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Wales Abdominal Aortic Aneurysm Screening Programme Annual Statistical Report 2022-23

Version 1

Mae'r ddogfen yma ar gael yn y Gymraeg/This document is available in Welsh

Publication details

This report is a detailed summary of information on the work undertaken by the Wales Abdominal Aortic Aneurysm Screening Programme for the year from April 2022 to the end of March 2023.

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Rydym yn croesawu gohebiaeth a galwadau ffôn yn Gymraeg. Byddwn yn ateb gohebiaeth yn Gymraeg heb oedi / We welcome correspondence and phone calls in Welsh. We will respond to correspondence in Welsh without delay.

QA Statement

Screening data records are constantly updated. The databases used by Public Health Wales Screening Division are updated on a daily basis when records are added, changed or removed (archived). This might relate to when a person has been identified as needing screening; has had screening results that need to be recorded, or has a change of status and no longer needs screening respectively. Data is received from a large number of different sources with varying levels of accuracy and completeness. The Screening Division checks data for accuracy by comparing datasets – for example GP practice data – and corrects the coding data where possible. It should be noted that there are sometimes delays in data collection – for example a person might not immediately register with their GP if they move address. These delays will therefore affect the completeness of the data depending on individual circumstances. In addition, the reader should be aware that data is constantly updated and there might be slight readjustments in the numbers cited in this document year on year because of data refreshing. We occasionally suppress numbers lower than five when the data is potentially sensitive.

Copyright information

This document is also available in Welsh.

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Key messages

- Undertaking the abdominal aortic aneurysm (AAA) screening test reduces the risk of dying from an AAA. Finding an AAA early gives the man the best chance of treatment and survival.
- The aorta is the main blood vessel that supplies blood to the body. An AAA is a swelling of the aorta in the abdomen, which left undetected, may split or rupture.
- AAA screening involves a simple ultrasound scan to measure the abdominal aorta.
- AAA screening is a free NHS test carried out in community clinics.
- Taking part in AAA screening is the man's choice.

Introduction

Background

Research evidence has shown that a high-quality screening programme for AAA can reduce deaths from ruptured aortic aneurysm by around 50% in men aged 65 – 74 years[1] . In February 2007, the UK National Screening Committee approved the introduction of AAA screening for men aged 65 using abdominal ultrasound scanning provided:

- Invited men were given clear information about the risks of elective surgery, and
- Vascular networks were in place to treat individuals referred from screening.

The Wales Abdominal Aortic Aneurysm Programme (WAAASP) was launched in May 2013 and by 2025 aims to halve abdominal aortic aneurysm (AAA) related mortality in the eligible population through a systematic screening programme for 65-year-old men resident in Wales.

Since 1st May 2015, men who have never been for an NHS AAA screening scan and who have not been offered AAA screening because they turned 65 before it was available in Wales can contact the local screening offices to request an AAA screening scan.

Current eligibility

A man who lives in Wales will be invited to participate in AAA screening when they are 65 years old. Men over the age of 65 can 'self-refer' to the programme provided they haven't been screened before. There is no upper age limit for this.

Sources of additional information

Abdominal Aortic Aneurysm Screening - Public Health Wales (nhs.wales)

[1] Ashton HA, Buxton MJ, Day NE, Kim LG, Marteau TM, Scott RAP et al. (2002) Multicentre Aneurysm Screening Study Group. The Multicentre Aneurysm Screening Study (MASS) into the effect of abdominal aortic aneurysm screening on mortality in men: a randomised controlled trial. *Lancet*;360 (9345):1531-9

Screening locations

There are approximately 60 screening clinics across Wales. These venues include community hospitals, GP practices, community centres, prisons, sports facilities, education centres and 2 screening hubs, which are operated by Public Health Wales. During the pandemic, mobile screening units were used in conjunction with Tenovus Cancer Care and Welsh Blood.

