provides an overview of current national projects.

Current activities to address inequalities in screening within the 14 NHS Boards

Each of the 14 NHS Boards play an important role in tackling inequalities. Uptake of the screening and treatment pathways varies between boards. Many of the barriers to screening are shared. There may also be some barriers specific to certain geographic locations.

NHS Boards are well placed to understand local population groups and needs. They can work together with partners to respond to local needs, by addressing barriers and facilitating access. This includes working with local communities, local authorities, health and social care partnerships, other public sector agencies, independent sector organisations, third sector organisations and academia.

A great deal of work is undertaken by NHS Boards to reduce inequalities in screening. As an example of this, Appendix 4 provides an overview of local interventions funded by the Scottish Government Screening Inequalities Fund. To help us build the evidence-base and understand what works to reduce inequalities in screening, we need to support more robust evaluation of local interventions and improve mechanisms for shared learning.

Our approach to reducing inequalities in screening

To achieve our vision and long-term outcomes we need to address the following five priority areas:

- Communications, engagement, and learning
- Access
- Data collection and monitoring

- Research and evaluation
- Overarching issues.

The first four of these priority areas were explored by the subgroups, while the subject of 'overarching issues' was discussed by the reference group. The output of these discussions is captured below.

Issues we have identified we need to address

Communications, engagement, and learning

The subgroup for communications, engagement and learning identified the following four areas as issues in achieving equity.

1. Informed choice

Screening information needs to be available in a suitable format to allow individuals to make a personal informed choice around participation. It should also be easy for individuals to locate. There is also a lack of guidance for carers, the health and social care workforce, and volunteers to support individuals around considering the risks and benefits of screening.

2. Accessible information

In current practice, 'for awareness' and 'invitation to screen' communications are only issued in written English in the first instance to all participants. Any individual who prefers communications in a different language must request information in an alternative format.

Engagement with screening information is also a challenge. A survey from England, for example, found the majority of unscreened individuals in bowel screening had read none of the written information booklet designed to support informed choice[29]. This may in part be due to low health literacy skills of some individuals, which can result in greater challenge for individuals to obtain, process and understand health information.

There is an inconsistent approach to the development of accessible information beyond the 'invitation to screening', with individual NHS Boards developing their own local materials. Furthermore, the process to develop and revise screening information resources can be complex and time consuming.

Another challenge is presented by current IT systems. These do not provide the mechanism to record individual communication needs, or to then issue information in that format for subsequent screening rounds.

3. Engagement and targeting of under-served groups

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[29] Kobayashi, Lindsay C., Waller, Jo., von Wagner, Christian, and Wardle, Jane. 'A lack of information engagement among colorectal cancer screening non-attenders: cross-sectional survey'. *BMC Public Health* 29 (2016). <A lack of information engagement among colorectal cancer screening non-attenders: cross-sectional survey | BMC Public Health | Full Text (biomedcentral.com)> [accessed 12 September 2022].

There can be limited engagement of those with lived experience of screening services to help develop targeted information resources and communication approaches. Also, public campaigns cannot hope to meet the needs of all subpopulations who might benefit from them.

Some people in the eligible age range do not receive an invitation to screen e.g., those experiencing homelessness, those not registered with a GP and some trans individuals. There is an inconsistent approach to follow-up of non-attenders.

4. Learning

Some health professionals have expressed that they are unsure where to access national screening information and communication resources. There is also a lack of available, accessible training for the screening workforce to raise awareness of inequalities in screening and how to address these. Opportunities for shared learning between professionals and organisations working to deliver and support screening are also limited.

To address these issues relating to communication, engagement, and learning, **we will**:

- ***Develop a consistent approach to providing accessible information and communication resources across the full screening pathway***. To include standardised templates for 'screening results' and 'invitation to diagnostic testing'.
- ***Explore ways to strengthen our engagement with under-served communities and third sector organisations.*** This will include building upon existing mechanisms for co-production of information and communications.
- ***Develop mechanisms within IT systems to capture and respond to an individual's communication needs****.* We will continue to support the existing programme for 'screening digital modernisation'. This includes the creation of a digital channel to allow participants to interact with screening programmes, e.g., to change appointments and check screening status and results.
- ***Raise awareness of inequalities in screening amongst the screening workforce, as well as health and social care workforce, third sector organisations and communities.*** This will include development of accessible learning opportunities, and development of a professional network to share learning and good practice.

Outcome 1a: All eligible people are aware of the relevant national screening programmes, understand the benefits and harms of screening, and can make an informed personal choice with regards to their engagement across the screening pathway.

Outcome 1b: Professionals working to support the national screening programmes are knowledgeable of the inequalities that exist across the screening pathway and use effective interventions to reduce inequalities.

Success in addressing issues around communication, engagement and learning will mean:

Individuals feel they are supported to make a personal informed choice about an initial screening offer, and any subsequent testing or treatment offers

Individuals receive invites to screening and diagnostic testing in a format which meets their needs

Individuals can readily find accessible information throughout the screening pathway

Individuals, communities, and representatives of under-served groups are engaged in the development of screening information and communications

Individuals feel that screening information and communications are appropriately tailored to their needs

Those working to support the national screening programmes are aware of the inequalities in screening and the role they can play to help reduce these.

Access to screening

Access to screening refers to the availability of services, such as the location and time of appointment and the physical environment. These are determined by system resources and structures. Access also encompasses an individuals' ability to reach these services, and the individual barriers they may experience. For example, differences in socioeconomic status may see some individuals living further from services, with a limited ability to spend on travel or take time off work. People in remote and rural areas may also face barriers in distance to services, the means to reach these by limited public transport and limited service days and times. The acceptability of screening tests is another component of access.

The subgroup identified several barriers which create inequalities in access to screening. These are listed below, separated into service level and individual level barriers.

1. **Service level barriers**
   i. **Resourcing and capacity**

Staff, facilities, and equipment capacity can be problematic. This makes it more challenging to offer longer appointments or appointments outwith standard working hours. Insufficient capacity within the NHS interpreter and translation services is another issue.

There are wide ranging administrative issues. For example, variation in appointment times, duration, and locations, both regionally and locally. There are also limited methods for changing appointments – for example, discussing an appointment over the telephone with a receptionist can be embarrassing for some people, and inconvenient for others.

