Northern Ireland
Abdominal Aortic Aneurysm (AAA) Screening Programme

Annual Report 2019-2023

Abdominal Aortic Aneurysm Screening

HSC Public Health Agency

HSC Belfast Health and Social Care Trust

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- NI AAA Screening Programme Team - Public Health Agency
- NI AAA Screening Programme Co-ordinating Group

The final version of the report will be circulated to the above distribution list**.**

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Section 1:

Summary and Highlights for 2019-2023

This is the eighth annual report for the Northern Ireland Abdominal Aortic Aneurysm (AAA) Screening Programme since it was introduced in June 2012. It has been produced jointly by the Belfast Health and Social Care Trust and the Public Health Agency.

The Belfast Health and Social Care Trust is responsible for the management and delivery of the programme, whilst the Public Health Agency (PHA) is responsible for commissioning and quality assuring it. The two organisations work closely together to provide an effective, safe and accessible service.

All men registered with a GP in Northern Ireland are invited for screening in the year they turn 65. Men over the age of 65, who have never been screened before, can self-refer by contacting the screening programme office on 02896 151212.

This report combines 4 years of data, the period during which the programme temporarily paused due to the Covid-19 Pandemic and also includes the recovery period of the programme.

The overall performance of the programme for 2019 – 2023 is as follows –

Table 1 : Performance Summary for 2019 – 2023

Cohort	19/20	20/21	21/22	22/23
Number of cohort men invited to a screening appointment	9655	10107	10222	10911
Number of cohort men who attended a screening appointment	8130	8633	8055	8716
Newly detected AAA's	83	104	99	99
Large aneurysms referred to the vascular team	29	28	43	41
Self-referrals	264	10	26	118

Highlights of some of the work carried out by the programme from 2019 – 2023 are outlined on the following page.

- The seventh annual service user event took place on the 27th June 2019.

- The first edition of the NI Abdominal Aortic Aneurysm (AAA) Screening Programme's Service User newsletter was published in January 2021. The aim of the newsletter is to keep service users up to date with all aspects of the programme, particularly service developments. The first issue focused on service provision during the COVID-19 pandemic.

- The second edition of the NI Abdominal Aortic Aneurysm (AAA) Screening Programme's Service User newsletter was published and posted to surveillance men in March 2022.

- A patient satisfaction survey was posted to all surveillance men alongside the service user newsletter in March 2022. The survey was also handed out to men attending their initial screening appointment for a period of 6 weeks.

- In May 2022 programme representatives attended the Balmoral show to raise general awareness of the programme and encourage further self-referrals.

- The eighth annual service user event took place on the 20th September 2022.

- In November 2022, the programme successfully recruited and appointed two new Patient Representatives to its main management group (the Co-ordinating Group) to ensure continuity of service user involvement and build on existing successful engagement initiatives.

- The programme continued to work in partnership with appropriate prison healthcare providers to facilitate screening clinics for eligible men.

- New AAA video produced.

- A number of recovery weekend clinics were held at the Royal Victoria Hospital from September 2022 to April 2023.

Section 2:

Background and Programme Objectives

What is an AAA?

The aorta is the main vessel that circulates blood from the heart, through the abdomen to the rest of the body. Over time, the walls of the aorta can weaken, causing it to balloon out. This results in an abdominal aortic aneurysm (AAA).

AAAs usually cause no symptoms, therefore most people who have one will not feel anything. As the aneurysm grows so too does the risk of it rupturing if left untreated. Rapidly expanding or ruptured aneurysms do produce symptoms (typically severe abdominal, back or flank pain, low blood pressure or shock and a mass in the abdomen which pulsates; however only a minority of patients have all of these features). Patients with a ruptured AAA have a very low chance of survival. In contrast, those detected who undergo planned surgery for a non-ruptured AAA have an excellent rate of survival.

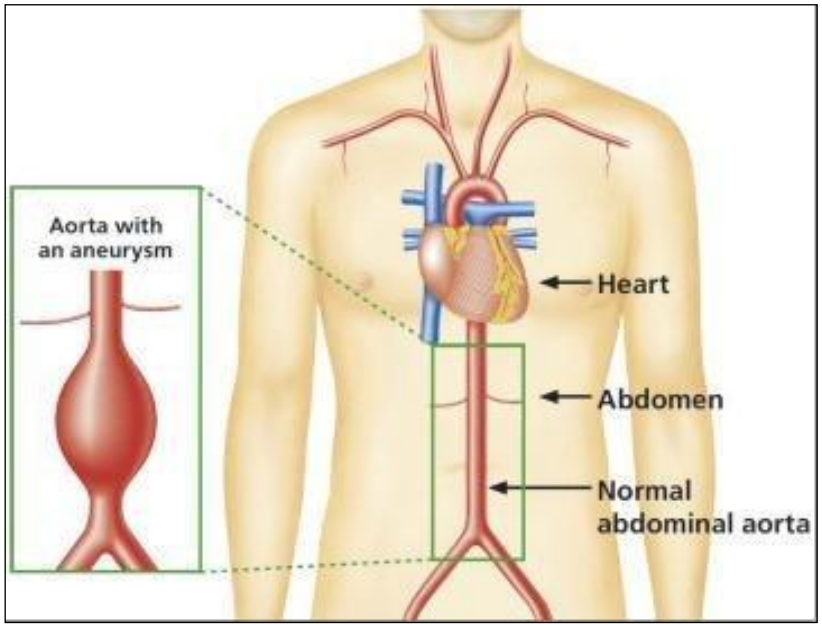


Image courtesy of the NHS England AAA Screening Programme

AAAs are more common in men aged 65 and older. Other factors known to increase the risk of developing an AAA are smoking, high blood pressure and high blood cholesterol. Close relatives of someone who has been diagnosed with an AAA are also more likely to develop one.

