

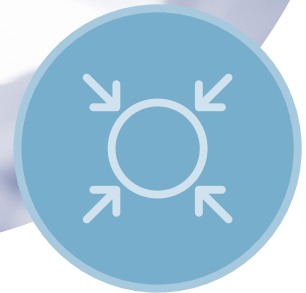


An tSeirbhís Náisiúnta Scagthástála
National Screening Service

National Screening Service

Improving equity in screening

A STRATEGIC FRAMEWORK 2023-2027



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Jargon buster

Term	Explanation
Detection rates	This is also known as test sensitivity and is defined as the proportion of affected individuals with a positive test result.
Eligible population/ cohort	Eligible people are those that meet the criteria to be offered screening. For example, the eligible people for breast screening are all women aged 50-69 years old.
Equality	The state of being equal, especially in status, rights or opportunities.
Equity stratifier	An equity stratifier refers to a characteristic — such as a demographic, social, economic, ethnic, or geographic descriptor — that can identify population subgroups for the purpose of measuring differences in health and health care that may be considered unfair or unjust (Canadian Institute for Health Information, 2018).
Incidence	The occurrence, rate, or frequency of a disease, crime, or other undesirable thing.
Morbidity	The condition of suffering from a disease or medical condition.
Multi-morbidity	This is also known as multiple long-term conditions (MLTC) and means living with two or more chronic illnesses.
PPP (Patient and Public Partnership)	In the NSS, we work in partnership with patients in a variety of ways called Patient and Public Partnership; we refer to it as the 'PPP'.
Qualitative research	Qualitative research uses individual in-depth interviews, focus groups or questionnaires to collect, analyse and interpret data on what people do and speak. It reports on; the; meanings, concepts, definitions, characteristics, metaphors, symbols and descriptions of things. It is often exploratory and open ended.
Quantitative research	Research that generates numerical data or data that can be converted into numbers. An example is research using clinical trials.
Sensitivity rates	Sensitivity (true positive rate) is the ability of a test to identify correctly cases as cases.
Stakeholders	An individual or group that has an interest in any decision or activity of an organisation.

Foreword from the National Screening Service Chief Executive

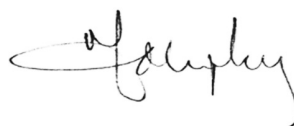
Health equity is when everyone has the opportunity to be as healthy as possible. This is a key priority for us in the National Screening Service. We know there are some groups of people who are less likely to come for screening than others, and that it is often the people who don't come for screening who could benefit the most from it.

We are proud to publish this framework to address equity in screening in Ireland. This framework supports [Choose Screening, our Strategic Plan 2023-2027](#) and our priorities of **engagement, partnership and service development**. It also supports the wider HSE aims to achieve a universal and equitable healthcare system through the implementation of Sláintecare where everyone has equal access to services based on their need, and not their ability to pay.

In our strategic plan, we have made commitments to deliver a person-centred service that reflects our values of care, compassion, trust and learning and that we will be an open, trusted, listening organisation. This framework is an example of those commitments in action. We know that if we treat everyone equally, this will not achieve equity. We need to consider peoples' needs, treat people justly and according to their circumstances – and this will achieve equity. We have worked with our stakeholders to co-produce this framework, listening to and learning from the experience and expertise of individuals and groups that have an interest in NSS and the people we serve.

We work to raise awareness and understanding of screening, including its limitations and we want people to be able access screening, if they choose screening. This framework emphasises our commitment to both understanding and improving equity in our screening programmes. Through the implementation of this framework, we aim to build trust and partnerships with our stakeholders, as we work together towards providing equitable screening programmes for everyone living in Ireland.

We look forward to working across the NSS and with our external partners to support the implementation of this framework over the next five years.



Fiona Murphy
Chief Executive
National Screening Service



Introduction from the National Screening Service Director of Public Health

We know that health is influenced by a range of factors including education, employment, income level, gender and ethnicity.

People can experience barriers or inequities at any point on the screening journey. We want to continue to better understand and address these barriers. We want to ensure that people can make an informed choice about whether to have screening. If they choose screening, we want them to be able to carry out that choice.

Our external partners and colleagues across the HSE have greeted the development of this framework with enthusiasm. We developed the framework using a co-production approach and multiple consultations were held with partners from the community, voluntary and statutory sector and with our staff. Through these consultations we have learned more about the perspectives of the people who use and deliver our screening services.

Actions arising from this framework will be implemented within the context of a society that is experiencing post pandemic effects, and rising misinformation and challenges to trust in public institutions. Our population is ageing and there is a rise in multimorbidity and disability. We have increased diversity in ethnic and cultural backgrounds, an increase in the incidence and prevalence of diabetes and technological advances in screening. It is vital that we remain aware of the context that we are working in and that we are agile and adaptable in our approach to implementation.

“It’s important that we are not doing it to people but with people.”
NSS Patient and Public Partnership Representative

In publishing this framework, it is important to acknowledge all the progress we have made in recent years to address inequities in our screening services, including our Patient and Public Partnership Strategy implementation, our digital Patient Reported Experience Measurement surveys, and our multiple health promotion interventions including our LGBT+ CervicalCheck research, Pavee Point partnership on bowel and breast screening projects, translated resources and easy-read materials, to name a few. This framework builds on our existing work and sets out how we will continue to understand and improve equity in our services. We have identified five priorities where action is needed, and we describe the areas we need to focus on to progress each priority.

Our work is underpinned by partnership and engagement, and I would sincerely like to thank all those who contributed to the development of this framework including our Equity Advisory Group members, everyone who attended our online consultations, and those who completed our online surveys. We look forward to working with all our partners on the implementation of this framework to ensure the equitable delivery of our national screening programmes over the years ahead.

Dr. Caroline Mason Mohan
Director of Public Health
National Screening Service



Improving equity in screening

A STRATEGIC FRAMEWORK 2023-2027

Who we are

The NSS delivers four national population-based screening programmes. We screen for breast, cervical and bowel cancer, and for retinopathy in people with diabetes.



NSS Mission

We deliver population screening programmes that help prevent, reduce the risk of, and assist the recognition of, disease in Ireland.

What is Health Equity?

Health equity is when everyone has the opportunity to be as healthy as possible. Health inequities are differences in health status or in the distribution of health resources, between population groups, which are avoidable and unfair.

Why we developed this framework?

This framework sets out how we can understand and improve equity in our screening programmes. We know that some of the population groups that don't participate in screening are the same ones with a higher incidence of disease. People can experience barriers at any point on the screening pathway and we want to continue to better understand and address these barriers. We want everyone to understand what screening is and to participate in screening, if they want to.

How we developed this framework

The framework was developed using a co-production approach. Multiple consultations were held with partners from the community, voluntary and statutory sector, patient representatives and with NSS staff.

Our priority areas

We identified the following 5 priority areas for improving equity in screening:



Priority Area 1 Research & Data

NSS understands the importance of reviewing and applying an evidence-based approach to our work in improving equity in screening. Consultation pointed to the importance of conducting research, gathering feedback from screening participants and identifying opportunities for capturing additional equity-related data, where possible.

AREA OF FOCUS

QUALITATIVE & QUANTITATIVE RESEARCH | ACCURATE DATA | EQUITY STRATIFIERS* | EVIDENCE-BASED APPROACH | CAPTURE EXPERIENCE | MONITORING AND EVALUATION



Priority Area 2 Education, learning & development

Enhancing the education, learning and development needs of HSE staff, screening providers and other stakeholders is essential. This may be done through raising awareness of existing content or the development of new content, if necessary.

AREA OF FOCUS

LEARNING AND DEVELOPMENT FOR HEALTHCARE WORKERS | EDUCATING PUBLIC & SCREENING PARTICIPANTS | TOOLS & RESOURCES | SHARED LEARNING



Priority Area 3 Partnership

NSS is not alone in wanting to improve health equity; through a partnership approach, we can build capacity, capability, and potential. We will apply the principles and practice of an appropriate model of partnership in this work for example, a community development approach.

AREA OF FOCUS

HSE PARTNERSHIPS | NATIONAL AND INTERNATIONAL PARTNERSHIPS | PATIENT & PUBLIC PARTNERSHIPS | POLICIES & LEGISLATION



Priority Area 4 Accessibility and inclusivity

By understanding the screening pathway from a participants' perspective, we can better understand service barriers and enablers and act to address them, for example through providing reasonable accommodations. Applying technological innovations and creative solutions could improve accessibility and inclusivity.

AREA OF FOCUS

SOCIAL DETERMINANTS OF HEALTH | TARGETING SPECIFIC GROUPS | TAILORED INTERVENTIONS | ADAPTATIONS AND FLEXIBILITY | EXPLORE NEW TECHNOLOGIES/INNOVATIONS



Priority Area 5 Communication

Communication can be a barrier to accessing screening for some people. By understanding and responding to the communication needs of audiences, we can address this barrier. Developing and testing content in partnership with our stakeholders is key to achieving this.

AREA OF FOCUS

FLEXIBLE AND EFFECTIVE COMMUNICATION | HEALTH LITERACY | STAKEHOLDER ENGAGEMENT | BEHAVIOURAL SCIENCE

What we will do next

An Equity Oversight Committee will be established, and they will play a key role in overseeing the development, implementation and monitoring of action plans.

How to get involved or find out more

Please email equity@screeningservice.ie

The National Screening Service

The National Screening Service (NSS), part of the Health Service Executive (HSE), is committed to ensuring that all eligible people can access our services. Through our work and through collaboration with our partners, we work to make this happen. We provide a national service, delivering free, evidence-based population screening in hospital and community settings across the country.

Our Programmes

We deliver four national population-based screening programmes.