Summary of activity in the reported year

Due to the impact of the pandemic on screening capacity, waiting times beyond the 65th birthday in the eligible population were longer than expected. The programme committed to ensuring that there would be no eligible men waiting beyond their 66th birthday by 31st March 2023. To achieve this, additional AAA screeners were recruited and trained and screeners worked longer hours to enable more scans to be undertaken than would be expected in any normal year.

Waiting times improved as planned by the end of March 2023. It is anticipated that fewer scans will be required in subsequent years.

Looking forward to the next screening year

In 2023/24, a new screening venue in Llanishen, north Cardiff, will be available for use. This venue will be managed by Public Health Wales and will provide a clinic facility that can be used for longer hours and, if required, 7 days a week.

As part of the drive towards sustainability, the programme will be replacing the current fleet of diesel cars with full-electric and hybrid vehicles.

Programme delivery

The Screening Division of Public Health Wales is responsible for managing, delivering and quality assuring the programme. The programme employs a Head of Programme, Programme Manager, Quality Assurance Vascular Surgical Lead, Clinical Imaging Advisor, Quality, Education and Training Lead, three clinical skills trainers and an All-Wales Administration Coordinator with support from a secretarial and administration team. Although an all-Wales programme, there is regional coordination by three Regional Coordinators and a team of 19 screeners who deliver the screening in the community.

Screening pathway

- 65 year old men resident in Wales are invited for a one-off ultrasound scan to check whether they have an AAA.
- The test involves a simple scan of the abdominal aorta, measuring the widest part of the aorta.
- Ultrasound scanning is performed in approximately 60 screening clinics throughout Wales, including community hospitals, health clinics, primary resource centres and GP practices. Screening is also undertaken in HMP Berwyn, HMP Parc, HMP Usk and HMP Prescoed.
- Men with an abdominal aortic diameter of less than 3cm are discharged from the programme.
- Men with a small or medium AAA are included in the surveillance programme and are offered:
    - a phone appointment with the AAA surveillance nurse to discuss the result and its health implications.
    - encouragement to make an appointment with their GP for lifestyle and health advice, blood pressure monitoring and best medical therapy.
    - annual scanning if the AAA is small (3.0 – 4.4cm).
    - scanning every three months if the AAA is medium in size (4.5 – 5.4cm).
- Men with a large AAA of 5.5cm or more (or a growth of 1cm or more in 12 months) are referred to the regional elective Vascular Network Multi-professional team (Multi-disciplinary Team or MDT).
- Men with a non-visualised aorta are usually offered a second appointment with WAAASP. If the second appointment is unsuccessful, the man is referred to a medical imaging department to measure his abdominal aorta.

More information is available at https://phw.nhs.wales/services-and-teams/screening/abdominal-aortic-aneurysm-screening/