People not registered on CHI[30] will not receive an invitation to screening, for example, a person born outside of Scotland who has never registered with a GP. Furthermore, people in long-term care or those in prison for less than six months, may not receive their invitation as it may continue to be sent to their home address. People not registered with a GP will receive a screening invitation but may have trouble in accessing cervical screening in a primary care setting.

ii. Staff knowledge and skills

Some health and social care staff lack knowledge of the national screening programmes, eligibility and how to access local screening services. Amongst screening professionals, there can be a lack of understanding of individual level barriers and how to address these and communicate in a supportive way with individuals.

2. Individual level barriers

People may face barriers in accessing services due to a range of factors, including

- Physical disabilities
- Learning disabilities
- Age
- Severe mental illness.

Other barriers to accessing screening for some individuals may include

- Language barriers e.g., some people may have limited fluency in English and find participation in screening more difficult
- Emotional barriers e.g., anxiety of the screening process and/or of the screening result, or experience of previous trauma
- Cultural barriers e.g., breast screening may be seen as immodest and dishonourable within some ethnic groups
- Cost related barriers e.g., transport or childcare costs
- Some people may have difficulty taking time off from work or caring commitments
- Some people may have no permanent home
- The location of screening services e.g., distance from home, difficulties with availability of public transport
- For people living in remote and rural areas may have limited or no choice of being seen by an alternative practitioner
- The screening environment may be a barrier for some people e.g., clinical settings, often busy and noisy waiting rooms

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[30] Note: The Community Health Index (CHI) is a population register used in Scotland for health care purposes, and uniquely identifies a person using a CHI number. A person may be registered on CHI but not registered with a GP.

- A lack of confidence in healthcare professionals, this may be because of a previous negative experience
- Some people may experience or live with other health conditions.

To address inequities in access to screening, **we will**:

- **Include relevant information in our communications about screening to help facilitate access.** For example, we continue to raise awareness of what happens during a screening test to help with anxieties. We will also highlight the availability of NHS translation services in invitations to screening.
- **Improve flexibility of screening appointments**. We will look for opportunities to offer a greater variety of service provision, for example appointments outwith core hours and in a variety of locations.
- **Support people's ability to access screening services.** This includes identifying where reasonable adjustments may improve accessibility and responding with appropriate service provision. This goes beyond appropriate service provision which should be available as standard, such as wheelchair use. We will support NHS Boards to offer more specialist services, such as cervical screening clinics for women experiencing sexual violence and trauma, or the provision of hoists for those accessing cervical screening with physical disabilities. We will also signpost screening participants to public transport information or voluntary transport providers.
- **Identify and address service level and individual level barriers to help facilitate access to screening**. We will develop existing resources to support NHS Boards to conduct equality impact assessments, to help identify and mitigate barriers. We will review the evidence for the acceptability of screening tests and acceptability of pathways, and seek opportunities to improve this, for example self-sampling for cervical screening.

Outcome 2: We have a strategic approach to identifying, addressing, and removing barriers to participants across the screening pathway.

Success in addressing issues related to access to screening will mean:

Individuals are offered greater flexibility for screening programmes, including a wider variety of appointment locations, times, duration, and type to meet their needs, along with different methods to change their screening appointment.

Individuals feel their needs for reasonable adjustments are met, where relevant.

Individuals feel they are supported to address barriers to screening and facilitate access.

Services are designed and planned to meet service users needs, and equality impact assessments are completed.

Data collection and monitoring

The subgroup for data collection and monitoring identified the following areas as issues in achieving equity.

1. Data collection

At a national level, our current data collection of characteristics known to be impacted by inequalities is limited to age, sex (as registered on CHI) and SIMD - a measure of deprivation based on postcode of residence. Beyond uptake of the screening test, the data are often not analysed across the full screening pathway.

2. Data monitoring

The current approach to data monitoring is inconsistent. Some limited inequalities data is included in annual performance reports, but this varies between programmes and is not a focus of reports. The process for discussing data on inequalities lacks clarity and consistency across the screening programmes.

3. Availability of data

Data for inequalities in screening is not easily accessible to those working in screening. There is a lack of knowledge about what is available and where to access it. Where inequalities data is available, it is often limited and not timely.

To address inequities in data collection and monitoring, **we will**:

- **Collect data on a wider range of characteristics associated with inequalities, focussing initially on the relevant protected characteristics, across the full screening pathway**. This will begin with capturing ethnicity data. It will also include scoping opportunities to link to other existing data sets.
- **Develop a systematic and consistent approach to monitoring data on inequalities across the screening programmes**. This will include developing a minimum inequalities data set. Also, an annual report template for each screening programme to analyse patterns and trends around inequalities.
- **Explore ways to make inequalities data more accessible to those working in screening**. This will include producing communications on data that is timely and readily available. Also, clarifying current arrangements for different organisations to access inequalities data.

Outcome 3: We collect and use data on a wider range of person characteristics to strengthen our understanding of where inequalities exist across the screening pathway.

Success in addressing issues related to data will mean:

We have a greater understanding of where screening inequalities exist, for whom and, at which stages of the screening pathway.

There is a systematic and consistent approach to monitoring inequalities across the screening pathway.

We use data to inform and evaluate our impact on addressing inequalities in screening.

Organisations working to deliver or support screening have access to relevant and timely data to inform their work.

Research and evaluation

Research is vital for ensuring evidence-based recommendations are made to introduce, modify, or cease screening programmes. Evaluation can help determine the effectiveness of an intervention and inform future decisions and actions.

The subgroup for research and evaluation identified the following five areas as issues in achieving equity.

1. Awareness of current research activity

There is a lack of awareness of all current research activity, including formal research*, local NHS Board activity and third sector research and activity. There is a risk of duplication and there are limited mechanisms for shared learning.

* Formal research is conducted using a systematic approach and scientific methods, it requires ethical approval and is typically carried out by or in association with academic institutions.

2. Support for robust evaluation of local projects

There is huge variation in local approaches to evaluation of NHS Board activities. These may sometimes lack robustness and consistency which makes the results and findings more limited for shared learning.

3. Translation of research around inequalities

Currently, there are no mechanisms for screening programmes, at both a national and local level, to consider key results and findings or recommendations from research and to identify ways to incorporate them into standard practice.