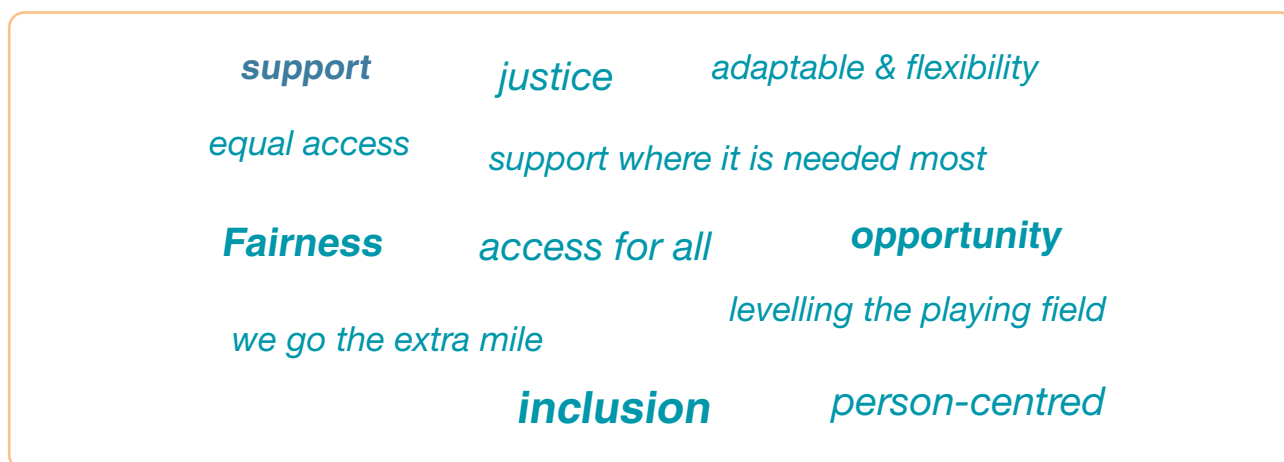


Our screening programmes aim to reduce morbidity and mortality in the population through prevention and/or early recognition of disease and treatment, both of which can greatly improve health outcomes. Screening gives an opportunity to prevent cancers by treating pre-cancer changes and picking up cancer and other disease at an earlier stage before symptoms start. If a disease is picked up early, more treatment options may be available, treatment can be easier, and the chance of favourable outcomes is greater. Although we deliver screening at a population level, we aim to put the person first by adopting a person-centred approach that focuses on care, compassion, trust and learning.

What is health equity?

These are the words that our stakeholders used when we asked them what equity means to them.

Figure 1. The words that our stakeholders used to describe equity.



There are many definitions of health equity; these were considered as part of the co-production of this framework. Through a process of engagement with our Equity Advisory Group, we agreed on the following definition.

Health equity is when everyone has the opportunity to be as healthy as possible. Health inequities are differences in health status between population groups that are socially produced, systematic in their unequal distribution across the population, avoidable and unfair.

We know that health is influenced by a range of factors including education, employment, income level, gender and ethnicity.

People that experience disadvantage such as poverty are more likely to experience poorer health. People in lower socio-economic groups, who would benefit most from screening, are often the least likely to participate. There are several reasons for this which are explored further in this framework.

Figure 2. Equity versus Equality

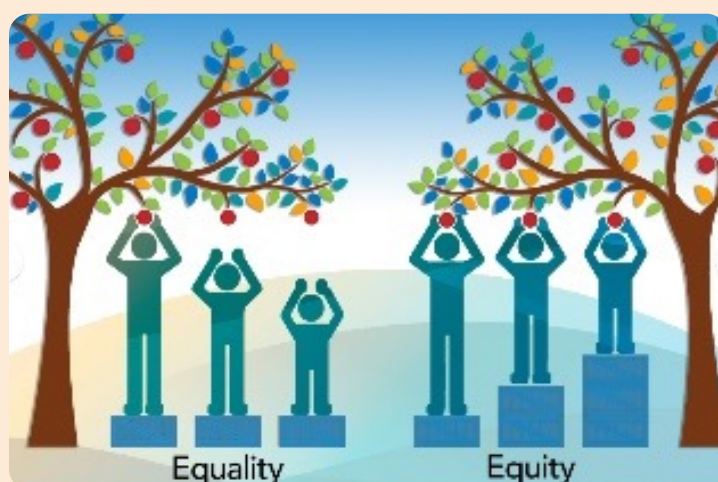


Image used with permission of Saskatchewan Health Authority

Equity in action, a case study from Pavee Point Traveller & Roma Centre

Nancy and Julie are two Traveller Primary Health Care Workers (PHCWs) in Pavee Point's Primary Health Care for Travellers Project. They deliver peer-led health information to the Traveller community in Finglas and Blanchardstown. When partnering with the NSS on a targeted project to register Traveller women for CervicalCheck, they identified several barriers to participation. These included fear of cancer, past experiences of discrimination within health services, embarrassment, and other practical concerns like a lack of transport, low literacy levels, poor facilities on sites, and no way to receive post. Nancy and Julie recall speaking to one Traveller woman, Brigid, who was in her mid-50s and had never attended CervicalCheck. Brigid had some awareness of the screening programme, but she didn't remember her GP mentioning it to her for several years. Brigid

thought that if you were older, there was no longer a risk of developing cervical cancer. Brigid also lived on an unofficial site, where post is not delivered and for this reason, she had never received an appointment letter. The PHCWs, empowered with the information they received from a session on CervicalCheck from NSS, were able to support Brigid to register using a designated registration form developed as part of this project. The PHCWs were able to address some of Brigid's concerns about screening, informing Brigid that it was primarily the nurse, rather than the GP, who took the sample. The PHCWs were also able to arrange for Brigid's letters from NSS to be sent to Pavee Point, so that they could deliver them to her. This case study shows how adaptations and communication enabled Brigid to participate in screening.

Strategic Context

Health inequities exist across our screening programmes, and these inequities are unfair and avoidable. Tackling inequalities in cancer prevention and care is a challenge internationally. [Europe's Beating Cancer Plan](#) (EU Health Union, 2021)⁸³ identified reducing cancer inequalities across the EU as a key priority area and committed to establishing a cancer inequalities register to help Member States address inequalities in cancer care by helping them to better understand their strengths and weaknesses.

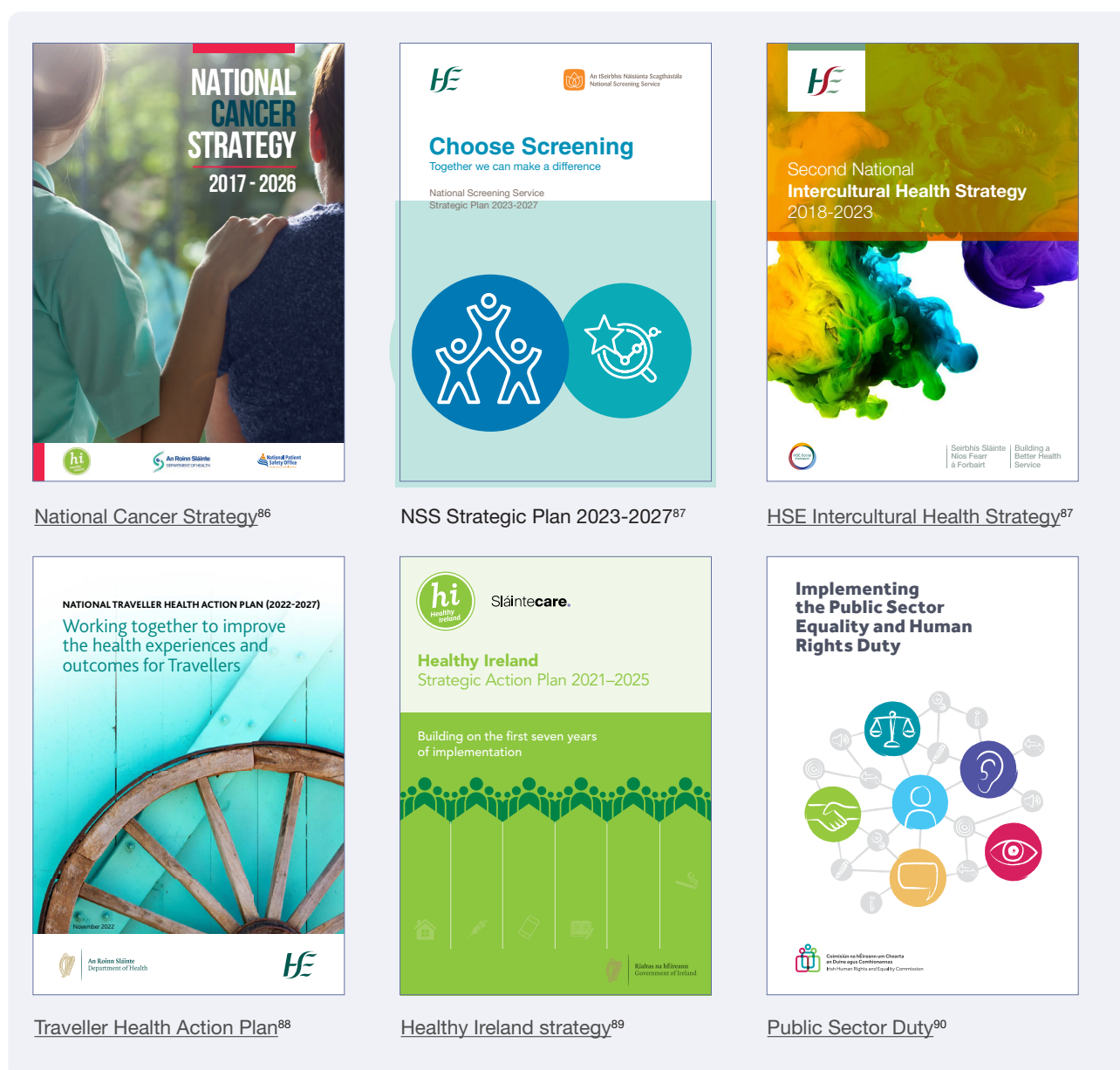
Understanding and improving screening equity is a key focus for the National Screening Service. Our Choose Screening, our Strategic Plan 2023-2027⁸⁴, – focuses on equitable care, seeking out and including those groups of people who have difficulty accessing screening services.