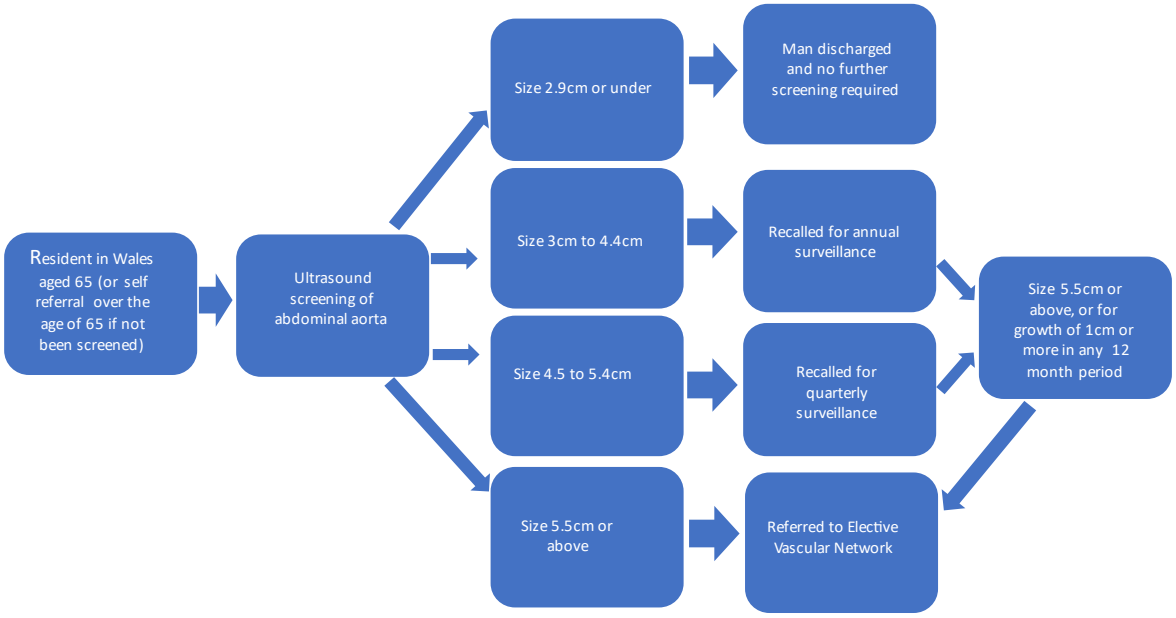

Figure 1: Pathway for AAA screening

Headline statistics

This report covers the time period from April 2022 to March 2023. With uptake defined as those invited in the year April 2022 to March 2023 receiving a scan by 30 June 2023.

- National uptake was 77.6%, ranging from 73.4% in Cardiff & Vale University Health Board to 82.1% in Powys Teaching Health Board.
- Uptake figures were higher in those men living in the least deprived areas (84.4%) compared to the most deprived areas (67.2%).
- Uptake of AAA screening decreased from 82.8% in 2021-22 to 77.6% in 2022-23.
- 26,068 eligible men were invited by the programme. Of these, 20,221 men attended for their first WAAASP scan and had a definitive scan result.
- Of the men who attended for their screening, 189 (0.9%) had an AAA detected by the screening programme.
- 60 men who were scanned needed a referral to the elective vascular network MDT. 83.3% of whom were referred within two working days of the scan being taken.
- 49 men had open or endovascular surgery (n.b. this is a different cohort to the men who were scanned and referred in the year). Six (12.2%) of which had their surgery completed within four or eight weeks of the referral being received, depending on the size of the AAA detected.
- 1,079 (88.1%) of surveillance scans were undertaken within standard (medium AAA on quarterly surveillance within 11 to 15 weeks of their previous successful scan, small AAA on annual surveillance within 50 to 56 weeks of their previous successful scan).
- 242 self-referred men were screened, with 12 AAA (5.0%) detected.

Data

Uptake

Definition and standard

For uptake calculations, eligible men were those resident in Wales who were invited between April 2022 and March 2023 and who received a scan by 30 June 2023. Men who were registered manually (such as self-referrals) are excluded, as are men who were ceased from the programme in the time period due to being out of cohort.

The standard for uptake is that 80% of invited men attend AAA screening and are tested.

Result for 2022-23

Uptake was 77.6%.

Three-year trend

Uptake was 77.6% in 2022-23, 82.8% in 2021-22, and 84.6% in 2020-21.

Comment

At an all-Wales level, uptake for 2022-23 was 77.6%, a decrease from 82.8% in 2021-22.
Across health boards, uptakes ranged from 73.4% in Cardiff & Vale University Health Board to 82.1% in Powys Teaching Health Board and typically increased with increasing deprivation quintile.

Figures and tables

Table 1: Abdominal aortic aneurysm screening uptake by health board of residence

Health Board	Invited	Tested	% Uptake
Aneurin Bevan University	4,633	3,520	76.0
Betsi Cadwaladr University	5,421	4,312	79.5
Cardiff & Vale University	3,331	2,445	73.4
Cwm Taf Morgannwg University	3,844	2,936	76.4
Hywel Dda University	4,103	3,285	80.1
Powys Teaching	1,280	1,051	82.1
Swansea Bay University	3,452	2,668	77.3
Unknown	4	4	100.0
All Wales	**26,068**	**20,221**	**77.6**

Uptake is of those eligible and invited between April 2022 – March 2023 who were tested by 30 June 2023. 'Unknown' refers to men who cannot be allocated to a health board, these are included in the all-Wales total.