4. Imbalance of research

There is an imbalance in screening research with cancer screening programmes receiving more research focus than non-cancer screening programmes. This imbalance is also seen in the focus of the Scottish Government 'screening inequalities fund', which comes from the cancer budget and is therefore only for use in the cancer screening programmes.

5. Inequalities in technical performance of screening technologies

Greater consideration of inequalities should be given to the assessment and implementation of new screening technologies, on the performance for different population groups e.g., sex, ethnicity.

To address inequities in research and evaluation, **we will**:

- **Raise awareness of all current screening inequalities research activity, to avoid duplication and inform learning.** This will involve developing mechanisms to capture formal research through the new screening 'Research and Innovation Group'. A new 'Equity in Screening Network' will seek to capture local and third sector research activity.
- **Support more robust evaluation of local NHS Board inequalities projects.** Working with partners to develop a standard evaluation template, and understand requirements for other resources, to allow all screening inequalities projects to be robustly and consistently evaluated across the country.
- **Develop mechanisms to support the translation and application of screening inequalities research recommendations.** This will seek to ensure consideration of key research findings and recommendations at a national and local level and provide opportunity to identify ways to incorporate them into standard practice where appropriate.
- **Champion opportunities to address the imbalance of inequalities research across non-cancer screening programmes.** This will involve highlighting research gaps and priorities to inform researchers, such as through the new screening 'Research and Innovation Group'. We will lobby for funding where additional resource is required, such as to extend the SG 'screening inequalities fund' to include non-cancer screening programmes.
- **Review the evidence around technical performance of screening technologies.** This should seek to identify potential inequalities for protected characteristic groups, and opportunities to mitigate against any found inequalities.

Outcome 4: We ensure action to reduce inequalities in screening is evidence-based and have a robust and consistent approach to evaluating the impact of interventions.

Success in addressing issues related to research and evaluation will mean:

We continue to build the evidence base of interventions relating to screening inequalities, and disseminate the learning, to guide our evidence-based approaches.

We robustly evaluate the effectiveness of interventions to address screening inequalities across the screening pathway.

We identify research gaps within screening inequalities and share these for consideration by research teams.

We support research activity in both cancer and non-cancer screening programmes.

'Overarching issues'

The reference group also identified several other overarching challenges to tackling inequalities in screening, these are outlined below.

1. Governance

There are no clear structures or process in place to systematically identify, monitor and address inequalities in screening. **We will clarify where within the existing governance structures the monitoring and review of inequalities is best managed**. This will include a review of the roles and responsibilities of existing governance structures in light of inequalities, such as the Programme Boards or Monitoring and Evaluation Groups.

2. Workforce

Across the full screening pathway, certain areas of the workforce face significant pressures around capacity and capability. Capacity shortages may impact accessible screening locations and appointments times, or the turnaround time to provide an individual with an appointment or test result. An example of this is currently seen within breast screening radiographers and radiologists. **We will work to understand what workforce constraints, pressures and opportunities exist across the system, and in individual locations and staff groups, and will support current work to address these**. For example, workforce is one of the workstreams within the breast screening modernisation programme.

3. Activity to address screening inequalities

There is evidence of marked variation in approaches to addressing inequalities in screening at a local NHS Board level. **We will require all NHS Boards to have a 'screening inequalities plan' in place.** We will support NHS Boards to develop and review these and provide a space to share their activity and learning.

4. Equality impact assessments

An equality impact assessment (EQIA) is an approach to help determine and understand how what we do may affect people differently. At a national level, there is currently no requirement to review these on a regular basis, but this is an opportunity to improve our practice. **We will implement a review process for national EQIAs of each screening programme. Also, any time there is a significant change to a screening programme we will ensure EQIAs are undertaken. We will also strengthen our support to local NHS Boards to undertake and review their own EQIAs.** This will involve establishment of a template process for equity audits, and an understanding of any additional resource requirements.

5. Third sector engagement

We recognise and value the in-depth knowledge, expertise, and insight third sector organisations have into screening amongst under-served communities. They are a key partner in the design and delivery of services to help reduce inequalities in

screening. The opportunity to engage and collaborate with third sector organisations on screening is inconsistent at present across NHS boards. **We will undertake a review of existing engagement arrangements and identify ways to build upon these**, for example, through the new 'Equity in Screening Network' or an annual stakeholder event.

6. More radical change

We have been working to tackle inequalities in screening for some time, however our impact at a national level has been limited. We want to create an environment where radical change, which recognises the scale of the challenge, is both possible and encouraged. **We will work to identify potential radical or innovative inequalities interventions and test a small number of these initially.** For example, prioritising people from a protected characteristic group within the screening pathway.

7. Future screening programmes

It is both possible and likely that the UK NSC will recommend new national screening programmes in the future. **We will ensure that consideration and mitigation of inequalities is embedded as a priority early in the planning stage of any future screening programme pathways.** This will include those for the recent UK NSC recommendation to introduce a national lung cancer screening programme for example.

8. Wider system challenges

Both our society and our healthcare service continue to face unprecedented challenges. For example, pressures on the NHS and the cost of living crisis. Addressing these challenges are outwith the scope of the strategy; however, they are likely to exacerbate health inequalities in general whilst impacting our ability to effectively tackle inequalities in screening.

Furthermore, many of the barriers and facilitators to screening also exist in other healthcare services and require action. Each national screening programme is currently delivered independently of any other screening programme or health and care services. **We will work towards better 'joined-up care' for individuals, to reduce common barriers in access.** This will involve scoping how different health, care and other services can be brought together to reduce barriers and provide greater opportunities to meet the needs of under-served groups.

Addressing the fundamental causes of inequality and inequity is outwith the scope of the strategy, and significant change will rely upon stronger policies and implementation at all levels.

We will use the strategy to help draw attention to the issues and support the case for wider system level change.

Outcome 5: We have a whole system approach to tackling inequalities in screening. Reducing inequalities is recognised by all as a priority and is

supported by the screening governance groups and the commitment of all partners.

Success in addressing 'overarching issues' will mean:

We have a systematic approach to monitoring inequalities in screening, and routinely discuss where progress has been made and any gaps need to be addressed.

We have an understanding of workforce constraints, pressures and opportunities and we support work to address these.