Aim of the Northern Ireland AAA Screening Programme

The overall aim of the Northern Ireland AAA Screening Programme is to reduce deaths from ruptured abdominal aortic aneurysms through early detection, monitoring and treatment.

On average, compared to men, women are six times less likely to develop an AAA. In addition, women tend to develop an AAA ten years later than men. The NI AAA Screening Programme is therefore targeted at men in keeping with the recommendations of the UK National Screening Committee.[1]

Programme Objectives

The Public Health Agency and the Belfast Health and Social Care Trust work together to meet the programme's core objectives. These include:

- Monitoring delivery of the programme against national pathway standards and taking appropriate action where performance is not on target.
- Ensuring all necessary failsafe systems are in place at each stage of the screening process.
- Ensuring staff are trained on all aspects of the programme, including the Health and Social Care organisations' mandatory training.
- Actively engaging with stakeholders at relevant events and opportunities, particularly in those geographical areas where uptake rates are lower than the programme average.
- Continuing to explore opportunities for Personal and Public Involvement (PPI) .
- Ensuring information materials remain relevant and up-to-date, with a particular emphasis on promoting self-referral for men aged 65 or over who have never attended for AAA screening.
- Ongoing review and development of the Northern Ireland AAA Screening Programme website content, with engagement of stakeholders to support this.

[1] Abdominal aortic aneurysm: the UK NSC policy on abdominal aortic aneurysm screening in men over 65. UK Screening Portal. Available at: https://view-health-screening-recommendations.service.gov.uk/abdominal-aortic-aneurysm/

- Continuing to develop and formalise an external quality assurance structure and function in collaboration with the English NHS AAA Screening Programme.

- Continuing to build on existing relations with the other three UK AAA Screening Programmes (England, Scotland and Wales) .

- Identifying and addressing health inequalities to ensure all eligible men can make an informed decision about whether or not to attend for screening.

- Identifying and disseminating examples of regional and national best practice with regard to all elements of programme delivery.

- Promoting and participating in research initiatives.

Section 3:

Governance and Accountability

The Public Health Agency

The Public Health Agency has a number of key functions in relation to screening programmes including:

- Leading on the implementation of screening policy, including the introduction of new screening programmes and any changes required to existing screening programmes.

- Ensuring the delivery of high quality, safe, effective and equitable screening programmes for people in Northern Ireland.

- Supporting continuous quality improvement through programme monitoring and evaluation, and adverse incident investigation and management.

The Agency takes lead responsibility for quality assurance (QA) of the programme. This involves the establishment of a robust QA structure and function, to ensure it meets the responsibilities outlined above.

The Belfast Health and Social Care Trust

The Belfast Health and Social Care Trust is responsible for the operational management and delivery of the NI Abdominal Aortic Aneurysm Screening Programme.

The Trust ensures all eligible men are invited to attend for screening in their 65th year. It ensures they are provided with appropriate information, support and advice, particularly those men who have an AAA detected through the programme.

Staff who have responsibility for the operation of the programme are employed by the Trust and carry out all of the scans, including rescans and surveillance scans.

The surveillance programme for men identified with a small or medium AAA is provided by the Trust as part of the NI AAA Screening Programme. Those men who are identified with a large AAA are referred to the vascular surgery team at the Royal Victoria Hospital within the Belfast Trust to discuss

potential treatment options.

The Trust also has responsibility for:

- Setting operational policy for the programme and ensuring appropriate failsafe systems are in place.
- Liaising with GPs regarding secondary care, particularly when a man is detected as having an aneurysm.
- Local quality assurance of the entire screening process.
- Providing reports on the performance of the programme and data for quality assurance purposes.
- Engaging with stakeholders regarding development of the programme.
- Organising and taking part in promotional activities for the programme.

Audit and Research

Both organisations take joint responsibility for developing and facilitating audit and research activities related to the programme as and when these become available.

Section 4:

COVID-19 pandemic and recovery of the programme

As part of the HSC response to the COVID-19 pandemic, all NI AAA Screening Programme invitations to routine screening and surveillance screening appointments were temporarily paused from Monday 23rd March 2020. These measures were in line with a ministerial press release in Northern Ireland; similar action was taken by the AAA Screening Programmes in England, Scotland and Wales. All men in the 2019/20 cohort had been offered an initial appointment by the 23rd March however, due to the pause of the programme, over 500 appointments for men in this cohort year were cancelled by the provider. Again, due to the pause of the programme almost 2000 men who did not attend (DNA) their first appointment were not offered a second timed appointment.

On the 23rd March 2020 10 men with an AAA measuring 5.5cm were referred to the vascular team. Due to Covid-19 pre-assessment was paused and there was a delay with other tests, for example, echocardiograms etc. Guidance released from the vascular society also stated that only AAAs greater than 7cm should be operated on.

Surveillance clinics for men with medium AAAs (4.5-5.4cm) restarted on 10th July 2020 based on risk prioritisation strategy and for small AAAs (3.0-4.4cm) in November 2020. Initial AAA screening did not resume until Monday 1st March 2021 meaning initial screening invitations were paused for 50 weeks. Self-referrals to the screening programme were paused from 23rd March 2020, the programme started to accept self-referrals again from February 2021.

When the programme restarted in July 2020 operational changes were required to allow for social distancing and increased infection control measures. Some staff were still redeployed to help with the COVID-19 Pandemic. Clinic capacity was reduced and appointment slots were increased from 15 to 30 minutes to allow for increased cleaning between appointments and phone call entry to clinics as the use of waiting rooms were prohibited. The programme also introduced a pre-appointment phone call to confirm men were planning to attend their appointment and to provide COVID-19 guidance.

In 21/22 the programme made some progress to recover by double booking of appointments at the end of clinics, changing the DNA 2nd timed

appointment to an open invitation letter, reverting back to the 15-minute appointment time, pre-COVID phone calls two days prior to appointments and allocation of capital funding for the purchase of four additional ultrasound machines however the programme was still 10 months behind.

