



Public Health
England

National Screening Programmes

Evidence, policy and implementation in the UK

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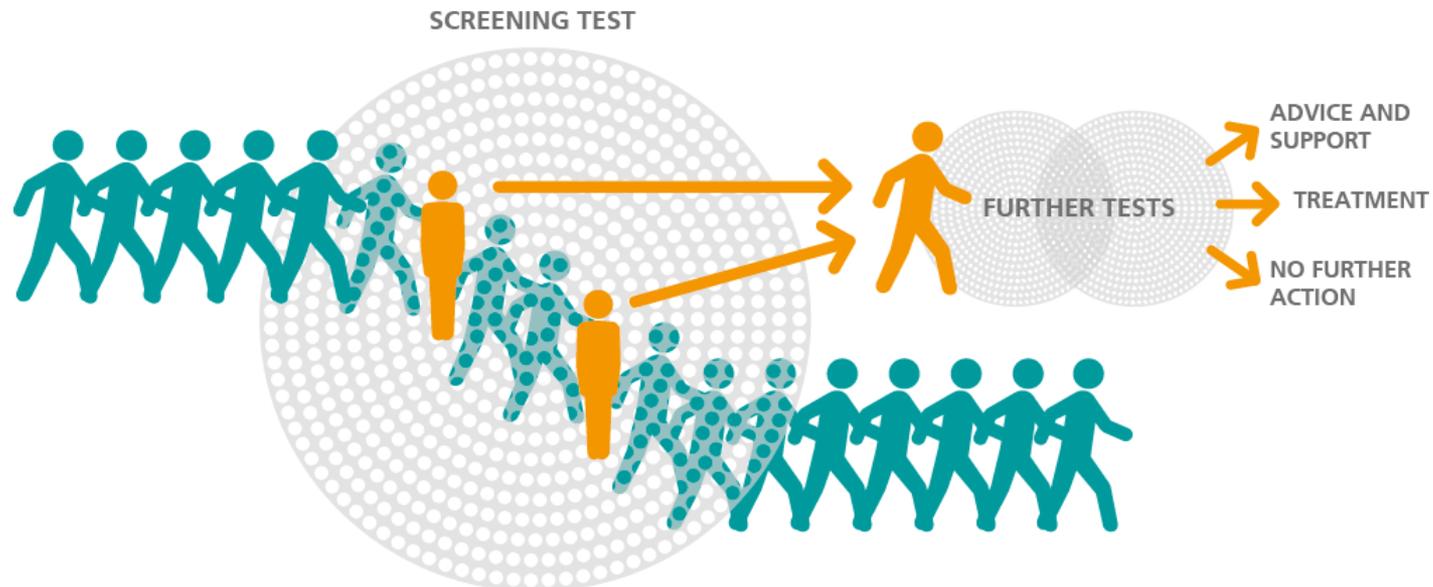


What is screening?

Screening can be thought of as putting people (who accept an offer to be screened) into a sieve to identify those who need further investigation

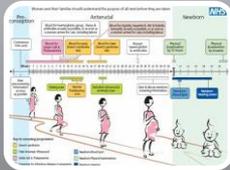
Those caught in the sieve are at increased risk of the condition being screened for and will be offered further tests

Those who pass through the sieve are discharged from the screen (this does not mean they have no risk but are at lower risk)



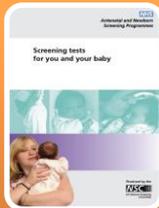


Screening is not just a test...



A screening programme supports people throughout the process, from invitation to referral (of anyone who is found to have a particular condition) for treatment and advice

Generic screening pathway



We have an extra duty to make absolutely sure the programme is of the highest possible quality and done to the best standards because the offer from the NHS is proactive.



Limitations of screening

Whilst screening has the potential to save lives or improve quality of life through early diagnosis of serious conditions, it is not a fool-proof process.

In any screening programme, there is an irreducible minimum of:

- **false positive results** (wrongly reported as having the condition)
- **false negative results** (wrongly reported as not having the condition)

Screening has the potential to do harm as well as good



Our responsibilities

Because the screening programmes invite apparently healthy people to be screened, we have special responsibilities:

- When deciding whether to recommend screening – or not – we must use the **best available evidence**.
- To the **NHS**, we must demonstrate that investing in screening is a wise use of money and will provide significant health benefits.
- To the **public**, we need to explain screening so they can make informed choices – understanding there may be risks as well as benefits.
- We need excellent **care and advice**. It is unethical (unacceptable in the UK) to offer screening if people cannot get appropriate treatment and information.
- The whole pathway should be delivered to the best possible standards (quality assurance)

The UKNSC

Is a scientific advisory committee providing evidence based recommendations on all aspects of screening programmes to the four UK departments of health. This includes