We consider people's needs in accessing screening by ensuring good practice for conducting equality impact assessments, and we regularly review these at a national level.

Inequalities in screening are a priority for all NHS Boards, with maintained effort to addressed these through clear planning and evaluation, and learning is routinely shared.

We work collaboratively as a screening system and have strong mechanisms for engagement with a wide range of partners, including third sector organisations and communities.

We are ambitious in our approach and embrace opportunities for radical change.

We work with the wider system to champion the issue of inequalities and support change in this area.

How we will deliver the strategy
Delivering and overseeing the strategy

The National Screening Oversight Board (NSOB) will be responsible for overseeing the implementation and delivery of the strategy and action plan. An 'Equity Strategy Implementation Group' will provide the NSOB with detailed assurance of progress. Different organisations will take the lead on delivering aspects of the strategy, and the action plan provides further detail on this (appendix 1).

Resourcing the strategy
All NHS Boards already have a responsibility to address inequalities, including those in screening, and so it is expected that many of the actions required to deliver upon this strategy can be supported by existing resources (including through reprioritisation where necessary). Re-current annual funding from Scottish Government also supports national and local intervention to address inequalities specifically in the cancer screening programmes. However, there may also be a need for additional investment to support new work or system-level developments at national and local levels. Where this is the case business cases will be developed to demonstrate the value of such investment.

Measuring our impact

It is important that we understand the impact the strategy has on reducing inequalities in the national screening programmes. To do this, we must first prioritise to improve our collection of screening inequalities data. In the meantime, we will evaluate short-term outcomes of the strategy.

NSO will engage Public Health Scotland and other stakeholders to identify how change can be measured to understand our impact towards achieving our long-term outcomes and vision.

NSO will ensure regular monitoring and review is built into the action plan. Reports on progress will be produced and shared through established governance channels, such as the National Screening Oversight Board and Programme Boards.

Review

NSO will review the strategy and action plan within 3 years. This will allow for changes to be reflected in our understanding of inequalities in screening from new data and evidence, also from shared learning. Where relevant, to also consider new developments in any of the national screening programmes.

Appendices

Appendix 1: Strategy Action Plan

Introduction

Our vision is for equity in access for all eligible people, across the full screening pathway. To achieve this, we must make incremental steps towards delivering our six long-term outcomes. This high-level plan outlines the actions we will take over the next three years (2023 to 2026) as we begin to implement the Strategy.

Actions are set out towards achieving each of the six long-term outcomes. They apply across all six national screening programmes, unless otherwise stated. Responsible lead organisations are identified. Many of the actions will require engagement with wider partners also. Timescales are given for each action, indicating when the screening system will see a level of output over the next three years. While some actions can be taken forwards within existing resource, the progress of certain actions may depend on availability of additional resource.

We are at the very beginning of implementing the Strategy. Many of the actions identified for the first three years reflect the work needed at a national level, to then support more local action. For example, the need to improve our national communications, our national data collection, and our national IT systems. There are some actions for screening Programme Boards and NHS Boards to take forward.

The Strategy aspires to address inequalities across the full screening pathway and for all national screening programmes. Previously our national communications and data collection have concentrated on the initial screening test stage. We need to gain a better understanding of the data, resources, and processes for the later stages in the pathway, to inform appropriate actions to take in the future.

The National Screening Oversight Board (NSOB) is responsible for overseeing the implementation and delivery of the Strategy and Action Plan. An 'Equity Strategy Implementation Group' will provide NSOB with detailed assurance of this.

The action plan will be updated over the course of the Strategy and provide an opportunity for current actions to develop and new actions to be considered, for example placing a greater emphasis on equity across the full screening pathway. The National Screening Oversight team will also lead a review of the Strategy and Action Plan within three years.

Outcome 1a: All eligible people are aware of the relevant national screening programmes, understand the benefits and harms of screening, and can make an informed personal choice with regards to their engagement across the screening pathway.

Communication Methods and Resources			
No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
Communication methods			
1.1	Develop IT systems to introduce a mechanism to: • Record individual's preferred communications needs • Support with issuing information based on needs in a choice of alternative communication types (e.g., SMS messaging)	Digital and Security (DaS), NHS National Services Scotland (NHS NSS)	Year 3
1.2	Explore the use of QR codes on all national screening resources to provide a link to alternative accessible formats of information	Public Health Scotland (PHS): Screening & Immunisations Team	Year 1
1.3	Develop or source animations, where they do not currently exist, as an alternative format of information to raise awareness of screening	PHS: Screening & Immunisations Team	Year 2
Communication resources			
1.4	For cervical screening information, raise awareness that people can request for a female health professional to perform the screening test. (Note, this is not an issue in breast screening as the test is done by female health professionals only).	PHS: Screening & Immunisations Team	Year 2
1.5	Improve awareness that national screening information in available in alternative languages e.g., adding flags or text in the relevant language.	PHS: Screening & Immunisations Team	Year 2

1.6	Highlight in screening information that translation and interpretation services are available across NHSScotland services, and how people can access these	PHS: Screening & Immunisations Team	Year 1
1.7	Commit to update and include inclusive imagery through the review and development of all national information resources.	PHS: Screening & Immunisations Team	Year 3 / ongoing
1.8	Produce standardised national templates for: • 'Screening test results' and 'diagnostic test results' • 'Invitation to diagnostic testing'	PHS: Screening & Immunisations Team	Year 3
Engagement & targeted information			
1.9	Gather information on targeted national resources: • Identify existing national screening resources which target under-served groups, and where gaps exist • Understand existing mechanisms for engaging under-served groups and representatives in developing national targeted resources, and opportunities to strengthen this	PHS: Screening & Immunisations Team	Year 2
1.10.	Plan and deliver targeted screening resources and campaigns, with engagement from under-served groups	PHS: Screening & Immunisations Team	Year 3 / ongoing

Outcome 1b: Professionals working to support the national screening programmes are knowledgeable of the inequalities that exist across the screening pathway and use effective interventions to reduce inequalities.