In October 2022 the programme reduced the initial screening appointment from 15 to 10 minutes. The programme continued to send open invitation letters to men who DNA'd their first appointment instead of a second timed appointments. In 22/23 extra funding was successfully secured to increase the capacity of initial screening appointments. A number of weekend clinics were held at the Royal Victoria Hospital from September 2022 to April 2023. The extra clinics reduced the backlog of delayed invitations from 10 months to 3 months so that men from the 23/24 cohort were being invited for their screening appointment in June 2023.

It is important to highlight the hard work and dedication of all those involved in the screening programme within the Belfast Health and Social Care Trust and the PHA and to acknowledge their commitment to the recovery of the programme.

Section 5:

Programme Delivery and the Screening Pathway

The programme is run by a multidisciplinary team of staff. All staff play an important role at various stages in the screening pathway.

The programme office is based in the Royal Victoria Hospital within the Belfast Trust.

Ten screening technicians (7.0WTE) run clinics on a daily basis. There are 24 clinic locations across Northern Ireland, including health and wellbeing centres and community hospitals (see **Appendix 1**).

Eligibility for Screening

All men in Northern Ireland who are registered with a GP are eligible for screening in the year they turn 65 (1 April to 31 March). This includes those men in prison or other secure accommodation. Any man who already has a known AAA can transfer to the care of the screening programme. However, if a man has previously had surgery for an AAA he does not require screening.

Men over the age of 65 and registered with a GP, who have not previously been scanned as part of the programme or been told they have an aneurysm, are also eligible for screening. These men can contact the screening programme office on 02896 151212 to request an appointment.

Details of all men registered with their GP who are eligible to be invited for screening are transferred to the Belfast Trust IT system on an annual basis. Daily updates are then automatically provided with changes to any demographic information.

The Screening Pathway

Appendix 2 provides an overview of the whole screening pathway. The key stages within the pathway are:

- Screening Invitation
- The Scan
- The Result
- Surveillance
- Referral and Treatment

Screening Invitation

The programme office sends all eligible men an invitation letter to attend a local screening clinic. This includes those men registered with a GP during the year in which they turn 65 and those eligible men over the age of 65 who have self-referred to the screening programme.

Invitations for men on surveillance are also sent:

- Men who have a small aneurysm detected will be invited back every *twelve months* for a surveillance scan.
- Men who have a medium aneurysm detected will be invited back every *three months* for a surveillance scan.

The Scan

The screening test involves a simple ultrasound scan of the abdomen. It is quick and painless. The screening technician measures the widest part of the abdominal aorta. The whole process usually lasts less than fifteen minutes.

The Result

All men will be informed of their results verbally at the clinic. Both the man and his GP will then be sent a letter confirming the result. If a man is identified as having an aneurysm his GP practice will also be informed by telephone the same day.

There are **FIVE** possible results from screening:

- **NO AAA FOUND**: **aortic diameter less than 3cm**

Over 98% of men will have this result. This means that the aorta is not enlarged (there is no aneurysm). No treatment or monitoring is needed and these men will be discharged from the screening programme. They will not need to be screened again.

- **SMALL AAA**: **aortic diameter measuring between 3cm and 4.4cm**

Men who have a small aneurysm detected will be invited back every twelve months for a surveillance scan to monitor the size of the aneurysm. Some small aneurysms will grow in size over time and become medium or large aneurysms.

- **MEDIUM AAA**: **aortic diameter measuring between 4.5cm and 5.4cm**

Men who have a medium aneurysm detected will be invited back every three months for a surveillance scan to monitor the size of the aneurysm. Some medium-sized aneurysms will grow over time to become large aneurysms.

- **LARGE AAA**: **aortic diameter measuring 5.5cm or over**

Men who have a large aneurysm detected are referred to a vascular surgeon within the Royal Victoria Hospital at the Belfast Health and Social Care Trust for further investigation and to discuss possible treatment options. All men referred are required to be seen at outpatients within two weeks of the initial scan.

- **NON-VISUALISATION**: sometimes the aorta cannot be fully visualised and a man will be invited to come back on a different day for another scan.

Surveillance

As indicated above, if a man has either a small or medium-sized aneurysm he will be invited back for surveillance appointments on a regular basis to monitor its size.

Men under surveillance are also offered an appointment with a vascular nurse specialist for additional support and advice. The nurse will contact every man who has an AAA detected within two working days and offer either a face to face appointment or a telephone consultation. The nurse will explain the significance of having an AAA and offer lifestyle advice (including advice on smoking cessation) and advice on blood pressure control (if relevant) to help decrease the risk of the aneurysm growing. The man will also be asked to attend his GP to have measurements taken for his height, weight and blood pressure and to discuss the need for any medication.

Referral and Treatment

The Northern Ireland AAA Screening Programme refers all men with a large aneurysm to the vascular service within the Belfast Health and Social Care Trust.

All men referred to the vascular service are required to be seen by a consultant vascular surgeon within two weeks of the scan when the large AAA was detected. During this period, the man will have a CT scan to confirm the size of the aneurysm. This detailed imaging will help decide if the man is suitable for treatment and if so, what the best option is. All men diagnosed with a large AAA are discussed at a weekly vascular multidisciplinary team meeting (MDT) and also undergo vascular pre-assessment by a specialist nurse and vascular anaesthetist. If suitable, the vascular consultant will then discuss treatment options at outpatient review. The two main treatment options are open surgery or endovascular (EVAR) surgery. Open surgery requires a longer hospital stay and initial recovery period. Endovascular treatment, with a stent graft, allows for quicker recovery but has a longer follow-up period with X-ray surveillance. The decision regarding the choice of

operation depends on many factors and is discussed in detail by the vascular team. The nominated consultant will then discuss the appropriate options with the man to enable him to make an informed choice. For some men further investigation and optimisation of underlying medical issues may be required prior to treatment of their AAA.