- Starting a programme
- Stopping a programme
- Making big changes to a programme
- Piloting a programme

The UKNSC Secretariat

Commission reviewers to gather, appraise and synthesise peer reviewed literature. (30-40 a year)

Consult in line with good practice

Communicate the reasons why such recommendations are made

Develop principles underpinning screening using informed choice for public and professionals

Policy reviews

Over 100 policies are reviewed on a regular basis (approx 3 yearly)

Reviews are carried out against the UK NSC's criteria (based on Wilson and Jungner) these cover:

- **The condition**
- **The test**
- **The treatment**
- **The screening programme**

We use expert reference groups to work up the scope of the documents and advise on quality and face validity and clinical sense. One for fetal, maternal and child health and a not-yet - convened one for adult programmes

Draft reviews go out to registered stakeholders and public consultation for 3 months.

Back to UKNSC for a discussion and recommendation to the UK governments

Policy reviews UKNSC

**Annual call (pilot this year)/ regular review of “no” recommendations/
regular review of existing programmes**

- Is it systematic whole population screening?
- Triage: how many people have the problem, is there a test, a treatment?
- Rapid evidence assessment
- More detailed products cost effectiveness/ ethical/systematic review/model.
- Other recommendations (research, clinical management/ prevention)

Programme modification (intervals/age)

Tests (DBT/ FIT)

Guidelines

Public Health England

Pilots new programmes and works with the NHS (commissioners, hospitals and (sometimes) primary care in England to roll out where agreed.

These are whole country consistent systematic screening programmes free to all, offered on the basis of informed choice.

Variation is very limited and really only where local programmes wish to flex their approach to increase uptake /coverage in specific local communities

Public Health England cont.

For all programmes (new or existing) PHE staff work with clinicians and representatives of the patient and public voice to:

- set standards,
- write specifications,
- develop and run IT,
- collect analyse and publish data,
- produce programme specific public and patient information,
- develop training for front line professionals
- assess evidence and develop guidance for current programmes, encourage and support external research/evaluation
- occasionally run internal evaluation and
- quality assure screening for over 30 conditions across the life course



Screening programmes



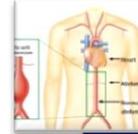
Antenatal/newborn

- Fetal anomaly
- Newborn and infant physical
- Newborn hearing



Antenatal/newborn

- Infectious diseases in pregnancy
- Sickle cell and thalassaemia
- Newborn blood spot



Adult

- Diabetic eye
- Abdominal aortic aneurysm



Cancer

- Breast
- Cervical
- Bowel



Public Health
England

Antenatal/newborn screening

NHS Fetal Anomaly Screening Programme

Screened over 500,000
Identified 15,000 for further investigation

NHS Newborn and Infant Physical Examination Programme

Screened over 600,000 babies
Over 1 in 200 babies has a heart problem that requires treatment

NHS Newborn Hearing Screening Programme

Screened 680,000 children
Identified 1,167 children as having a hearing loss, leading to early support



Antenatal/newborn screening

NHS Infectious Diseases Screening Programme

Screened over 690,000 women for
Hepatitis B and Syphilis
And over 675,000 for HIV and
Rubella susceptibility

NHS Sickle Cell and Thalassaemia Screening Programme

720,000 antenatal screens were
completed
Over 14,500 women were identified as
carriers leading to further investigation

NHS Newborn Blood Spot Screening Programme

Screened nearly 700,000 babies
Identified 1,290 babies to be at
risk of a serious condition.



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Adult screening

NHS Abdominal Aortic Aneurysm Screening Programme

Screened over 1,000,000 men

Estimated to save more than 2000 premature deaths a year

NHS Diabetic Eye Screening Programme

Screened 1.9 million people with diabetes

Over 4000 going on to have surgery to prevent further sight impairment



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Cancer screening

**NHS Cervical Screening
Programme**

**Estimated lives
saved per year: 5,000**

**NHS Breast Screening
Programme**

**Estimated lives
saved per year: 1,300**

**NHS Bowel Cancer
Screening Programme**

**Reduces the risk of
dying from bowel
cancer by 16%**



Screening, done well, saves lives and reduces morbidity

- The NHS Infectious Diseases Screening Programme has helped reduce the transmission rate of HIV from mother to baby to **less than 1 in 100**.
- About **200 congenital cataracts are diagnosed** each year. The NHS Newborn and Infant Physical Examination Screening Programme ensures treatment in the first few months of life ensuring quality of vision.
- In 2011/12 **15,749 cancers were detected** in women through the breast screening programme ensuring they could be offered appropriate treatment.
- In 2012/13 **3,025 men were identified as being at risk** of an abdominal aortic aneurysm through the screening programme, leading to further monitoring and 326 men had surgery.