Professional Knowledge and Skills			
No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
1.11	Establish current learning opportunities around health inequalities and screening, including access requirements for different organisations and communities, and identify any gaps or opportunities for development.	National Screening Oversight Team (NSO), NHS NSS	Year 1
1.12	In response to any gaps or opportunities identified above, to develop accessible learning packages to support awareness of inequalities in screening and ways to address barriers and facilitate access, for those working to support screening, including health and social care professionals, third sector and local communities.	NSO, NHS NSS	Year 2
1.13	Establish a professional network for those working to support screening, to share evidence, best practice and learning to address inequalities in screening.	NSO, NHS NSS	Year 1

Outcome 2: We have a strategic approach to identifying, addressing, and removing barriers to participants across the screening pathway.

No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
Barriers to Screening			
Identifying barriers			
2.1	Establish a template process for equity audits at Programme Boards and at NHS Board level	NSO, NHS NSS	Year 1
2.2	National NHS Boards and local NHS Boards undertake and regularly review equity audits	NSO, NHS NSS; Programme Boards; NHS Boards	Year 2 / Ongoing
2.3	Ensure Equality Impact Assessments (EQIAs) are undertaken any time there is a significant change to a screening programme, using well established EQIA processes	NSO, NHS NSS; Programme Boards; NHS Boards	Year 1 / Ongoing
Addressing barriers			
2.4	Develop IT systems to introduce a mechanism to allow individuals more flexibility in making and changing screening appointments for an initial screening test.	DaS, NHS NSS	Year 3
2.5	Scope requirements for developing IT systems to introduce a mechanism to record individual's special requirements e.g., equipment such as hoist, longer appointment times, translator. Note: The breast screening programme already capture these.	DaS, NHS NSS	Year 2
2.6	Undertake a national audit of 'out of hours' service provision in NHS Boards, to identify differences in provision and share ways to increase flexibility of appointments	NSO, NHS NSS	Year 2

2.7	Undertake a national audit on information and service provision for those with additional requirements, to identify differences in provision and to share learning and best practice to support NHS Boards to respond to different needs. To include availability of specialist equipment and provision of specialist services e.g., cervical screening clinics for women with experience of sexual trauma	NSO, NHS NSS	Year 2
2.8	If a policy decision is made to introduce self-sampling for cervical screening, to provide support and advise to SG to consider the implications on inequalities	NSO, NHS NSS; National Specialist and Screening Directorate (NSD), NHS NSS	Ongoing

Outcome 3: We collect and use data on a wider range of person characteristics to strengthen our understanding of where inequalities exist across the screening pathway.

No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
Data Collection and Use			
Data collection			
3.1	Establish what information is available for relevant participant characteristics data across screening and health systems. This will provide opportunities to plan linkages to other data sources, as well as new fields for data collection	PHS: Cancer & Adult Screening Team	Year 1
3.2	*Informed by action 3.1*, work to include relevant participant characteristics in all screening data sets, where possible, to develop a minimum inequalities dataset	PHS: Cancer & Adult Screening Team	Years 2-3 / Ongoing
3.3	Undertake a review current process to ensure robustness in identifying trans individuals and offer them appropriate screening tests	NSO, NHS NSS	Year 1
3.4	Support activities to strengthen production of national data within the Pregnancy and Newborn screening programme, and ensure inequalities data is included in this	PHS; NSD, NHS NSS	Year 3
Data monitoring			
3.5	Develop a systematic approach and consistent process for monitoring data on screening inequalities within current governance arrangements	Programme Boards, NHS NSS	Year 1
3.6	Produce an annual data report on screening inequalities across the screening pathway, to measure and improve access for underserved groups	PHS: Cancer & Adult Screening Team	Year 2

Data accessibility			
3.7	Clarify current arrangements for organisations to access data on inequalities	PHS: Cancer & Adult Screening Team	Year 1

Outcome 4: We ensure action to reduce inequalities in screening is evidence-based and have a robust and consistent approach to evaluating the impact of interventions.

No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
Evidence-based Action and Robust Evaluation			
Research & intervention			
4.1	Develop a mechanism for screening programmes at both a national and local level to consider key research findings/recommendations and identify ways to incorporate them into standard practice.	NSO, NHS NSS	Year 2
4.2	As part of the Equity Network development, capture NHS Board informal research & intervention activity along with third sector activity to support shared learning	NSO, NHS NSS	Year 2
4.3	Deliver an annual screening research day, encompassing all screening research but with an inequalities strand, to raise awareness of research activity and results and identify gaps for future research opportunities.	NSO, NHS NSS	Year 1
4.4	Support research and intervention activity in both cancer and non-cancer screening programmes	NSO, NHS NSS	Year 2
4.5	Introduce a process for routine review of the evidence-base to identify opportunities to improve the acceptability of screening tests	NSO, NHS NSS	Year 1
Evaluation			
4.6	Provide support and expertise to NHS boards around service evaluation, including identification of key components for evaluation, to support with robust and consistent evaluation of inequalities projects	NSO, NHS NSS	Year 2

Outcome 5: We have a whole system approach to tackling inequalities in screening. Reducing inequalities is recognised by all as a priority and is supported by the screening governance groups and the commitment of all partners.

No.	Action description	Responsible Lead Organisation	Delivery Timeframe Year 1: 2023-24 Year 2: 2024-25 Year 3: 2025-26 Ongoing
Whole System Approach			
Governance			
5.1	Systems are in place at national and local levels to address screening inequalities. i) For each Programme Board to agree a process to monitor and review inequalities within the programme, and also be assured that each NHS Board is also doing this locally. ii) Inequalities is a standing agenda item for meetings of the National Screening Oversight Board, Scottish Screening Committee and Programme Boards	Programme Boards, NHS NSS	Year 1
5.2	Embed standards for inequalities within all national screening standards through development and implementation of core standards	Healthcare Improvement Scotland (HIS)	Year 1
Inequalities activities			
5.3	All NHS Boards have a 'screening inequalities plan' in place	Programme Boards, NHS NSS; NHS Boards	Year 1
Collaboration			
5.4	Undertake a review of existing engagement arrangements with the third sector and explore ways to strengthen these relationships	NSO, NHS NSS	Year 2
Whole system approach			
5.5	Explore opportunities for screening programmes to interact with other health and care services, for	NSO, NHS NSS	Ongoing

	better 'joined-up care' that address common barriers in access		
5.6	Identify potential radical/innovative inequalities interventions and test a small number of these	NSO, NHS NSS	Year 2
5.7	Ensure health inequalities are embedded in discussions for future national screening programmes from the outset e.g., Lung Cancer Screening	NSO, NHS NSS	Ongoing

Appendix 2: Reference Group membership

National Screening Oversight are grateful for the engagement of the following organisations involved in The Scottish Equity in Screening Strategy Reference Group, as listed below.