End Point of Screening Programme for Men

As outlined within Public Health England guidance[2], active inclusion in the screening programme ends when:

- the scan is found to be within normal limits.
- an AAA reaches 5.5cm diameter on ultrasound and the man has been referred to the vascular unit.
- the director of the local screening programme, or the GP, decides referral for treatment should be considered based on other factors (for example, symptoms or co-morbidities).
- three consecutive scans show an aortic diameter less than 3cm on ultrasound where the initial scan was 3cm or greater.
- the man has had 15 scans at one-year intervals and the AAA remains below 4.5cm .
- the man declines to be in the screening programme, fails to attend consecutive appointments as per local policy, moves out of the area and becomes the responsibility of another screening programme (if one exists) or dies.

[2] https://www.gov.uk/government/publications/aaa-screening-standard-operating-procedures

Section 5:

Programme Performance

This section of the report focuses on the performance of the programme. Data included covers the 19/20, 20/21, 21/22 and 22/23 cohorts, the self-referrals and others offered screening through the programme. All data outlined within this report have been provided by the Belfast Trust programme team and quality assured by the Public Health Agency.

Eligible Cohort

The table below details the number of men who were eligible to be offered AAA screening by the programme from the 19/20, 20/21, 21/22 and 22/23 cohorts.

Table 2: AAA Screening cohort for 2019 - 2023

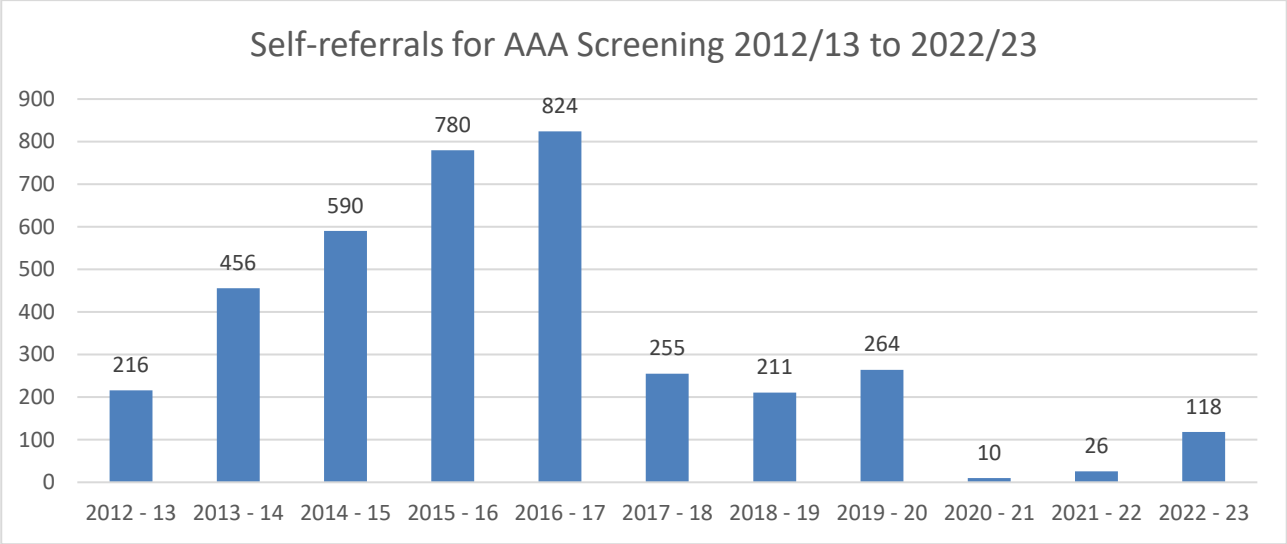
Category / Men:	19/20	20/21	21/22	22/23
Eligible screening cohort	**9785**	**10110**	**10233**	**10943**

Self-referrals

Men over 65 who have never been screened can self-refer to the programme and request a screening appointment. The figure below shows the number of self-referrals the programme has had since it started.

The number of self-referrals to the programme has reduced significantly from 2016-17. The Programme has been unable to facilitate or participate in as many promotional events compared with previous years which has contributed to the decrease in self-referrals. Self-referrals were also paused from 23rd March 2020 due to the COVID-19 pandemic, the programme started to accept self-referrals again from February 2021. The numbers of men eligible to self-refer will also reduce the longer the programme runs as men are automatically called for screening.

Figure 1: Self-referrals for AAA Screening 2012-13 to 2022-23



AAAs Detected and Prevalence

Table 3 below outlines the number of AAAs detected during 19/20, 20/21, 21/22 and 22/23 screening years, including cohort men and self-referrals. It also notes the number of overall referrals for large AAAs to the Vascular Unit within the Belfast Trust and the prevalence rate.