Engagement and partnership are a strategic priority for NSS and these themes were raised during the consultative processes leading to the co-production of this framework. We understand the importance of listening to and learning from the experience and expertise of individuals or groups (stakeholders) that have an interest in NSS and the people we serve. We aim to proactively share appropriate information to raise awareness and understanding of screening and to support people to make individual and informed choices.

This framework is set within the context of the wider HSE aims of achieving a universal and equitable healthcare system, where everyone has access to services based on their need, and not on their ability to pay.

Ireland's health and social care systems are undergoing significant reform through the implementation of [Sláintecare](#)⁸⁵, which aims to deliver more care to 'the right patient in the right place at the right time'. Within this programme of reform are opportunities to embed person-centred measures through evidence-based public health approaches. We are committed to engaging with partners in the revised structures to raise awareness and understanding of how to address screening inequities in communities and regions nationally.

This framework will be implemented within the context of a wide range of national strategies, policies and legislation, for example:








To achieve equity in screening, it is important that we develop meaningful partnership and build capacity with our national, regional and community level stakeholders.

A key piece of legislation that will guide our work is the Equal Status Act (2000-2018)⁹¹. The Act prohibits discrimination on the provision of services on nine grounds, i.e., gender, marital status, family status, age, disability, sexual orientation, race, religion, and membership of the Traveller community. It requires that public health bodies such as NSS make reasonable accommodation or provide special treatment to support people to avail of our services.

In any screening programme, there are continuous improvements and changes that are informed by new evidence, for example there may be an extension of the age cohort that is invited to participate in a programme, for example, BowelScreen. Or, in other screening programmes, we can start to work towards the elimination of the cancer, for example CervicalCheck. Elimination would be due not only to the continued role that screening will play but to high HPV vaccination uptake rates. As the evidence grows and medical advances are made, we will review and assess developments for their impact on equity and monitor the effects of these changes on populations that experience health inequities.

What the literature tells us about inequities in screening

This section provides an overview of the literature in the following areas.

-  **Factors associated with increased incidence and prevalence of the four conditions that the NSS screens for.**
-  **Factors associated with reduced participation in screening in Ireland.**
-  **Current challenges with the measurement of equity in screening.**
-  **Barriers to participation in screening.**
-  **Interventions to improve participation in screening.**

Factors associated with increased incidence and prevalence of the four conditions that the NSS screens for

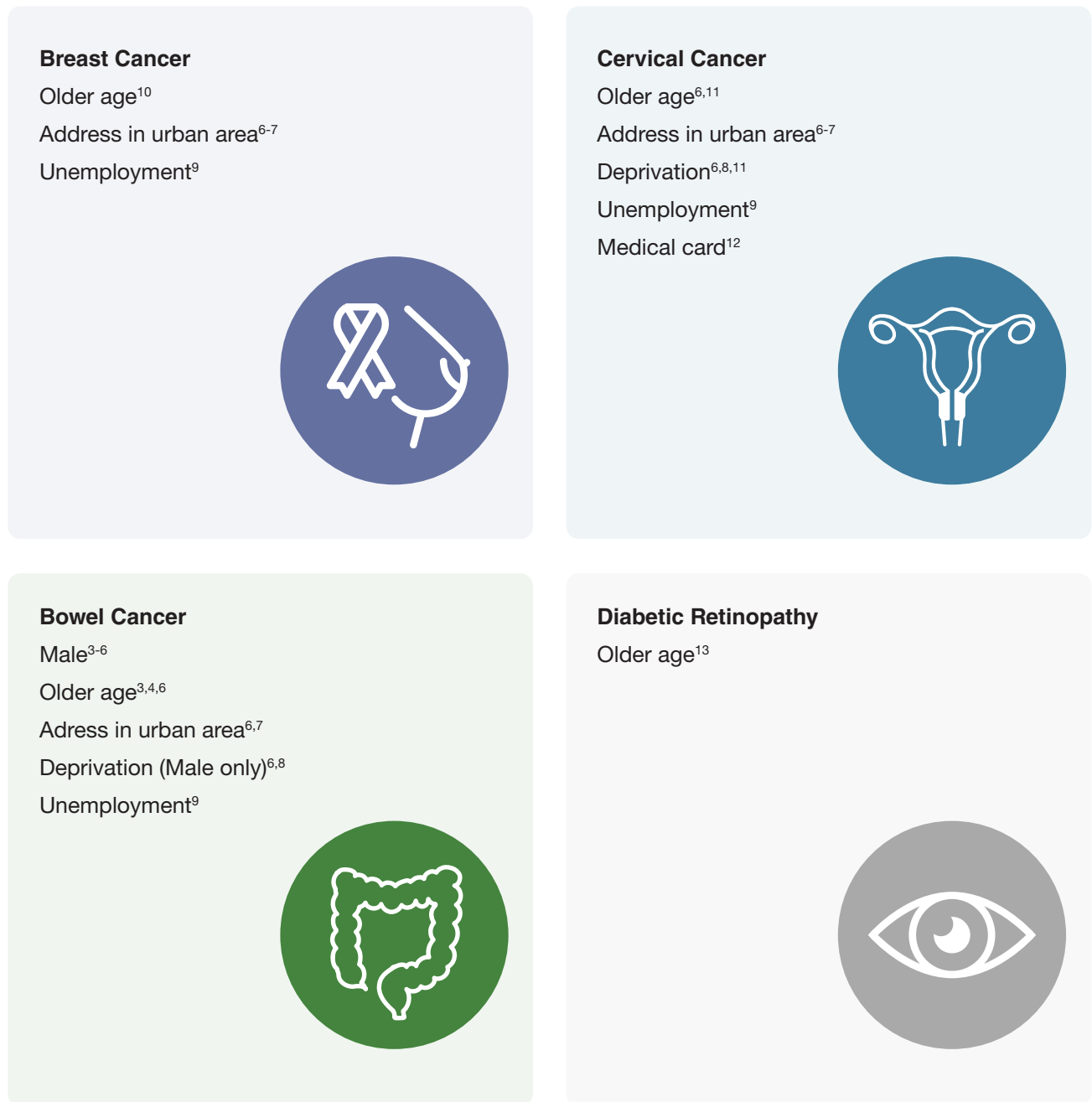
The incidence of the three screened-for cancers in the Republic of Ireland is as follows:

- Bowel cancer incidence is 55 cases per 100,000 women and 83 cases per 100,000 men¹
- Breast cancer incidence is 157 cases per 100,000 women¹
- Cervical cancer incidence is 10.7 cases per 100,000 women¹

There is no national register of people with diabetes in Ireland. It is estimated that there are approximately 225,000 people in Ireland with diabetes. Diabetic retinopathy can affect up to 25% of people with diabetes².

Figure 3 below summarises some of the population characteristics associated with a higher incidence of the three cancers that the NSS screens for and the characteristics associated with a higher prevalence of diabetic retinopathy in the Republic of Ireland.

Figure 3. Population characteristics associated with increased incidence of the screened-for conditions (prevalence for diabetic retinopathy) in the Republic of Ireland



Footnote* deprivation is associated with decreased incidence in breast cancer 6,8

The National Cancer Registry's report [Cancer inequalities in Ireland by deprivation, 2004-2018](#), published in 2023, clearly highlighted the association between area deprivation (as measured by the Pobal HP deprivation index*) and cancer incidence and mortality. Key findings of that report included:

- Both males and females in the most deprived quintile have a significantly higher incidence rate of cancer compared with those in the least deprived quintile (7% higher in males and 5% higher in females).
- Males in the most deprived population quintile had a significantly higher incidence rate of bowel cancer (8% higher) compared with those in the least deprived quintile, in the most recent diagnosis period (2014-2018). In females, there were no significant differences in the incidence rate of bowel cancer between the most and least deprived quintiles.
- There is a higher cervical cancer incidence in more deprived populations.
- The opposite trend was observed in breast cancer, with the more affluent population showing higher incidence.
- The most deprived quintile of the population in 2014-2018 had significantly poorer five-year survival (mortality hazard 28% higher than the least deprived quintile) for cancer as a whole.
- Five-year survival was poorer for the most deprived quintile of the population compared with the least deprived quintile for colorectal and breast cancers for the most recent period 2014-2018 and for the two earlier periods.
- People in the most deprived quintile had a higher risk of later stage at presentation for breast cancer compared with those in the least deprived quintile.
- This is similar to the experience in Europe where the following trends have been reported:
 - High socio-economic status is linked with increased risk of breast cancer¹⁴
 - Low socio-economic status (including low education, low income and living in a deprived community) is linked with an increased risk of cervical cancer¹⁴
 - Colorectal cancer shows a varying pattern in different countries in terms of its relationship to socio-economic status¹⁴
 - Negative associations of socio-economic status are generally stronger for men compared to women¹⁴
 - Cancer mortality rates among individuals with high socio-economic status have almost universally declined; over the past decades, however, trends have generally been more favourable among groups with high socio-economic status than among those with low socio-economic status, for which cancer mortality rates have often remained stable or even increased¹⁵.









* The Pobal HP Index is an area deprivation index based on three dimensions of affluence/disadvantage: Demographic Profile, Social Class Composition and Labour Market Situation. For more information: <https://maps.pobal.ie/WebApps/DeprivationIndices/index.html>.