- Bowel Cancer UK
- Breast Cancer Now
- Cancer Research UK
- Healthcare Improvement Scotland
- Jo's Cervical Trust
- NHS Ayrshire and Arran
- NHS Borders
- NHS Dumfries and Galloway
- NHS Grampian
- NHS Greater Glasgow and Clyde
- NHS Highland
- NHS Lanarkshire
- NHS Lothian
- NHS National Services Scotland – National Screening Oversight
- NHS National Services Scotland – National Services Division
- NHS Orkney
- NHS Shetland
- NHS Tayside
- Public Health Scotland
- Royal National Institute of Blind People Scotland
- Scottish Government
- The University of Edinburgh
- The University of Glasgow
- Voluntary Health Scotland

Appendix 3: An overview of current national projects to support reducing screening inequalities

National level work, which supports reduced screening inequalities, is outlined below.

The Scottish Government **Screening Inequalities Fund** supports work on tackling inequalities in access to cancer screening services across Scotland. In place since 2017, the fund continues to support NHS Boards implement targeted interventions.

Public Health Scotland continue to review and **develop high-quality information** 'for screening awareness' and 'invitation to screen'. It produces these in four core languages - with further translations available on request - as well as easy read, large print, and audio formats.

Scottish Government has invested in and continues to support the **Detect Cancer Early (DCE) Programme**. This includes building greater public awareness of signs and symptoms of cancer through existing campaigns, with additional campaigns to be developed to reach those in areas of deprivation.

Healthcare Improvement Scotland are working to embed inequalities in the development of new **core screening standards**. These will support screening programmes to be delivered to a high quality, in robust and resilient manner, and meet the needs of individuals. Other projects underway to achieve quality standards include a **review of call-recall** for all screening programmes and a **review of informed decision making**, both led by NHS National Services Scotland (NHS NSS).

NHS NSS is leading a programme of **Screening Digital Modernisation** to use digital capabilities within screening programmes to innovate, improve services and deliver a sustainable service. This will include development of a **Screening Intelligence Platform**, to make better use of data and intelligence to improve the health and wellbeing of the population.

The **Breast Screening Modernisation Programme** led by NHS NSS will consider the recommendations from the [Major Review of the Scottish Breast Screening Programme 2021](#). The programme will embrace improvement and innovation to ensure our breast screening programme is high quality, efficient, resilient, and sustainable, and that it will meet the needs of all participants.

A new **Research and Innovation Group** (RIG) has been established by NHS NSS, to develop a consistent and coherent strategic approach to the promotion and facilitation of research and innovation across all Scottish screening programmes. Gaps in the evidence base can be highlighted through this group.

Appendix 4: Scottish Government Screening Inequalities Fund

The Scottish Government Screening Inequalities Fund is intended to support and deliver work on tackling inequalities in access to cancer screening services across Scotland. It is part of Detect Cancer Early (DCE) funding, a public health intervention which aims to have a significant role in preventing or identifying cancer at an early stage, to improve chances of survival.

Screening inequalities funding has been available on an annual basis since 2017. Up until 2020-2021, the fund was allocated using a bidding process. In 2021-22 the funding structure changed to a new process which supports a blend of national and local projects, with funding allocated directly to all NHS Boards.

The fund has enabled over 60 local projects, covering a wide range of settings, providers, target groups and interventions. The most recent NHS Board projects enabled by the 2022-23 funding are listed below. These are followed by many of the projects funded between 2017 and 2021. Please note, this second list between 2017 and 2021 is not definitive, instead it is a list of projects for which National Screening Oversight has been made aware of.

2022-23 Funding		
Health Board	**Project Title**	**Cancer Screening Programme**
NHS Ayrshire & Arran	Health Board clinic for cervical screening	Cervical
	Cervical screening outreach to areas of deprivation	Cervical
	Health board clinics for staff unable to access their GP practice due to shift work	Cervical
	Research by Jo's Trust	Cervical
NHS Borders	Staff member	Breast, Bowel, Cervical
NHS Dumfries & Galloway	Reducing screening inequalities in people affected by homelessness and/or mental health issues	Breast, Bowel, Cervical
NHS Forth Valley	*Project title TBC*	Cervical
NHS Grampian	Research project – barriers & facilitators	Breast, Bowel, Cervical
NHS Greater Glasgow & Clyde	Engaging BAME Communities	Breast, Bowel, Cervical
	Additional community cervical screening clinics	Cervical
	Service improvement	Breast, Bowel, Cervical

NHS Highland	Accessible Screening Website	Breast, Bowel, Cervical
	Breast Screening Telephone Reminder and Support Project	Breast
	Screening Awareness & Engagement - Community Outreach	Breast, Bowel
	Raising the issue of screening with eligible people accessing smoking cessation support	Breast, Bowel, Cervical
	Development of National Screening Programmes CPD TURAS Module	Breast, Bowel, Cervical
	Project title TBC	
NHS Lanarkshire	Camglen Screening Community Engagement Project	Breast, Cervical
	VANL Community Engagement Project	Breast, Cervical
	Primary Care Engagement	Cervical
	Sexual health & cancer screening for people affected by homelessness	Breast, Bowel, Cervical
	Animated video brochures (purchased from NHS GGC)	Breast, Bowel, Cervical
NHS Lothian	Communication campaign	Breast, Bowel, Cervical
	Social media to increase reach in breast screening	Breast
	Ethnic minority screening champion	Breast, Bowel, Cervical
	Access to sexual health and cervical screening for inpatients within mental health services	Cervical
	Young people and cervical screening	Cervical
NHS Orkney	Analysis of screening inequalities in Orkney	Breast, Bowel, Cervical
NHS Shetland	Cervical Screening Recovery Hub	Cervical
NHS Tayside	Intervention to Increase Uptake Breast Screening amongst individuals with a Learning Disability	Breast
	Telephone Intervention to Increase Uptake Breast Screening	Breast