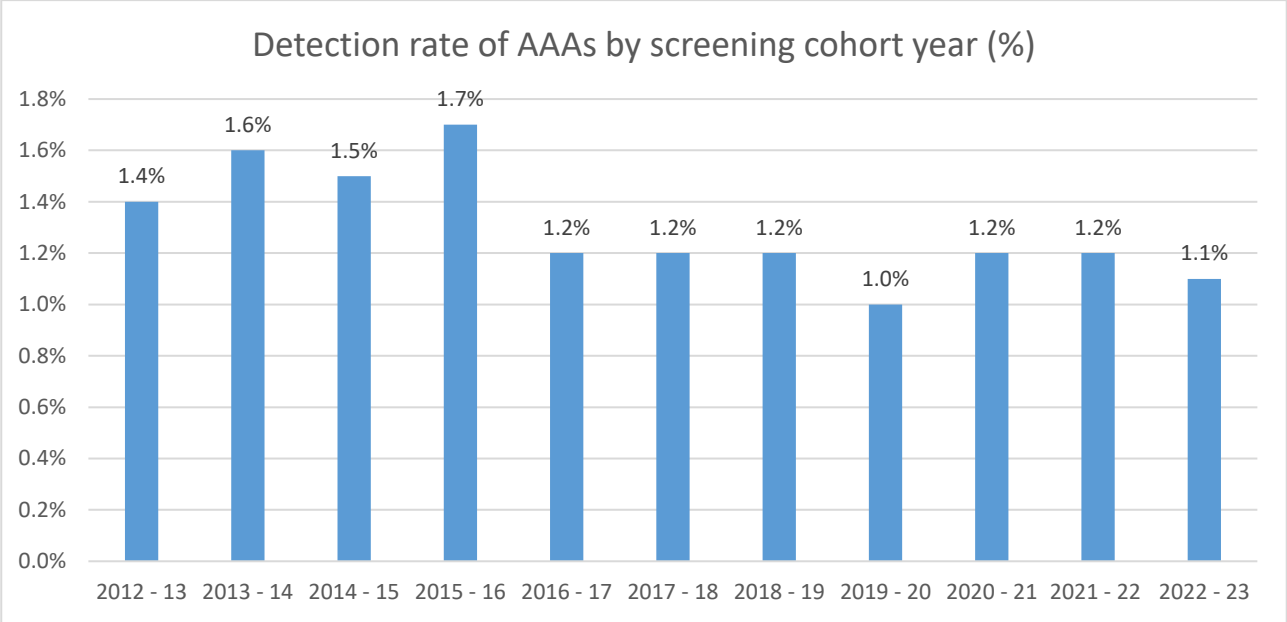
Table 3: AAAs detected by the Screening Programme 2018-19

Detected AAAs:				
	19/20	20/21	21/22	22/23
AAAs newly detected by the programme (including self-referrals)	95	107	100	100
Referrals to the Vascular Unit	29	28	43	42
Prevalence (calculated using the cohort year only)	1.0%	1.2%	1.2%	1.1%

Figure 2 below outlines the AAA detection rate for the programme, broken down by year. AAA screening should remain cost effective unless the prevalence of AAAs in 65-year-old men falls below 0.35%.[3]

[3] **Impact of the first 5 years of a national abdominal aortic aneurysm screening programme** Jacomelli J, Summers L, Stevenson A, Lees T, Earnshaw JJ Br J Surg. 2016 Aug

Figure 2: Detection rate of AAAs by screening cohort year



Performance against Key Pathway Standards for 2019 - 2023

The table below compares the programme's overall performance against key national pathway standards for 2019 - 2023.

Table 4: Performance against Key Pathway Standards for 2019 - 2023

	Pathway Standard	Acceptable	Achievable	**19/20**	**20/21**	**21/22**	**22/23**
1a	Completeness of offer – initial screening Percentage of eligible subjects who are offered screening[4]	≥ 90.0%	≥ 99.0%				
1b	Completeness of offer – surveillance Percentage of eligible subjects who are offered screening	≥ 95.0%	100%	*99.8%*	*41.6%*	*98.6%*	*97.8%*
2a	Coverage – initial screening Percentage of eligible subjects who are tested	≥ 75.0%	≥ 85.0%	*68.6%*	*15.6%*	*14.4%*	*70.4%*
	COHORT TOTAL[5]			*83.1%*	*85.4%*	*78.7%*	*79.6%*
2b	Coverage – surveillance Percentage of eligible subjects who are tested	≥ 85.0%	≥ 95.0%	*94.6%*	*38.1%*	*93.3%*	*88.1%*
3	Provision of sufficient opportunity to attend Percentage of subjects not responding to first offer to whom a confirmed second offer is made[6]	≥ 90.0%	100%				
4a	Uptake – initial screening	≥ 75.0%	≥ 85.0%	*84.2%*	*85.4%*	*78.8%*	*79.9%*

[4] Due to the pause to the programme and to aid with the restoration of the programme men were not offered a second timed appointment. They were sent an open invitation letter asking them to contact the screening unit to arrange a second appointment. This was being managed manually and not on the IT system.

[5] This is the coverage figure for the total cohort screened irrespective of the date they were screened. The national standard coverage is the total screened by 31st June.

[6] Due to the pause to the programme and to aid with the restoration of the programme men were not offered a second timed appointment. They were sent an open invitation letter asking them to contact the screening unit to arrange a second appointment. This was being managed manually and not on the IT system.

	Pathway Standard	**Acceptable**	**Achievable**	**19/20**	**20/21**	**21/22**	**22/23**
	Percentage of subjects offered screening who are tested[7]						
4b	Uptake – surveillance Percentage of subjects offered screening who are tested	≥ 90.0%	≥ 95.0%	*94.8%*	*91.6%*	*94.6%*	*90.1%*
5	*Quality of images/samples/testing technique* *Percentage of assessed images of acceptable quality*[8]	*≥ 95.0%*	*≥ 99.0%*				
6	*Quality of images/samples/testing technique* *Percentage inaccurate calliper placement determined by review of static images*[9]	*≤ .02%*	*0.0%*				
7	Definitive outcome of scan Percentage of screening encounters where aorta could not be visualised	≤ 3.0%	≤ 1.0%	1.1%	0.4%	1.1%	1.0%
8	Accurate assessment of outcomes Percentage of incomplete screening episodes	≤ 0.75%	≤ 0.20%	*0.02%*	*0%*	*0%*	*0%*

[7] This is the uptake figure for the total cohort irrespective of the date they were offered screening or screened. The national standard for uptake is the total number offered a screening appointment and screened by 31st June. The screening programme was unable to calculate the national standard figure because screening was delayed by a year and 2nd timed appointments were not being offered, men that DNA' d their 1st appointment were being sent an open invitation letter which was being managed manually.

[8] This standard was unable to be measured. The national AAA screening programme has been working to identify an appropriate method for assessing screener performance.

[9] This standard was unable to be measured. The national AAA screening programme has been working to identify an appropriate method for assessing screener performance.