Due to the lack of a national diabetes register, less is known about inequalities and diabetes in Ireland. Data collected as part of a 2007 survey showed that diabetes prevalence in the most deprived local health offices (LHOs) was 1.4 times what it is in the least deprived LHOs in Ireland¹⁶. The link between the prevalence of type 2 diabetes and socio-economic deprivation, severe mental illness and intellectual disability is widely accepted internationally, however¹⁷⁻¹⁸. For people with severe mental illness (SMI), including schizophrenia and bipolar disorder, type 2 diabetes is twice as common as in the general population, with antipsychotic therapy playing a major role by increasing obesity and insulin resistance¹⁸. Data from the UK has also demonstrated the increased risk of diabetes for people of Black and Asian ethnicities¹⁸. Finally, there is international evidence that there is an increased risk of diabetic retinopathy for people with low levels of education, on low incomes and who live in a deprived or rural area¹⁹.

Factors associated with reduced participation in screening in Ireland.

Table 1 below shows the population characteristics associated with reduced participation in each of the four screening programmes.

Table 1. below shows the population characteristics associated with reduced participation in each of the four screening programmes

Type of screening	Bowel Screening	Breast Screening	Cervical Screening	Diabetic Retinopathy Screening
Characteristic				
Gender (male)	 20, 21	NA	NA	
Older age				 28, 29
Urban				
Deprivation <i>Pobal HP Index</i>	 20			 28
Medical card				
Low education		 23		
Unemployed		 23		
Health status*		 23		 30, 31
Travellers <i>Co. Clare study</i>	 22	 22	 22	 22
Intellectual disability		 25		
LGBTQI+			 27	

*Health status means 'poor health status' in relation to Breast Cancer and 'less diabetic complications' in relation to Diabetic Retina Screening.

Older age is associated with increased participation in bowel²⁰ and breast screening^{23, 24}

Living in an urban area increases participation in breast screening²³

Having a medical card increases participation in breast screening²³

In summary, there is evidence that some population groups with higher incidence of disease are less likely to participate in screening, for example, people living in communities with high deprivation, which have a higher incidence of bowel cancer, are less likely to participate in BowelScreen. Lower participation in the BreastCheck screening programme could also be a contributing factor to later stage at presentation for breast cancer among those in the most deprived quintile⁸. Lower participation in the CervicalCheck screening programme could also be one of the factors behind the increased incidence of cervical cancer in communities with high deprivation but we don't yet have the data to know for certain.

The findings in Table 1 are consistent with screening participation in other European countries, where there is further evidence that screening participation is lower amongst the following:

- People living in areas of high deprivation³²⁻³⁴
- People with physical or intellectual disabilities^{32, 35}
- People with severe mental illness³⁶
- Migrants³⁷⁻³⁸ and ethnic minorities³²
- Lesbian and bisexual women, trans men and non-binary people born female are less likely to participate in cervical screening³²
- Men are less likely to participate in bowel screening³⁹
- Screening participation based on age varies between countries³²⁻³³

Current challenges with the measurement of equity in screening

Due to limitations in the available data, there are gaps in what we know about those who are at highest risk of the screened-for conditions and their participation in screening.

- Equity stratifiers, including ethnicity and country of birth, are not yet routinely collected across the entire health system despite the recommendations of the HSE Social Inclusion office.
- Due to gaps in data collection, it is also difficult to assess the effects of intersectionality, for example, how does ethnicity interact or overlap with age and socio-economic status to increase or decrease the likelihood of participation in screening?
- Currently, there is no standardisation across the health service or the NSS in how we report on equity in healthcare.
- The lack of widespread use of an individual health identifier impedes the ability to link data collected by the NSS with other datasets in the health service.

Similar challenges are faced by screening programmes in other countries, for example, Public Health England (PHE) highlighted how the collection of core demographic data is compromised by deficiencies in some of their screening and national IT systems in the [PHE screening inequalities strategy](#). The lack of timely access to data, which hinders the ability to monitor the impact of interventions, is also called out in their strategy³².

Barriers to participation in screening

As part of the development of this framework, a review of systematic reviews on the barriers to participation in population screening programmes was completed. The findings of the review are summarised in Table 2. The research methodology is outlined in Appendix 4. These barriers can help to explain why some population groups have lower participation in screening⁴⁰⁻⁵⁵.

Table 2

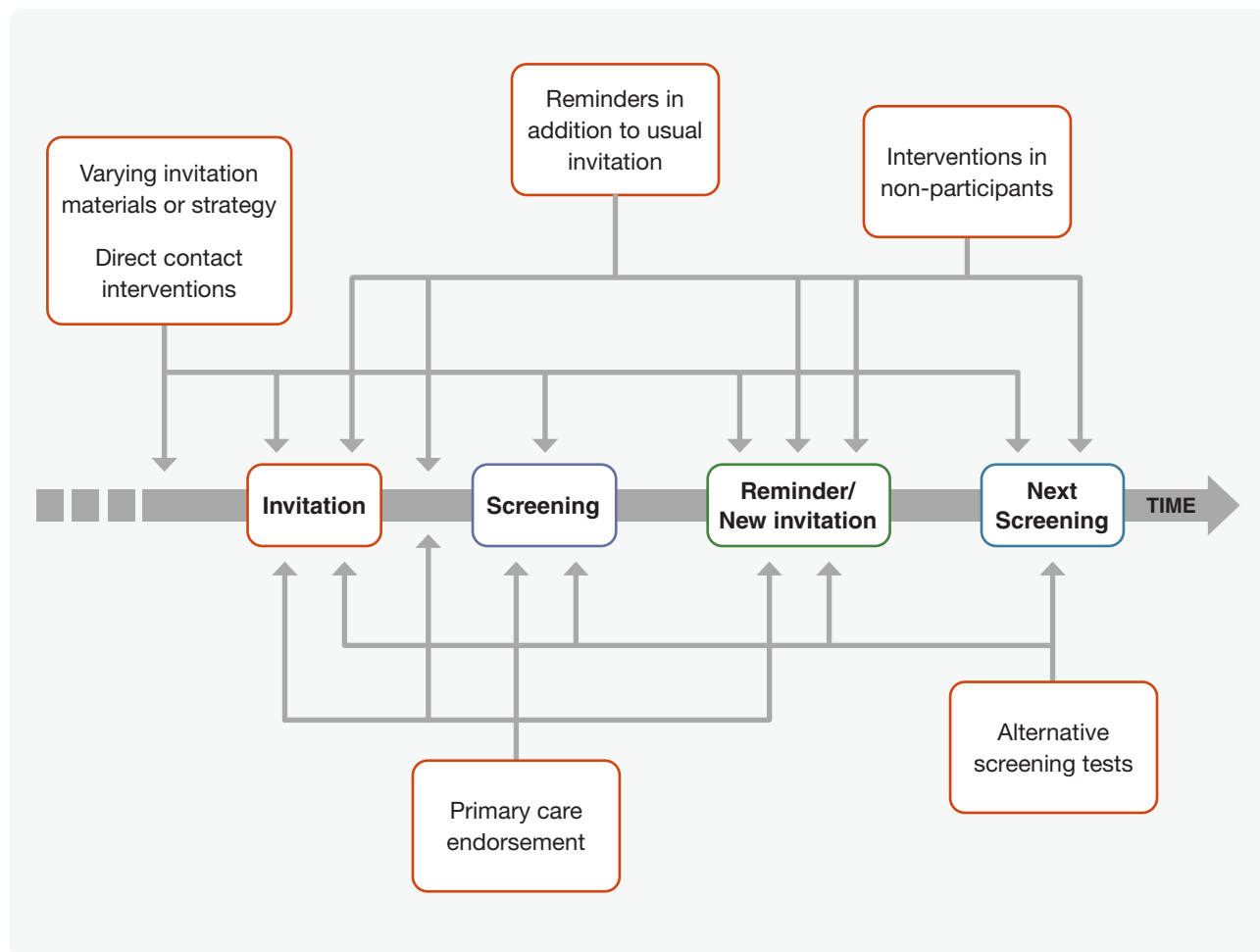
● BreastCheck ● BowelScreen ● DiabeticRetina Screen ● CervicalCheck

Psychological Barriers				
Barrier	Programme			
Trust and confidence in the service	●	●	●	
Attitudes & behaviours (shame, guilt, embarrassment, violation & disgust)	●	●	●	●
Fear & anxiety of the test or results	●	●	●	●
Fatalism		●		●
Fear of burdening family		●		●
Lack of coping skills	●			●
Painful procedure	●	●	●	●
Not a priority			●	●
Self-esteem/self-confidence	●			
Forgetting appointments/lack of reminders		●		
Privacy		●		●
Belief that screening test is not accurate		●	●	●
Cognitive Barriers				
Not knowing how to conduct the test		●		
Knowledge, awareness and understanding	●	●	●	●
Perception of risk	●	●	●	●
Health/cancer literacy	●	●	●	●
Language			●	●
Structural Barriers				
Transport		●	●	●
Availability of appointments/opening hours			●	●
Waiting times/lists			●	●
Locations		●	●	●
Availability/consistent Healthcare Professional (HCP)		●	●	●
Lack of pathology services				●
Male physicians/HCP	●		●	●
Insufficient medical advice/lack of physician recommendation		●	●	●
Social/cultural Barriers				
Age		●		●
Relationships – spousal, family, friends, mother, HCP		●	●	●
Social acceptability				●
Discrimination/stigma			●	●
Religious beliefs	●	●		●
Education level	●	●		●
Employment status	●			●
Low income	●	●		●
Financial Barriers				
Transport			●	●
Loss of income			●	
Cost of childcare			●	●

Interventions to improve participation in screening

As highlighted earlier, screening is a pathway and barriers can occur at one or more points in the pathway. Therefore, it can be useful to think of interventions in terms of what part of the pathway they are designed to address (see Figure 4 adapted from Duffy SW et al's article, 'Rapid review of evaluation of interventions to improve participation in cancer screening services', published in the Journal of Medical Screening⁶⁶).