	Intervention to increase uptake amongst those who screen positive and do not respond/attend colonoscopy	Bowel
NHS Western Isles	Screening awareness	Breast, Bowel, Cervical

Pre 2022 Funding		
Lead Organisation	**Project Name**	**Cancer Screening Programme**
NHS Tayside	Reducing Inequalities: Bridging the Gap in Scottish National Cancer Screening Programmes in those Experiencing Severe and Enduring Mental Health Conditions	Multiple
NHS Orkney	Let's talk about cervical screening campaign	Cervical
NHS Lothian	Participation in the national screening programmes, cervical, breast and bowel screening make a significant impact on detecting cancer early.	Multiple
NHS Lothian	Regional Cervical Screening Staff Clinics	Cervical
NHS Lothian	Improve accessibility, reduce inequalities, and improve informed choice for those invited for all cancer screening programmes in the LD and BME women eligible screening population.	Multiple
NHS Highlands	An evaluation of the knowledge of frontline staff to support participation in NHS Health Screening Programmes	Multiple
NHS Highland	Public Health delivery of a bowel screening GP endorsement letter and FIT kit replacement service	Bowel
NHS Highland	Peer Led Intervention to Increase Awareness of Bowel Screening in People with a Learning Disability, their Family and Support Staff.	Bowel
NHS Highland	Community Champion and Volunteer Model.	Multiple
NHS Grampian	Making Every Opportunity Count (MeOC) model to raise conversations about cancer screening in community settings	Multiple
NHS Forth Valley	Cancer Screening and Inequalities	Multiple
NHS Fife	Increasing cervical smear uptake by vulnerable women in Fife: A pilot project using experience led co-design	Cervical
NHS Dumfries & Galloway	Screening Inequalities Engagement Programme (SIEP)	Multiple
NHS Borders	Staff cervical screening clinics pilot programme	Cervical

NHS Borders	Borders GP Practices Cervical Screening Services Scoping Report March 2018	Cervical
NHS Borders	Waverley Medical Practice: Cervical Cancer Screening Report Activity and Interventions in 2017	Cervical
NHS Borders	Continuing Professional Development Session for Public Health staff March 2018	Cervical
NHS Borders	An Update Session for Lifestyles Advisor Support Service 2017	Multiple
NHS Borders	An Update Session for Learning Disability Provider Forum 2018	Multiple
NHS Borders	An Update Session for Learning Disability Nurses 2018	Multiple
MECOPP	Chinese Cancer Screening Project	Multiple
Jo's Cervical Cancer Trust	Be cervix savvy roadshow.	Cervical
Jo's Cervical Cancer Trust	Awareness of cervical cancer and prevention among women eligible for cervical screening in Scotland	Cervical
Jo's Cervical Cancer Trust	Glasgow Outreach Service	Multiple
Glasgow University	A faith-based intervention for Muslim women in Scotland to encourage uptake of breast, bowel, and cervical cancer screening: a community based participatory approach.	Multiple
Glasgow City HSCP	Cancer Screening Videos/Animations for BAME Community	Multiple
Bowel Cancer UK	Bowel screening: tackling inequalities in uptake in adults with learning disabilities	Bowel
NHS Shetland (& NHS Orkney)	Working to support and better understand people with a LD/Autism and their support workers and carers	Multiple
NHS Orkney (& NHS Dumfries & Galloway)	Inequalities and Screening (aimed at people working with women who have experienced Intimate Partner Violence)	

Glossary

Community Health Index (CHI) number uniquely identifies a person on the population register - Community Health Index (CHI) - used in Scotland for health care purposes.

Equality Impact Assessment is a method for considering the effects or impacts of a public sector policy or function on groups with a protected characteristic and other under-served groups.

Health inequalities are the unfair, and avoidable, systematic differences in health or health access between different groups of people.

Protected characteristics, of which there are nine, are identified by the Equality Act (2010). People with a protected characteristic must not be treated less favourably, or subjected to unfair disadvantage, because of this.

Scottish Index of Multiple Deprivation (SIMD) is a measure of relative deprivation of small geographical areas.

Under-served groups refer to people who experience social inequity, stigma, and discrimination. People may fall into multiple groups. Note: We have chosen to write 'under-served' in this way to avoid this being misread as 'undeserved'.

Uptake is the percentage of people in a population eligible for screening at a given point in time who were screened adequately within a specified period.

References

1. NHS Inform, '*Screening*' (2022), <https://www.nhsinform.scot/healthy-living/screening/> [accessed 06 June 2022].
2. Finch, David., Wilson, Heather, and Bibby, Jo. 'Leave no one behind, the state of health and health inequalities in Scotland'. *The Health Foundation* January 2023. <https://doi.org/10.37829/HF-2023-HL01> [accessed 01 February 2023].
3. Public Health Scotland, '*What are health inequalities*' (2021), <https://www.healthscotland.scot/health-inequalities/what-are-health-inequalities> [accessed 01 September 2022].
4. Public Health Scotland, '*Fundamental causes, the primary causes of health inequalities in Scotland*' (2021), <https://www.healthscotland.scot/health-inequalities/fundamental-causes> [accessed 06 June 2022].
5. Note: We have chosen to write 'under-served' in this way to avoid this being misread as 'undeserved'
6. Marmot, Michael., Goldblatt, P., Allen, Jessica, et al. 'Fair Society, Healthy Lives: the Marmot Review: strategic review of health inequalities in England post-2010'. *Institute of Health Equity* 2010. <https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review> [accessed 03 September 2022]
7. '*Equality Act 2010*' (c.1) [online] <https://www.legislation.gov.uk/ukpga/2010/15/contents> [accessed 08 August 2022].
8. Robb, Kathryn A. 'The integrated screening action model (I-SAM): A theory-based approach to inform intervention development', *Preventative Medicine Report*, 23.101427 (2021) <https://doi.org/10.1016/j.pmedr.2021.101427>.
9. Office for Health Improvement and Disparities, 'Population screening: review of interventions to improve participation among underserved groups', *UK Gov*, 27 January 2022. <https://www.gov.uk/government/publications/population-screening-improving-participation-in-underserved-groups/population-screening-review-of-interventions-to-improve-participation-among-underserved-groups> [accessed 14 September 2022].
10. Campbell, Christine, Sommerfield, Tasmin, Clark, Gavin, et al. 'COVID-19 and cancer screening in Scotland: A national and coordinated approach to minimising harm'. *Preventive medicine* 151 (2021) <https://doi.org/10.1016/j.ypmed.2021.106606> [accessed 12 September 2022].
11. The Scottish Parliament, 'Health Inequality and COVID-19 in Scotland', (2021), https://digitalpublications.parliament.scot/ResearchBriefings/Report/ [Accessed 29.06.2022].
12. Public Health Scotland, 'Scottish Abdominal Aortic Aneurysm (AAA) screening programme statistics', *Public Health Scotland* 07 March 2023. <https://publichealthscotland.scot/publications/scottish-abdominal-aortic-aneurysm-aaa-screening-programme-statistics/scottish-abdominal-aortic-

aneurysm-aaa-screening-programme-statistics-year-ending-31-march-2022/ >
[accessed 16 May 2023].