Table 2: Abdominal aortic aneurysm screening uptake by month of invite for April 2022 – March 2023.

Year	Month	Invited	Tested	% Uptake
2022	April	1,838	1,445	78.6
2022	May	1,408	1,079	76.6
2022	June	2,115	1,652	78.1
2022	July	2,321	1,799	77.5
2022	August	2,266	1,791	79.0
2022	September	2,492	1,928	77.4
2022	October	2,075	1,604	77.3
2022	November	2,234	1,742	78.0
2022	December	1,694	1,320	77.9
2023	January	2,599	2,042	78.6
2023	February	2,554	1,971	77.2
2023	March	2,472	1,848	74.8
Total		26,068	20,221	77.6

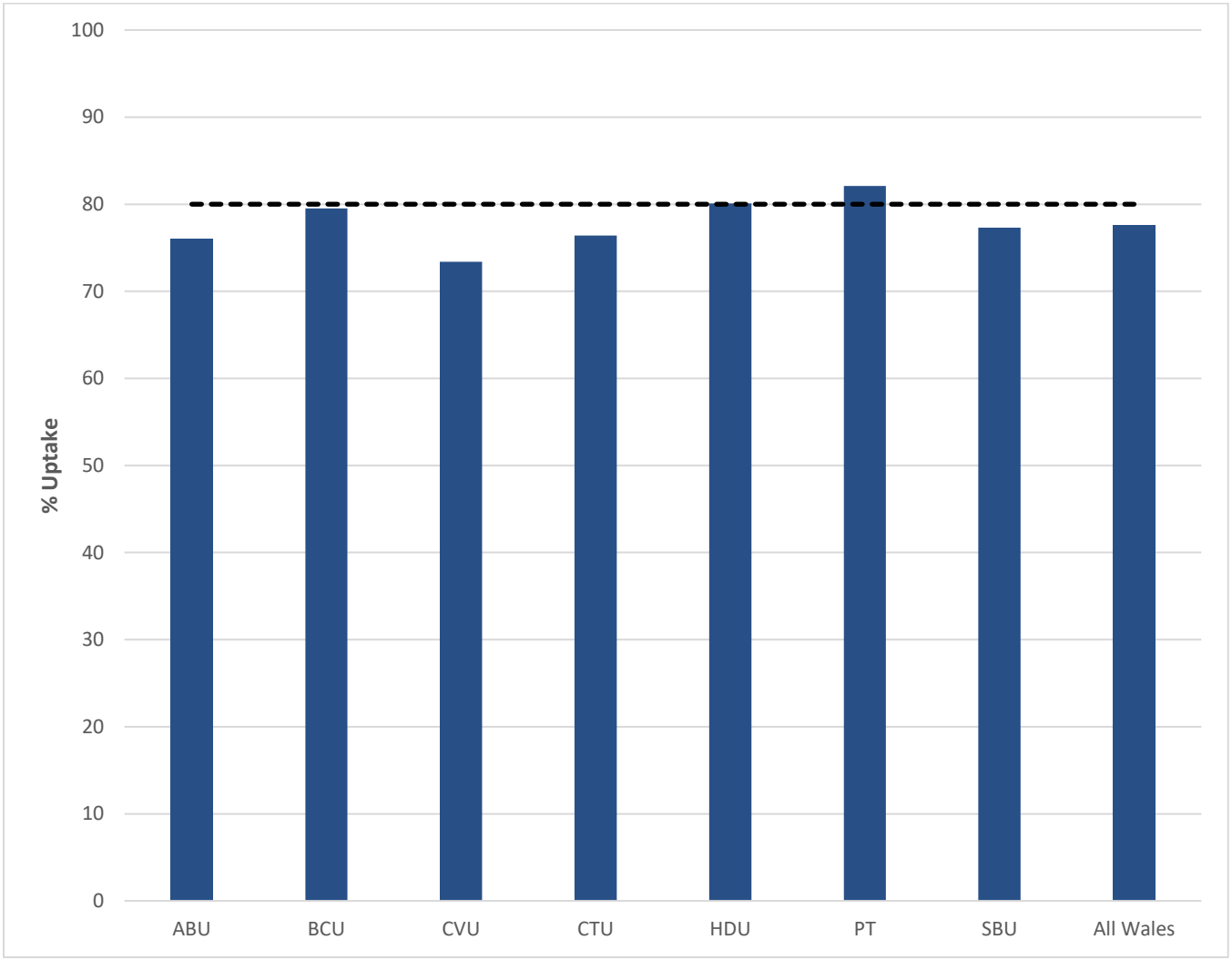

Figure 2: Abdominal aortic aneurysm screening uptake by health board of residence

ABU – Aneurin Bevan University Health Board, BCU – Betsi Cadwaladr University Health Board, CVU – Cardiff and Vale University Health Board, CTU – Cwm Taf Morgannwg University Health Board, HDU – Hywel Dda University Health Board, PT – Powys Teaching Health Board, SBU – Swansea Bay University Health Board.

Table 3: Abdominal aortic aneurysm screening uptake by deprivation quintile and health board of residence (%)

Health Board	Uptake %					Total Uptake %
	Q1 - most deprived	Q2	Q3	Q4	Q5 - least deprived	
Aneurin Bevan University	69.4	73.7	75.1	78.2	86.0	76.0
Betsi Cadwalader University	69.0	75.4	77.0	82.2	86.1	79.5
Cardiff & Vale University	58.2	69.7	68.8	77.4	82.2	73.4
Cwm Taf Morgannwg University	69.4	75.4	76.1	79.3	86.2	76.4
Hywel Dda University	65.4	78.1	79.1	84.2	85.5	80.1
Powys Teaching	71.9	78.8	81.1	84.1	83.1	82.1
Swansea Bay University	68.6	76.5	77.1	83.3	82.8	77.3
Unknown	N/A	N/A	N/A	N/A	N/A	100.0
All Wales	67.2	75.3	76.9	81.7	84.4	77.6

'Unknown' refers to men who cannot be allocated to a health board, these are included in the all-Wales total.