Figure 4. Interventions to improve participation along the screening pathway



An umbrella review of previous systematic reviews was performed to identify what interventions have been proven to increase the uptake of screening, organised below according to intervention type/which part of the screening pathway that they targeted. Table 3 shows the different groups of interventions that can be implemented along the screening pathway. The colour codes indicate what has been proven to work for each screening programme. Most of the interventions were designed to improve overall uptake of screening and only a proportion of the reviews examined the effects on equity i.e., whether uptake improved in certain under-screened groups, such as ethnic minorities and people from a lower socioeconomic background.

Table 3. Interventions that increase the uptake of screening

● BreastCheck ● BowelScreen ● DiabeticRetina Screen ● CervicalCheck

Reminders in addition to usual invitation	Quality of evidence		
Advanced notification letters ⁵⁷⁻⁵⁸ (Sent approx. 2 weeks prior to invitation)		●	Moderate
Telephone contact ^{57, 60-63}		●	Moderate
Text messages/digital reminders ^{57, 59, 63, 67}	●	●	Low/inconclusive
Letter reminders ⁶⁰⁻⁶¹			Moderate
GP invitation or reminder ^{60, 63}			Low/inconclusive
Primary care endorsement			
Endorsement by participant's GP ⁵⁷		●	Moderate
Interventions in non-participants			
Mobile mammography ⁶⁸	●		Moderate
Media campaigns ⁶⁷ (Using radio, television, billboards, leaflet distribution etc)	●		Low/inconclusive
Varying invitation materials			
Educational intervention combined with provision of testing kits ⁵⁹		●	Moderate
Additional printed materials with standard invitation ^{57, 63} (small effect for enhanced 'easy to read' instructions for FIT kit, no effect for bowel cancer information booklets)		●	Low/inconclusive
Personalised invitation letters ^{60, 63}			Low/inconclusive
Letter offers a fixed appointment for the screening test ^{61, 63}			Moderate
Decision aids ⁷⁰⁻⁷³ Decision aids are interventions that support patients by making their decisions explicit, providing information about options and associated benefits/harms, the reviews found mixed results on intention to participate and screening uptake, sometimes decision aids can lower both	●		Inconclusive
Direct contact interventions			
Patient navigators* providing practical and logistical support and advice ⁵⁹		●	Moderate
Lay health advisor ⁶²⁻⁶³			Moderate
Community-based educational interventions ^{67, 69, 74-75}	●		Low/inconclusive
Educational interventions delivered online ⁶⁴			Low/inconclusive
Alternative screening tests			
HPV self-sampling kits ^{60-63, 65-66}			High
Tele-ophthalmology ⁷⁶ (Where the screening is done in a primary care setting with a non-mydratic camera, and the images are sent via telemedicine for ophthalmology review)*			Low/inconclusive

* Navigators come from different backgrounds: they can be qualified health professionals, such as nurses or social workers, or trained lay persons, often recruited from the community that is being targeted. Typical tasks might include identifying individual needs and barriers to care, educating patients and communities, and linking patients with different care providers.

Other interventions to improve the uptake of diabetic retinopathy screening

Only one Cochrane review and one health technology assessment (HTA) were identified that examined interventions to increase attendance for diabetic retinopathy screening. The reviewers classified interventions according to the components of quality improvement (QI) and behavioural change techniques (BCTs) used⁷⁷⁻⁷⁸. This meant that the interventions did not easily fit into the categories above - most interventions also used multiple techniques or components in combination.

- For BCTs aimed at patients, the reviewers found that techniques based on 'goal setting' and 'credible source' were more effective.
- For healthcare professionals, techniques that included 'restructuring the social environment' and 'credible source' had the most effect⁷⁷.
- In the sub-group analysis for QI components which were associated with improvements in DRS attendance, interventions directed at patients (promotion of self-management and patient education) or the organisation of the health system (team changes or the establishment of an electronic patient registry) had the greatest effect⁷⁷.

The Cochrane meta-analysis found that QI intervention components that were aimed at patients, the healthcare professional or the healthcare system were associated with a 12% absolute increase in DRS attendance⁷⁷. The HTA was performed by the same authors of the Cochrane review and here, they identified four key recommendations from their thematic synthesis:

- reduce inconvenience to people with diabetes for example through provision of local screening facilities;
- increase awareness of the importance of screening among both patients and healthcare workers;
- increase patients' sense of comfort and support; and
- improve message content, for example, some people with diabetes did not think they needed retinopathy screening if they had no symptoms or their diabetes was under control or if they were getting routine eye tests⁷⁸.

Important point to note: The evidence summarised above for each programme was synthesised from a review of systematic reviews. The methodology is outlined in Appendix 3. Due to time and resource considerations, the reviewers did not sub-classify the studies based on their design or quality. Quality of evidence for the interventions was based on the authors' conclusions for each systematic review. For further details on specific interventions and their relevance to a particular screening programme or population group please access and review the full papers, which are listed in the References section.

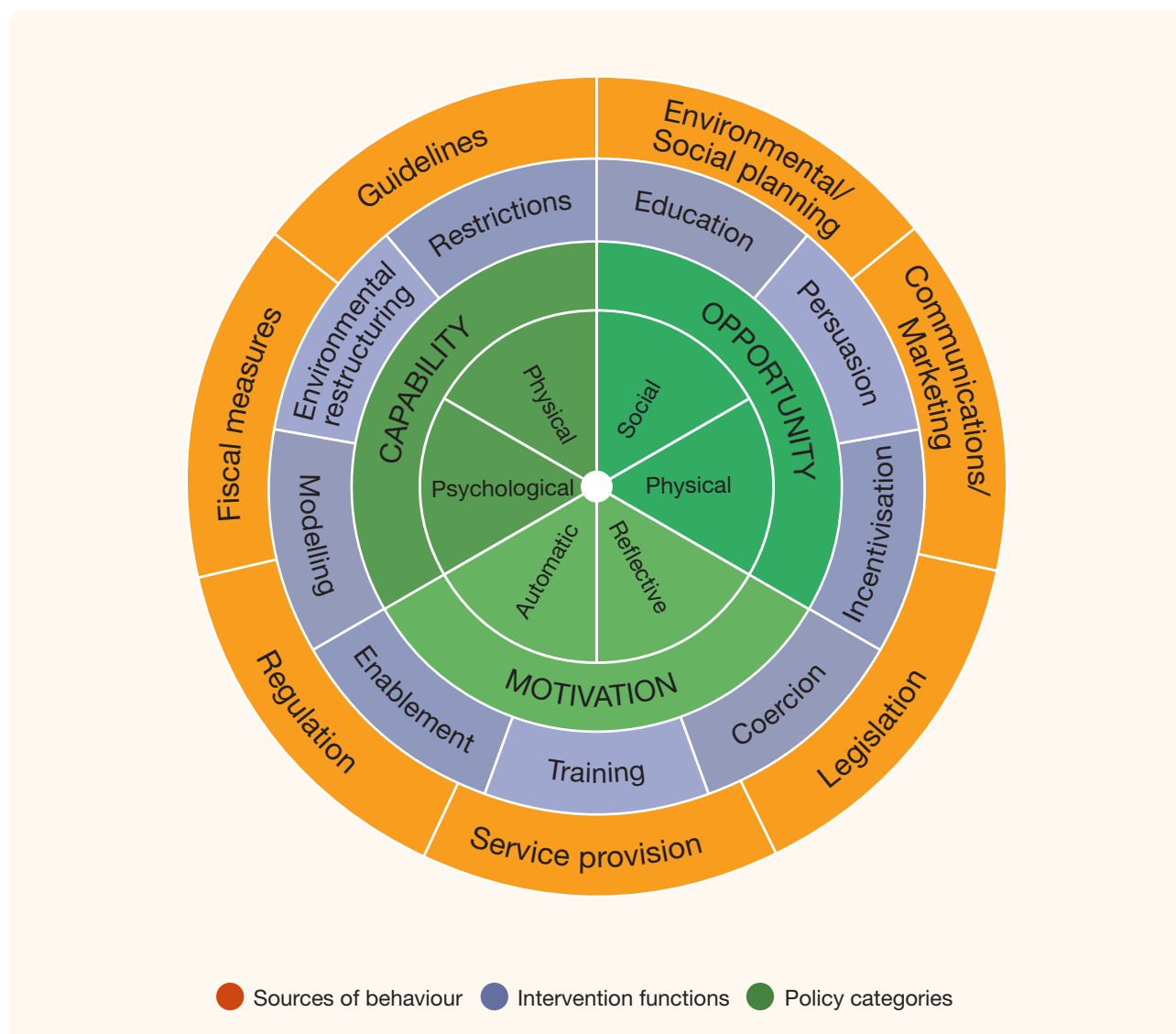
Key messages from the systematic reviews

- A relatively small number of interventions extracted from the papers included in this review showed statistically significant increases in uptake after the introduction of an intervention and not all the reviewers assessed the impact on equity. This does not necessarily mean that all other interventions are not effective, simply that their effectiveness could not be, or was not, measured independently when introduced. The authors of the included reviews also outlined the difficulty in comparing and pooling data on different interventions due to heterogeneity in the design of studies included in the systematic reviews, resulting in inconclusive results. This highlights the importance of rigorous evaluation of new interventions aimed at improving screening uptake in never screened and under-screened groups, to add to the current evidence base.
- Regarding educational interventions to improve the uptake of screening, these were more likely to have some impact if the following conditions were met:
 - The interventions were based on theoretical models of behaviour change.
 - The content was culturally specific and sensitive.
 - They addressed some of the structural barriers to screening and were designed to empower people through knowledge and skills.
 - The educational intervention was not delivered in isolation but in combination with another initiative, such as practical assistance from a lay health advisor or distribution of FIT kits for bowel screening.

In summary, knowledge does not necessarily translate into action – we cannot rely on education and awareness raising alone. Overcoming economic, structural, socio-cultural and psychological barriers is likely to be key in recruiting under-screened and never-screened population groups.