	Pathway Standard	**Acceptable**	**Achievable**	**19/20**	**20/21**	**21/22**	**22/23**
9	Timely referral Percentage of men with AAA ≥ 5.5cm referred within one working day	≥ 95.0%	100%	*100%*	*100%*	*100%*	*100%*
10	Accuracy of diagnosis; reduction in inappropriate referrals Percentage of referred men subsequently found to have an aorta < 5.5cm on confirmatory CT or MRI scan	≤ 3.0%	≤ 1.0%	*0%*	*0%*	*2.3%*	*2.4%*
11	Timely treatment/intervention by specialist (measured from latest successful screen) Percentage of men with aorta ≥ 5.5cm seen by vascular specialist within 2 weeks	≥ 90.0%	≥ 95.0%	*79.3%*	71.4%	81.4%	85.7%
12 a	Timely treatment/intervention by specialist (measured from date of referral) Percentage of men with aorta ≥ 5.5cm deemed fit for intervention and not declining, operated on by a vascular specialist within 8 weeks	≥ 60.0%	≥ 80.0%	*21%*	12.0	14.7%	10.8%

The acceptable threshold is the lowest level of performance which screening services are expected to attain. The achievable threshold represents the level at which the screening service is likely to be running optimally.[10]

The NI programme has adopted an additional standard outlined below in relation to AAAs measuring over 7cm.

Table 5: Timely treatment (men with AAA >7cm deemed fit for intervention and not declining, operated on by a vascular specialist within four weeks)

	Pathway standard Acceptable	Pathway standard Achievable	19/20	20/21	21/22	22/23
Timely treatment (men with AAA >7cm deemed fit for intervention and not declining, operated on by a vascular specialist within four weeks)	n/a	n/a	100%	n/a	100%	100%

The standard below was withdrawn as a national standard however it continues to be monitored at national level across vascular services.

Table 6: 30 day mortality (following elective surgery on screen-detected AAAs)

	Pathway standard acceptable	Pathway standard Achievable	19/20	20/21	21/22	22/23
30 day mortality (following elective surgery on screen-detected AAAs)	**n/a**	**n/a**	0%	0%	2.9%	0%

The figures for the above are <10.

[10] https://www.gov.uk/government/publications/population-screening-our-approach-to-screening-standards/our-approach-to-nhs-population-screening-standards#performance-thresholds

Table 7: Uptake by Trust

The highest uptake each year is in the South Eastern HSCT with the lowest uptake in Belfast HSCT for 19/20,20/21 and 21/22 and Southern HSCT in 22/23.

19/20			
HSCT	**Number screened**	**Number invited**	**%**
Belfast	1,607	1,957	82.1%
Northern	2,035	2,385	85.3%
South Eastern	1,530	1,755	87.2%
Southern	1,574	1,889	83.3%
Western	1,382	1,667	82.9%
Northern Ireland	**8,128**	**9,653**	84.2%

20/21			
HSCT	**Number screened**	**Number invited**	**%**
Belfast	1,743	2,094	83.2%
Northern	2,069	2,430	85.1%
South Eastern	1,731	1,955	88.5%
Southern	1,576	1,857	84.9%
Western	1,511	1,768	85.5%
Northern Ireland	**8,630**	**10,104**	85.4%

21/22			
HSCT	**Number screened**	**Number invited**	**%**
Belfast	1,617	2,150	75.2%
Northern	1,990	2,503	79.5%
South Eastern	1,591	1,924	82.7%
Southern	1,501	1,932	77.7%
Western	1,351	1,708	79.1%
Northern Ireland	**8,050**	**10,217**	78.8%

22/23			
HSCT	**Number screened**	**Number invited**	**%**
Belfast	1,887	2,415	78.1%
Northern	2,116	2,635	80.3%
South Eastern	1,723	2,074	83.1%
Southern	1,580	2,033	77.7%
Western	1,406	1,749	80.4%
Northern Ireland	**8,712**	**10,906**	79.9%

* *Total figures differ slightly to table 1 as some men screened did not have a GP post code recorded.*

Section 7:

Health Inequalities

Population screening programmes need high levels of participation to achieve their desired public health impact. Informed personal choice is central to the screening strategy and the decision to have a screening test or not is for the individual involved. However, people may choose not to make a decision about screening, are not aware of the offer or do not attend their appointment.

Health inequalities are systematic, avoidable and unjust differences in health and wellbeing between different groups of people. The Marmot Review, Fair Society, Healthy Lives (2010) highlighted the social gradient of health inequalities, i.e. the more disadvantaged the person's social position the worse their health.

Studies on inequalities in AAA screening have found a number of factors:

- the Multi-centre Aneurysm Screening Study (MASS) found that higher age and social deprivation are associated with poorer screening attendance and having an AAA[11]
- a Scottish analysis found that both urban residence and social deprivation were associated with lower uptake among men invited for AAA screening[12]

In April 2020 the English AAA Screening programme introduced a new screening standard –

AAA-S07: coverage: initial screen in the most deprived 30% of local areas is the proportion of men in the eligible cohort who were tested and who lived in a lower super output area (LSOA) classed as decile 1 to 3 in the English indices of deprivation 2019.

Men living in more deprived areas are less likely to attend for screening but are more likely to have an aneurysm. It is therefore important for the AAA screening programme to engage with men living in more deprived areas to make sure they can make a personal informed choice.

This standard only focuses on one aspect of inequalities in access to AAA screening. It is acknowledged that there are many sources of inequalities which need to be identified and reduce drivers of inequalities relevant to the local area.