13. Public Health Scotland, 'Scottish bowel screening programme statistics', *Public Health Scotland* 21 February 2023. <https://publichealthscotland.scot/publications/scottish-bowel-screening-programme-statistics/scottish-bowel-screening-programme-statistics-for-the-period-of-invitations-from-may-2020-to-april-2022/ > [accessed 16 May 2023].

14. Public Health Scotland, 'Scottish breast screening programme statistics', *Public Health Scotland* 25 April 2023. <https://publichealthscotland.scot/publications/scottish-breast-screening-programme-statistics/scottish-breast-screening-programme-statistics-annual-update-to-31-march-2022/> [accessed 16 May 2023].

15. Public Health Scotland, 'Scottish cervical screening programme statistics', *Public Health Scotland* 05 October 2021. <https://publichealthscotland.scot/publications/scottish-cervical-screening-programme-statistics/scottish-cervical-screening-programme-statistics-annual-update-to-31-march-2021/> [accessed 01 September 2022].

16. Clark, Gavin., Strachan, Judith A., Carey, Frank A, et al. 'Transition to quantitative faecal immunochemical testing from guaiac faecal occult blood testing in a fully rolled-out population-based national bowel screening programme', *Gut,* 70 *(*2021), 106-113 < http://dx.doi.org/10.1136/gutjnl-2019-320297> [accessed 12 September 2022].

17. Note: Gender refers to what is recorded on an individual's Community Health Index (CHI) number, this may differ to how an individual identifies their gender.

18. Burr, Nicholas E., Derbyshire, Edmund., Taylor, John, et al. 'Variation in post-colonoscopy colorectal cancer across colonoscopy providers in English National Health Service: population based cohort study', *BMJ* 367 (2019), <https://doi.org/10.1136/bmj.l6090> [accessed 12 September 2022].

19. Unpublished data from the Scottish Breast Screening System.

20. Prothero, Louise., Cartwright, Martin., Lorencatto, Fabiana, et al. 'Barriers and enablers to diabetic retinopathy screening: a cross-sectional survey of young adults with type 1 and type 2 diabetes in the UK'. *BMJ Open Diabetes Research and Care*, 10 (2022) <http://dx.doi.org/10.1136/bmjdrc-2022-002971> [accessed 12 September 2022].

21. Campbell, Christine., Douglas, Anne., Williams, Linda, et al. 'Are there ethnic and religious variations in uptake of bowel cancer screening? A retrospective cohort study among 1.7 million people in Scotland'. *BMJ,* 10 (2020) <http://dx.doi.org/10.1136/bmjopen-2020-037011> [accessed 12 September 2022].

22. Public Health England, 'ANNB screening: identifying inequalities', *UK Gov* 25 August 2021. <https://www.gov.uk/government/publications/antenatal-and-newborn-screening-identifying-and-reducing-inequalities/annb-screening-identifying-inequalities#ref1> [accessed 08 August 2022].

23. Public Health England, 'Population screening: reducing inequalities for people with a learning disability, autism or both', *UK Gov* 14 June 2021.

<https://www.gov.uk/government/publications/population-screening-supporting-people-with-learning-disabilities/population-screening-reducing-inequalities-for-people-with-a-learning-disability-autism-or-both> [accessed 06 August 2022].

24. Public Health England, 'Population screening: improving access for people with severe mental illness', *UK Gov* 23 September 2021. <https://www.gov.uk/government/publications/population-screening-access-for-people-with-severe-mental-illness/nhs-population-screening-improving-access-for-people-with-severe-mental-illness> [accessed 06 August 2022].

25. Public Health England, 'NHS population screening: improving access for people in secure and detained settings', *UK Gov* 19 March 2021. <https://www.gov.uk/government/publications/population-screening-reducing-inequalities-in-secure-settings/nhs-population-screening-improving-access-for-people-in-prisons> [accessed 06 August 2022].

26. Public Health Scotland, 'Cancer incidence in Scotland to December 2021', *Public Health Scotland* 28 March 2023. <https://publichealthscotland.scot/publications/cancer-incidence-in-scotland/cancer-incidence-in-scotland-to-december-2021/ > [accessed 16 May 2023].

27. Public Health Scotland, 'Cancer mortality Annual update to 2021', *Public Health Scotland* 25 October 2022. <https://publichealthscotland.scot/publications/cancer-mortality/cancer-mortality-in-scotland-annual-update-to-2021/> [accessed 16 May 2023].

28. Davies, Emma., Crilly, Mike., Manson, Paul, et al. 'Factors influencing attendance at Abdominal Aortic Aneurysm (AAA) Screening and interventions to reduce inequalities'. *Unpublished* (2017). <https://phescreening.blog.gov.uk/wp-content/uploads/sites/152/2018/03/Factors-influencing-AAA-screening-attendance-systematic-review.pdf> [accessed 09 January 2023].

29. Kobayashi, Lindsay C., Waller, Jo., von Wagner, Christian, and Wardle, Jane. 'A lack of information engagement among colorectal cancer screening non-attenders: cross-sectional survey'. *BMC Public Health* 29 (2016). <https://doi.org/10.1186/s12889-016-3374-5> [accessed 12 September 2022].

30. Note: The Community Health Index (CHI) is a population register used in Scotland for health care purposes, and uniquely identifies a person using a CHI number. A person may be registered on CHI but not registered with a GP.

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