- Myers et al highlighted that ‘while individual interventions show modest effects, these results indicate that future programs might overcome this by combining interventions together. Adding intervention strategies together tended to improve participation rates in the reviewed studies; however, this is not the case for all interventions, they need to be effective individually.⁵⁸’
- Insights from behavioural science can help when designing interventions to improve screening uptake and equity. The Behaviour Change Wheel, (Figure 5) which considers an individual’s capability and motivation, as well as their physical and social environmental influences, is a useful framework to keep in mind when trying to improve screening uptake⁷⁹. Context is key and understanding the experiences of, and barriers faced by, different groups is important when designing interventions to improve uptake. The Behaviour Change Wheel includes an overview of intervention types, such as persuasion and environmental restructuring, for consideration⁷⁹. The APEASE criteria (as explained in Table 4 below) can also be a useful tool to guide decision-making on which interventions to pilot to improve uptake⁸⁰.

Figure 5: The Behaviour Change Wheel for characterising and designing behaviour change interventions



Taken from: Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci.* 2011;6:42.

Table 4. APEASE criteria for evaluating interventions (Michie et al., 2014)

Acceptable	How far is it acceptable to all key stakeholders?
Practicability	Can it be implemented as designed within the intended context, material and human resources?
Effectiveness	How effective and cost-effective is it in achieving desired objectives in the target population?
Affordability	How far can it be afforded when delivered at the scale intended?
Side-effects	How far does it lead to unintended adverse or beneficial outcomes
Equity	How far does it increase or decrease differences between advantaged and disadvantaged sectors of society?

Taken from: Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions*. London, UK: Silverback Publishing.

Developing the Framework

Why does the NSS need a framework to address equity?

Population-based health interventions, like screening, can increase health inequities because of higher levels of uptake in populations that are healthier, more educated and well-resourced. This is known as the inverse equity hypothesis and is a widely accepted concept.

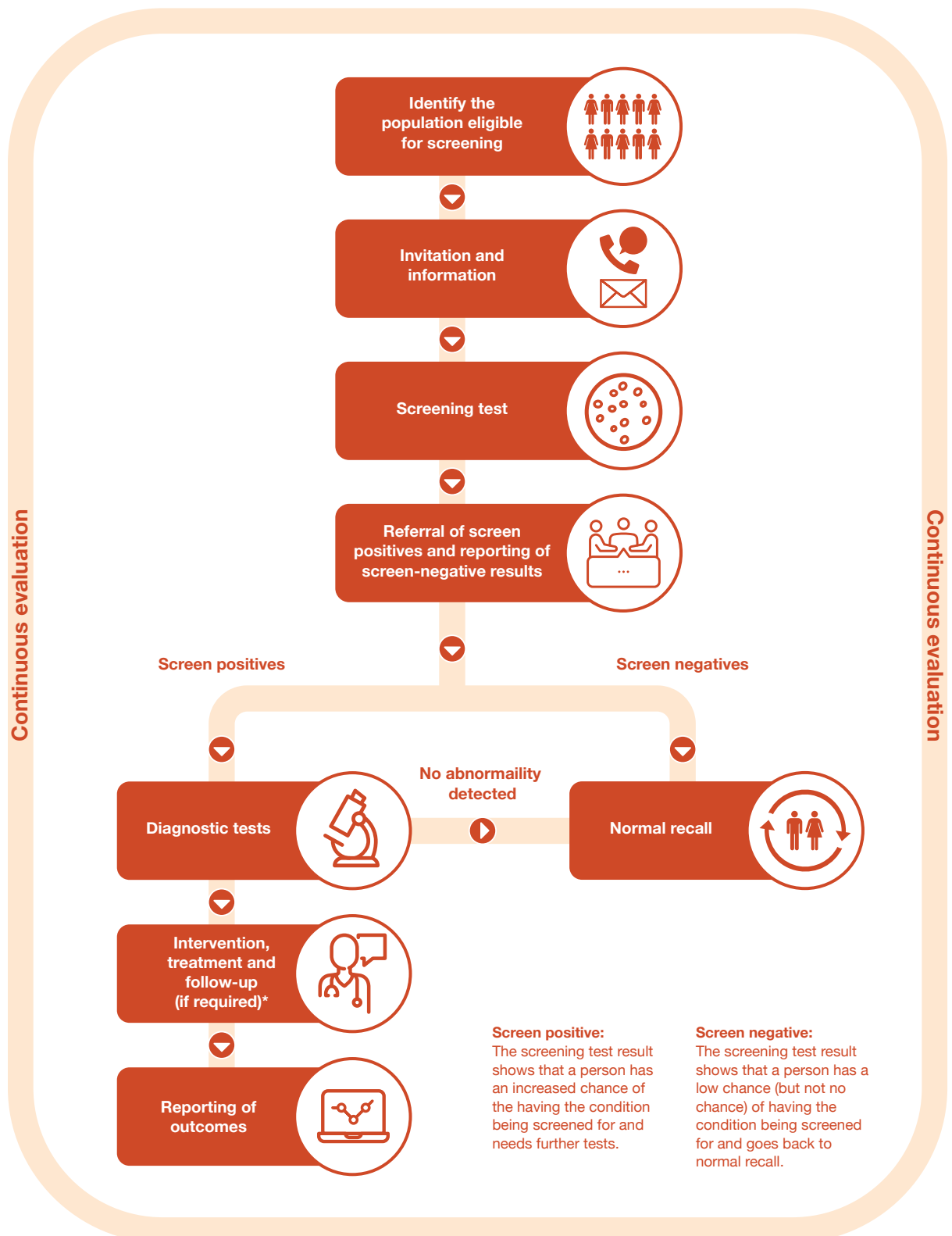
We know that all those that are eligible for screening do not access it and that certain population groups are less likely to take part in our screening programmes than others.

Screening is a step in an integrated disease prevention pathway, where elements are interrelated and integrated. Organised screening involves people coming for a test at regular intervals. The screening pathway is explained in Figure 6. People can experience barriers at any point on the screening pathway and we want to continue to better understand and address these barriers. We have introduced service adaptations and supports to help people to overcome some of these barriers already. Details on our interventions and supports can be found in our Equity Reports for 2021⁸¹ and 2022⁸².

Figure 6. The Screening Pathway

The Screening Pathway

Screening is the process of identifying healthy people who may have an increased chance of a disease or condition. Screening is a pathway that starts with identifying the population eligible for screening and ends with treatment of those who have the screened condition. For most people the pathway operates as a cycle, with people who have a normal screening test being invited back in an agreed time to be screened again. For example breast screening is offered to women aged 50-69 years every 2 years.

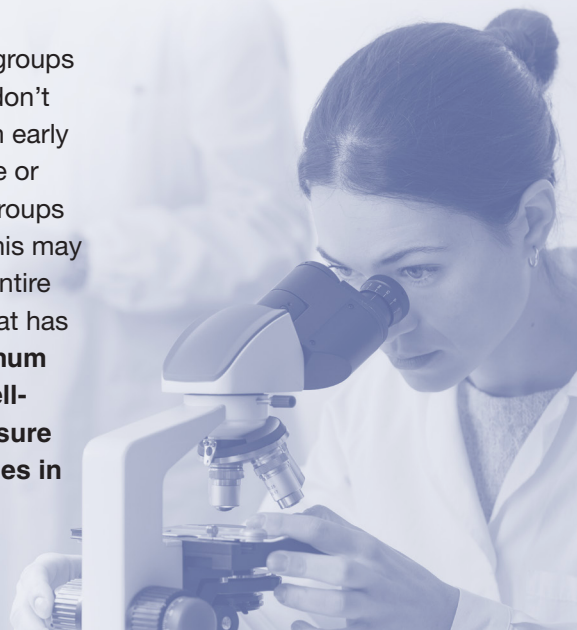


* Not everyone who screens positive will need intervention and treatment. Some will have a negative diagnostic test and go to normal recall

Reference: This image was developed using content from: Screening Programmes – A Short Guide. Increase effectiveness, maximize benefits and minimize harm. World Health Organisation 2020 <https://apps.who.int/iris/bitstream/handle/10665/330829/9789289054782-eng.pdf>

Screening primarily benefits those at most risk of developing the disease being screened for.

If these groups are less likely to take up screening, it means that they don't get the potential benefits e.g., detection of cancer at an early or pre-cancerous stage which can reduce the incidence or mortality and morbidity associated with the cancer. If groups with a higher incidence of disease do not participate, this may change the balance of benefits and harms across the entire population. This can lead to a screening programme that has reduced effectiveness. **The best way to get the maximum benefit from a screening programme is to have a well-delivered, quality assured programme and to make sure that the uptake is high and that there are no inequities in that uptake.**



We know that if we treat everyone equally, we will not achieve equity, however if we consider peoples' needs, treat people justly and according to their circumstances, we will achieve equity. This framework will help us to set the strategic direction for how we develop and deliver our services in more equitable ways over the next 5 years.

The purpose of the framework?

This framework sets out how we can understand and improve equity in our services. We want people to make an informed choice about whether to have screening. If they choose screening, we want them to be able to carry out that choice.

The benefits of having this framework are that it will:

- help build trust and partnerships between NSS and our stakeholders as we work towards providing equitable screening programmes for everyone living in Ireland.
- establish the strategic direction for work to improve equity across the NSS screening programmes for the next 5 years.
- ensure that we work towards achieving the NSS vision of 'working together to save lives and improve people's health through population screening'.
- create a shared understanding of equity and how we can improve it.
- help to ensure that everyone who is eligible for screening can participate in screening if they choose to.
- have identified the evidence-base and best practice methodologies for addressing inequities in screening for both internal and external NSS stakeholders.
- build on existing work to improve equity across the NSS and provide clarity on how to address gaps and identify future priorities.

This framework is a high-level document that will help guide the development of action plans. We have identified five priorities and areas that we need to focus on within these priorities. These priorities and focus areas will help shape multi-annual action plans that will be developed in the next phase of this work.