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[11] https://journals.sagepub.com/doi/10.1177/096914130301100112

[12] https://onlinelibrary.wiley.com/doi/pdf/10.1002/bjs.9803

The performance thresholds for this standard are –

- Acceptable level: greater than or equal to 75.0%
- Achievable level: greater than or equal to 85.0%

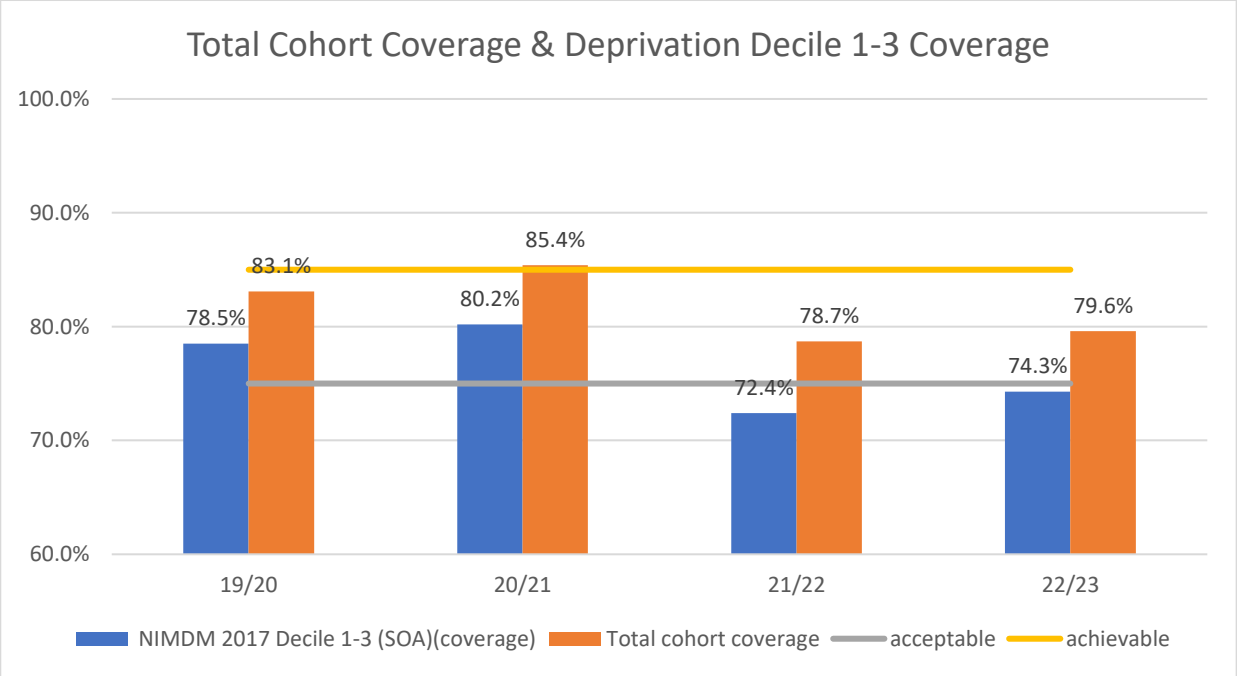
The following table and chart show the coverage for initial AAA Screening appointments in Northern Ireland (NI) broken down by deprivation decile 1-3 for the 19/20, 20/21, 21/22 and 22/23 total cohorts.

Table 8: % men in Northern Ireland who attended for Abdominal Aortic Aneurysm screening by deprivation decile 1 – 3 for 19/20, 20/21, 21/22 and 22/23

	No. eligible NIMDM 2017 Decile 1-3 (SOA)	No. screened NIMDM 2017 Decile 1-3 (SOA)	% screened (coverage) NIMDM 2017 Decile 1-3 (SOA)	Total cohort No. eligible	Total cohort No. screened	% screened (coverage)
19/20	2996	2352	78.5%	9785	8130	83.1%
20/21	3042	2440	80.2%	10110	8633	85.4%
21/22	2327	3212	72.4%	10233	8055	78.7%
22/23	2481	3340	74.3%	10943	8716	79.6%

Source: AAA Screening Programme, Public Health Agency and Belfast Health and Social Care Trust
Data refers to men screened by their cohort year irrespective of the date they were screened
Deprivation data is based on the Northern Ireland Statistics and Research Agency, NI Multiple Deprivation Measure 2017 (Super Output Area (SOA) level) and contact post code.
https://www.nisra.gov.uk/statistics/deprivation/northern-ireland-multiple-deprivation-measure-2017-nimdm2017

Figure 3: % Coverage by NI Multiple Deprivation Measure 2017 quintile (SOA) 1-3 and 8-10 for cohorts 19/20, 20/21, 21/22 and 22/23



Section 8:

Personal and Public Involvement (PPI)

Personal and Public Involvement (PPI) enables the public to influence the planning, commissioning and delivery of health and social care (HSC) services. It includes actively engaging with communities, specifically those who use services such as screening. The Public Health Agency is the lead organisation responsible for the implementation of PPI policy across all HSC organisations within Northern Ireland.

During 2019-2023, the Northern Ireland AAA Screening Programme completed the PPI projects outlined below.

- The programme's annual **Service User Event** (for men with a screen-detected AAA and their wives/companions) continues to be popular and well-supported by service users and programme providers. The programme's seventh Service User Event took place on 27th June 2019. The user event was cancelled in 2020 and 2021 because of the COVID-19 pandemic. The eighth annual service user event returned in September 2022 celebrating ten years of AAA screening. Presentations included information about AAA surgery by Mr Andrew McKinley, Clinical Lead Surgeon, BHSCT and smoking cessation information by Darren Whiteside, Stop Smoking Specialist, BHSCT. The event was well attended by service users and feedback from the event was very positive.

- Members of the screening team attended The Royal Ulster Agricultural Society (RUAS) Balmoral Show in May 2022 to raise general awareness of the programme and encourage self-referrals. 85 men registered as a self-referral for screening.

- In November 2022 the programme appointed two new patient representatives to the NI AAA Screening Programme's Coordinating Group. Tom and Paul are both currently under the care of the surveillance element of the programme at the Belfast Health and Social Care Trust. Tom and Paul attended their first AAA Screening Programme Coordinating Group meeting in December 2022 providing vital feedback regarding some of the programme's processes.

Section 9:

Role of Primary Care

Primary Care teams are integral to the successful delivery of the NI AAA Screening Programme. Since the programme began in 2012, the considerable contribution and partnership working with primary care teams has been invaluable, particularly in the areas outlined below.

Supporting men with a screen-detected AAA

When an aneurysm is detected, the programme informs the man's GP practice by telephone on the same day. This is followed up in writing.

GPs are then asked to arrange to take measurements for height, weight, BMI and blood pressure, and consider commencing the man on anti-platelet and statin therapy (unless contra-indicated).

For men with a large AAA, GPs are also asked to make a standard referral to the vascular team for further intervention / treatment and to arrange an urgent blood test (U&E).

GPs are the key providers of aftercare for men who have undergone surgical repair.

Providing information to facilitate screening appointments for eligible men

The programme continually liaises with primary care on a range of issues such as:

- Ensuring patient records are accurate – information is downloaded into the programme's IT system on eligible men registered with GPs; programme staff liaise with practices about any discrepancies.

- Seeking information about particular needs of men invited for screening, e.g. a physical or sensory disability, limited mobility or a learning disability – this helps facilitate the screening appointment and allows appropriate arrangements to be made e.g. extra time for the appointment if required.

- Organising an appropriate interpreter or signer when required to facilitate an appointment.

Promoting screening

People often rely on the advice of primary care teams when making health decisions. It is therefore important that these teams are well informed about the programme and can discuss the benefits and risks of AAA screening to enable eligible men to make an informed choice.

GPs are notified when a man does not attend his screening appointment. Some GP practices, upon being informed of non-attendance, will either talk to men opportunistically about screening or proactively contact men to specifically encourage attendance.

Appendices

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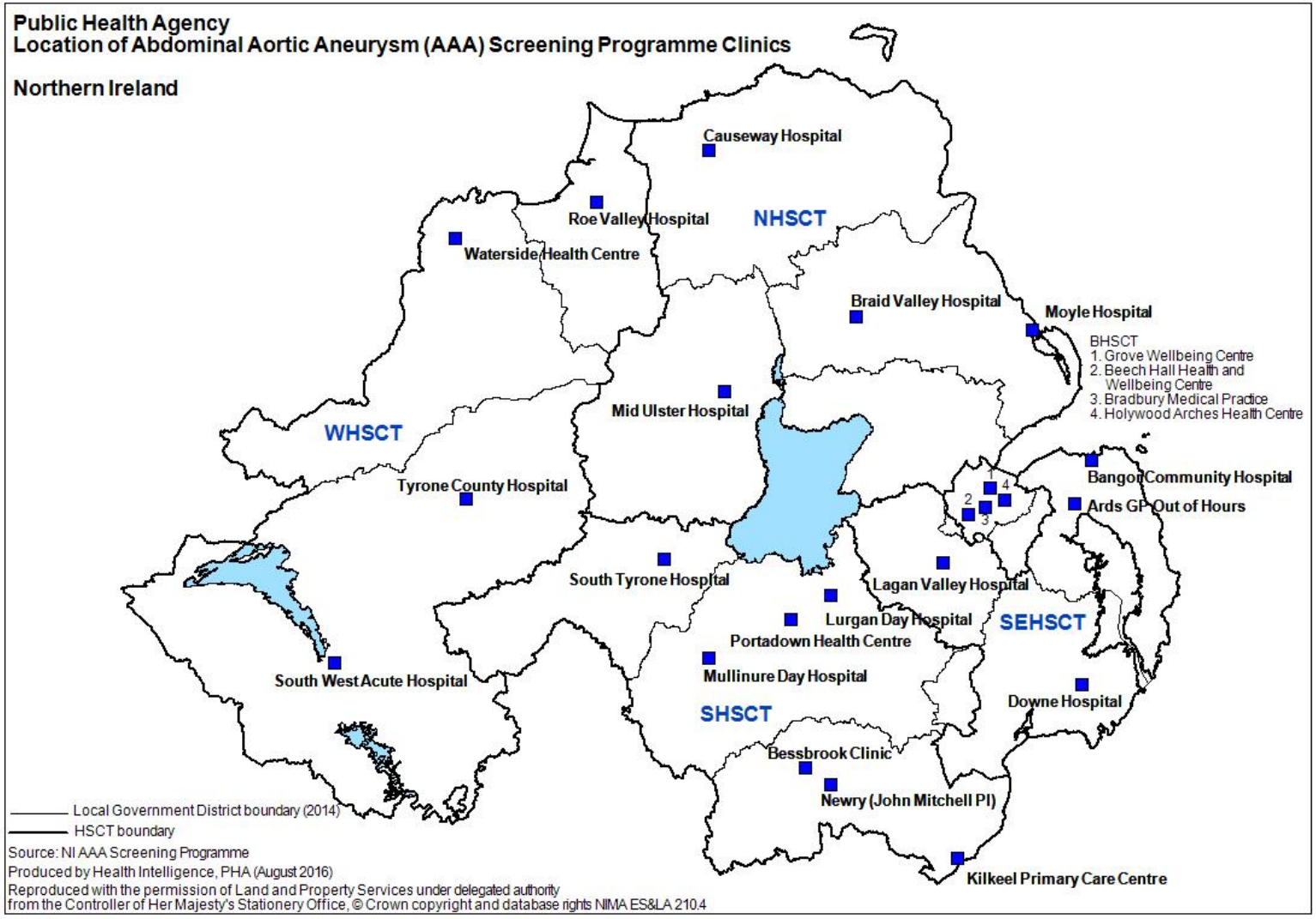
1 Map of Screening Locations

2 The Screening Pathway

Appendix 1 – Map of Screening Locations



Appendix 2 – The Screening Pathway