Process for development of the framework

Figure 7. The steps we took to develop the framework



Improving Equity in Screening – a strategic framework 2023 – 2027, was co-produced in partnership with a range of stakeholders who represent the views of our service users. The framework was informed by contributions from an Advisory Group on Equity, stakeholder consultations and the literature review.

An Equity Advisory Group (outlined in Appendix 1), made up of a small number of external stakeholders, including Patient and Public Partnership Representatives participated in two workshops. The workshops enabled the Group to identify priorities and focus areas. The graphic drawings below represent some of the feedback from the workshops. Over 200 external partners from across the statutory, community and voluntary sectors, all NSS staff and members of our Patient and Public Partnership (PPP) were invited to provide feedback on the priorities and focus areas. Through this process we have ensured that the voice and experience of a diverse range of stakeholders was heard and incorporated to this framework.

During our staff consultations to develop this framework, we heard feedback on areas that staff recognised could be improved, such as recognising that not all awareness campaigns reach all groups of people living in Ireland and how we could improve efficiencies and provide a better user experience if we were ‘more joined up’ in relation to the delivery of our four programmes. We discussed work that has commenced on geocoding our screening registers and how having data at a lower geographic level will allow us to plan and evaluate our supports better. Our staff also told us of the value of having an accessible website, in terms of how a person with a disability can understand and navigate our information online.

The priority areas, which are set out below, are interrelated and interdependent and of equal importance. The focus areas are statements that will help inform the development of action plans.

Figure 8. Equity Advisory Group workshop 1, graphic drawing



“It’s about working with people, starting with them from where they are at. It’s about building on trust... and communities representing themselves, not us for them.”

NSS STAFF MEMBER

“How do you tailor information resources to certain ages. Would there be different messages for different groups of people that are eligible for screening”

NSS STAFF MEMBER

“Looking at getting screening programme databases geocoded with smaller area codes, which should help with (identifying) areas of deprivation. Thinking about the different groups, e.g., refugees, (can we) ...tailor ...our approach (for) these groups.”

NSS STAFF MEMBER

Figure 9: Equity Advisory Group workshop 2, graphic drawing



“Training of community workers, Health Promotion colleagues and anyone on the ground...Looking at how we (build capacity) and can get maximum return on the tools and resources that we have.”

NSS STAFF MEMBER

“There is not a lot of equity in our big campaigns. It's the individual work that we do that matters, that really gets to people.”

NSS STAFF MEMBER

Our strategic framework

Our framework consists of five priority areas, these are broad areas that we need to work on to address the inequities we know are being experienced in our services. Associated with each priority are a series of statements that highlight areas that we need to focus on. The focus areas are high level statements that will be used to guide and inform our actions.



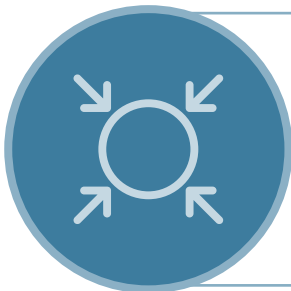
Priority Area 1 Research & Data



Priority Area 2 Education, training, and development



Priority Area 3 Partnership



Priority Area 4 Accessibility and inclusivity



Priority Area 5 Communications



Priority Area 1: Research & Data

Overview: NSS understands the importance of reviewing and applying an evidence-based approach to our work in improving equity in screening.

Consultation pointed to the importance of conducting research, gathering feedback from screening participants and identifying opportunities for capturing additional equity-related data, where possible.

Our focus areas

- 1.1** Ensure we stay up to date with evidence of equity in screening by: (a) reviewing available research, data, and epidemiological analyses, and (b) conducting qualitative and quantitative research.
- 1.2** Work to ensure that all equity projects are based on the best, comprehensive, and evaluated evidence.
- 1.3** Share data, research, and learnings with relevant stakeholders through a robust information sharing process to support action in under-screened communities, for example with Health Regions.
- 1.4** Agree on robust equity and screening monitoring, evaluation and reporting guidelines and practice. This may include, but is not limited to the following elements:
 - a.** Agree a minimum set of equity stratifiers and comply with the recording of ethnic identifiers
 - b.** Partnership involvement
 - c.** Monitor and evaluate this framework
- 1.5** Use service level, user experience evidence and equity tools to tailor processes to improve and modify screening programmes.

"We need to turn data into info and use the info to get return on investment"

NSS
STAKEHOLDER

"Collecting equity stratifiers, (it is important) to look not just at refugees or migrants but within that what age groups are / aren't attending. Looking at other equity stratifiers, having the ability to look at the complexity of the stratifiers."

NSS STAKEHOLDER

"Use the data. Tailor individual approaches. Understand how to target them specifically and get a good return on investment"

NSS STAKEHOLDER

"Certain equity stratifiers, are not captured equally across the programmes. It would be important to streamline that. Any new variables/ values you want to introduce, you need to be clear with the Programmes (on) the meaning or value of those measures or it can be unclear."

NSS STAKEHOLDER



Priority Area 2: Education, training, and development

Overview: Enhancing the education, learning and development needs of HSE staff, screening providers and other stakeholders is essential.

This may be done through raising awareness of existing content or the development of new content, if necessary.

Our focus areas

- 2.1** Support NSS staff and screening providers to build their knowledge, awareness and understanding of avoidable barriers (inequities) that people may experience in screening services.
- 2.2** Contribute to raising awareness of the NSS supports and interventions that aim to improve access to screening services.
- 2.3** Identify, understand and, where possible, address the educational and training needs of different stakeholders in the statutory, community and voluntary sectors.
- 2.4** Ensure that our resources are appropriate and accessible.
- 2.5** Identify and enhance opportunities for shared learning with existing and relevant health training and education programmes – within and beyond the HSE.

“Training of community workers and health promotion colleagues and anyone on the ground. We realise we don’t have capacity. E.g., training sample takers on equity. Training Public Health Nurses for when they talk to patients.... looking at structures and how we can add in messages and have the correct message...and get maximum return on the tools and resources that we are putting out there at the moment.”

NSS STAKEHOLDER

“E-learning is great, but talking is great also. It is the deeper educational work that needs to be done”

NSS STAKEHOLDER



Priority Area 3: Partnership

Overview: NSS is not alone in wanting to improve health equity. Through a partnership approach, we can build capacity, capability, and potential.

We will apply the principles and practice of an appropriate model of partnership in this work, for example, a community development approach.

Our focus areas

- 3.1** Continue to collaborate and invest in partnerships with organisations, community leaders and structures representing never screened or under-screened populations to understand and meet their needs.
- 3.2** Consider new and creative partnership approaches that may enhance screening participation, for example a single register for screening.
- 3.3** Strengthen our engagement with regional and national partners to ensure that we are maximising connectivity, reducing duplication of effort and creating efficiencies.
- 3.4** Continue to strengthen international partnerships to ensure that we are aware of best practice knowledge (including data), developments, strategies and initiatives.
- 3.5** Continue to adhere to, report on and implement relevant policies and legislation at an organisational level.

"It's about continuously building on partnerships and maintaining it over time. Linking with people who are linked with services. It's about the people who aren't linked in with those in services"

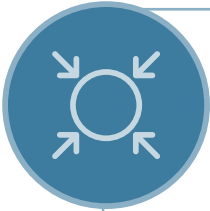
NSS STAKEHOLDER

"People who are homeless or have addiction issues... the kinds of services that they access would be worth linking in with e.g., Safety Net. There are peer advocates in some homeless charities, they may be open to sharing local peer level supports with communities."

NSS STAKEHOLDER

"Communicating with stakeholders, it's about valuing peoples time, considering that in order to engage, we need to build relationships. That can take time. Too big a topic for now. But it's about relationship building."

NSS STAKEHOLDER



Priority Area 4: Accessibility and inclusivity

Overview: By understanding the screening pathway from a participants' perspective, we can better understand service barriers and enablers and act to address them, for example by providing reasonable accommodations.

Applying technological innovations and creative solutions could improve accessibility and inclusivity.

Our focus areas

- 4.1** Work to improve access to our services by, understanding and addressing barriers experienced by individuals and groups and by promoting awareness of existing supports.
- 4.2** Identify opportunities that enable or enhance access for never screened and under-screened groups to participate in our screening services.
- 4.3** Consider the potential for implementing adaptations and flexibility to the screening pathway (including invitation and registration processes), where these are proven to be effective and feasible.
- 4.4** Evaluate the potential of innovative technologies and information systems in improving participation and experience for screening participants for example, the Patient Reported Experience Measures Surveys (PREMS) which gathers real-time feedback from participants at each stage of their screening journey.
- 4.5** Develop frameworks and tools to support NSS Programmes to identify the potential impacts of their decisions on those experiencing inequities, for example, an equity proofing decision-making type tool and or an equity impact assessment for new programmes.

"Having screening information in your language is one thing but more is required. Staff can play a role in supporting patients e.g. reducing their fear of screening"

NSS STAKEHOLDER

"Having an accessible website is important"

NSS STAKEHOLDER

"NSS provides a phone service but that is not helpful for a deaf person. How do they access the supports they need?"

NSS STAKEHOLDER



Priority Area 5: Communications

Overview: Communication can be a barrier to accessing screening for some people. By understanding and responding to the communication needs of audiences, we can address this barrier. Developing and testing content in partnership with our stakeholders is key to achieving this.

Our focus areas

- 5.1** Assess communications needs and tailor messages, recognising both the digital health literacy divide and the role that technology can play.
- 5.2** Use appropriate, visual imagery which is representative of the diversity of screening participants.
- 5.3** Use engaging methods and channels of communication, including social media, to reflect and meet stakeholders needs.
- 5.4** Use clear, concise, standardised, and evidence-based language, communications processes, and approaches.
- 5.5** Proactively engage relevant stakeholders, including screening participants, in the development and review of resources.
- 5.6** Scope opportunities for successfully engaging with people that may be isolated and or not engaged with any community groups, advocacy groups or services.

"It is important that health literacy is weaved into everything we do. It is tied into the social determinants of health."

NSS STAKEHOLDER

"There is a noticeable digital literacy divide, especially with older people. Some people may not have the data on their phone and need to be sitting at a laptop."

NSS STAKEHOLDER

"We have Romanian and Slovakian languages in Roma community. Visual videos should be inclusive. There should be awareness about our traditions, character, and culture. Good to know why we wear long clothes or skirts."

NSS STAKEHOLDER

Conclusion and next steps

The publication of this Framework is an important milestone for how we improve equity in screening, and is a key deliverable as called out in our NSS Strategic Plan 2023-2027. This is our first equity framework and one of the first equity strategic frameworks in the health service in Ireland.

It is important that our screening service is person-centred, and the process used to co-produce the framework, as well as the content of the framework, demonstrates our commitment to working with people, whether they be our Patient and Public Partnership representatives, screening participants, organisations representing under-screened and never-screened participants, representatives from the wider community, voluntary and statutory sector and our staff.

Our framework provides an overview of the context we are working in, the relevant literature and the five priority areas to improve equity in our screening service. The framework demonstrates our commitment to embedding equity into our organisational culture. It will help us to be more strategic in creating a more equitable screening service that puts people at the centre and responds to the various needs of the population. This Framework will be complemented by other NSS projects and strategies for example the Data Strategy, the Cervical Cancer Elimination project, the Information Hub, projects that capture patient experience and the Stakeholder Engagement Framework.

The next steps following the publication of the framework are to:

- Establish an Equity Oversight Committee.
- Develop an initial action plan for framework implementation.
- Establish monitoring and evaluation processes to measure our performance.

The NSS looks forward to continuing to work with key partners on the implementation of the framework.

Acknowledgements

We wish to acknowledge and thank everyone who was involved in the development of our framework.

A comprehensive consultation process was undertaken to provide an opportunity for all stakeholders to review and comment on the draft priorities and focus areas for the NSS. Feedback from the consultation was taken on board to refine the final draft of the framework document prior to its review and approval by the NSS Executive Management Team. The consultation process involved the following stakeholder groups:

Academics/ Behavioural Scientists	Men's Health
Cancer & Diabetes Organisations	NSS Patient and Public Partnership (PPP)
Disability organisations & Disabled Persons Organisations	Older people services
HSE Health & Wellbeing	Parenting and family groups
HSE Social Inclusion	Representatives from the poverty, homeless and addiction services
Internal NSS Programmes & Functions	The Institute of Public Health
Intercultural groups and services	Traveller Health Organisations
LGBTQI+ groups	Women's Services

We also wish to acknowledge the support and contributions of all that engaged in our consultations. We also wish to thank Ms Sophie Mulcahy, PhD student, for her work on gathering the evidence from the published literature to support the development of this framework.

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Appendix 1: Equity Advisory Group membership

External Partners

Dr Douglas Hamilton, Public Health Lead, Social Inclusion, HSE

Ms Ellen O’Dea, Head of Health and Wellbeing, HSE

Dr Heather Burns, Specialist in Public Health Medicine, National Cancer Control Programme

Ms Helen Deely, Assistant National Director, Health and Wellbeing, HSE

Dr Helen McAvoy, Director of Policy, Institute of Public Health

Dr Chris Carroll, Specialist in Public Health Medicine, HSE

Ms Grainne Begley (Project Manager, Social Inclusion) and Ms Lauren Rodriguez (Public Health Development Officer, Institute of Public Health) participated as deputies to Dr Douglas Hamilton and Dr Helen McAvoy respectively.

Patient and Public Partnership (PPP)

Mr Will Kennedy, PPP Member

Ms Jessica Black, PPP Member

Mr Keith Cairns, PPP Member

Internal NSS Partners

Ms Kerry Lombard, Radiography Service Manager, BreastCheck

Dr Rachael Comer, Education and Training Manager, Screening Training Unit/ CervicalCheck

Ms Kathy Stack, BowelScreen Clinical Coordinator

Ms Helen Kavanagh, Programme Manager, Diabetic Retina Screen

Ms Fiona Ness, General Manager, Communications Engagement, and Information Development

Dr Mairead O’Connor, Research Officer, Programme Evaluation Unit (PEU)

Chair: Dr Laura Heavey, Specialist in Public Health Medicine, National Screening Service.

Deputy Chair, Ms Pheena Kenny, Public Health Strategy & Development Manager.

NSS Public Health Project Team

Ms Lynn Swinburne, Senior Health Promotion Officer

Ms Caroline Walsh, Senior Public Health Officer

Ms Sinéad Woods, Senior Public Health Officer

Mr Seán Ryan (Sept 2022 – Feb 2023), Ms Michelle Reid (Feb – May 2023) & Ms Lena Remidianakis (From May 2023), Public Health Administration Support.

Appendix 2:

Consultation representatives

Brothers of Charity Service Ireland	Marie Keating Foundation
Care Alliance	Mater Misericordia University Hospital
Cork Kerry, Community Health/CHO 4 (HSE)	Men's Health Forum in Ireland (MHFI)
Deep End Ireland	Midwest Irish Sign Language Hub
DePaul	National Federation of Voluntary Service Providers (Disabilities)
Diabetes Ireland	National Screening Service
Dublin city Community Co-op	Pavee Point Traveller & Roma Centre
EcoEd4All	PhD researcher, UCD
Head of Health & Wellbeing	Positive Cork
HSE Mid - West, CHO 3	RehabCare
Irish Cancer Society	Retirement day centre - over 55 group
Irish Deaf Society	Safety Net Primary Care
Irish Institute of Pharmacy	Sexual Health Centre Cork
Irish Men's Sheds Association	Sickle Cell and Thalassaemia Ireland
Irish Patient Organisation	Saolta University Health Group
Irish Patients Association (Family Carers)	Southeast Health and Wellbeing
Irish Pharmacy Union	The National Platform of Self Advocates
Irish Sign Language	University College Dublin
Irish Traveller Movement	Voice of Vision Impairment Ireland (VVI)
Kerry Deaf Group	Women's Service - Merchants Quay Ireland
LGBTI+ & DSGBV Health - HSE NSIO	

Appendix 3:

Literature review methodologies

Methodology for the review of systematic reviews on the topic of barriers and enablers to participation in our four national screening programmes

A review of systematic reviews on the topic of barriers and enablers to attending screening was completed. A search strategy was built using Medical Subject Headings (MeSH) terms and title and abstracts were searched on PubMed. The review was limited to systematic reviews published in the last 5 years; the papers included in the review discuss the barriers and enablers of attending screening services. Additional studies, outside of the 5-year limit, i.e. from 1946 onwards, were included to ensure a representative sample. Efforts were made to ensure a representative sample of studies were included focusing on the screening programmes available in Ireland. This review was limited to studies published within the last 5 years, papers available in full-text and in English.

In total, 45 papers were initially extracted from PubMed and underwent review by title and abstract. Papers discussing interventions to increase uptake/attendance were outside the scope of this review. Papers describing screening services not currently available through the NSS were excluded from the review.

Methodology for the review of systematic reviews on the topic of interventions to improve uptake/participation in our four national screening programmes

A review of systematic reviews on the topic of interventions to improve uptake/participation in our four national screening programmes for cervical cancer, bowel cancer, breast cancer and diabetic retinopathy were completed in April 2023.

Cervical cancer

A search strategy for cervical cancer was built using Medical Subject Headings (MeSH) (uptake OR participat*) AND (improv* OR increase* OR access OR coverage) AND cervical AND screen*

The title and abstracts were searched on PubMed. This review was limited to studies published within the last 10 years, papers available in full-text and in English. In total, 125 papers were initially extracted from PubMed and underwent review by title and abstract. Fifteen papers were selected for inclusion.

Bowel Cancer

A search strategy for bowel cancer was built using Medical Subject Headings (MeSH) terms (uptake OR participat*) AND (improv* OR increase* OR access OR coverage) AND bowel AND screen*.

Title and abstracts were searched on PubMed. This review was limited to studies published within the last 10 years, papers available in full-text and in English. In total, 25 papers were initially extracted from PubMed and underwent review by title and abstract. Three papers were selected for inclusion.

Breast Cancer

A search strategy for breast cancer was built using Medical Subject Headings (MeSH) (uptake OR participat*) AND (improv* OR increase* OR access OR coverage) AND breast AND screen*.

The title and abstracts were searched on PubMed. This review was limited to studies published within the last 10 years, papers available in full-text and in English. In total, 41 papers were initially extracted from PubMed and underwent review by title and abstract. Eight papers were selected for inclusion. 1 additional paper was included that was not captured in the PubMed search but met inclusion criteria.

Diabetic retinopathy

A search strategy for diabetic retinopathy was built using Medical Subject Headings (MeSH) (uptake OR participat*) AND (improv* OR increase* OR access OR coverage) AND diabetic retin* AND screen*.

The title and abstracts were searched on PubMed. This review was limited to studies published within the last 10 years, papers available in full-text and in English. In total, 3 papers were initially extracted from PubMed and underwent review by title and abstract. 1 paper was selected for inclusion. 2 additional paper was included that was not captured in the PubMed search but met inclusion criteria.

Please note, due to time and resource considerations, we did not sub-classify the studies by design or quality. Collation tables will only be available to NSS staff, upon request. Quality of evidence for the interventions was based on the authors conclusions for each systematic review.



An tSeirbhís Náisiúnta Scagthástála
National Screening Service

National Screening Service
King's Inns House,
200 Parnell Street, Dublin 1, D01 A3Y8.

Tel: 01 865 9300

Email: info@screeningservice.ie
Website: www.screeningservice.ie

NSS/S&F-10