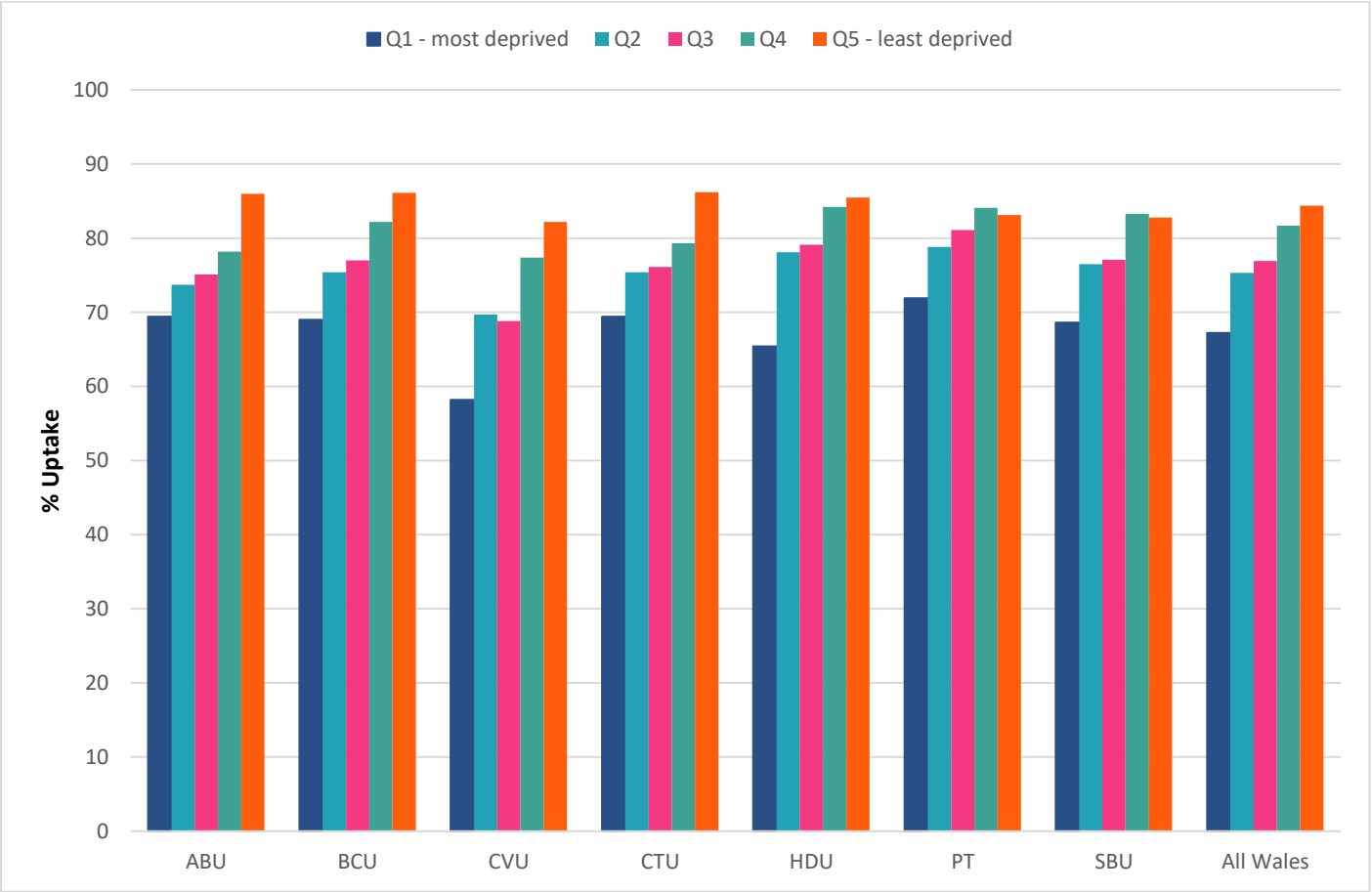

Figure 3: AAA screening uptake by deprivation quintile and health board of residence (%)

ABU – Aneurin Bevan University Health Board, BCU – Betsi Cadwaladr University Health Board, CVU – Cardiff and Vale University Health Board, CTU – Cwm Taf Morgannwg University Health Board, HDU – Hywel Dda University Health Board, PT – Powys Teaching Health Board, SBU – Swansea Bay University Health Board. N.b. quintile 5 in Powys is composed of small numbers.

Non-visualised

Definition and standard

Completed appointments where the abdominal aorta was not seen are referred to as 'non-visualised'.

The standard is that ≤3% of consented appointments result in a non-visualised aorta.

Result for 2022-23

The percentage of non-visualized aortas was 0.9%.

Three-year trend

The non-visualised percentage was 0.9% in 2022-23, 1.1% in 2021-22 and 1.3% in 2020-21.

Comment

At an all-Wales level, the percentage of non-visualised aortas has fallen from 1.3% in 2020-21 to 0.9% in 2022-23. Across health boards, the percentage of non-visualised aortas ranged from 0.4% in Swansea Bay University Health Board to 1.3% in Cwm Taf Morgannwg University Health Board.

Figures and tables

Table 4: Percentage of non-visualised aortas by health board of residence

Health Board	Scans	Non-visualised	Non- visualised (%)
Aneurin Bevan University	4,022	47	1.2
Betsi Cadwalader University	4,826	50	1.0
Cardiff & Vale University	2,772	27	1.0
Cwm Taf Morgannwg University	3,097	40	1.3
Hywel Dda University	3,572	18	0.5
Powys Teaching	1,158	13	1.1
Swansea Bay University	2,983	12	0.4
Unknown	4	0	0.0
All Wales	**22,434**	**207**	0.9

Men who self-refer

Definition and standard

Since 1st May 2015, men over 65 years old who have not received an NHS ultrasound screening scan for AAA can self-refer by contacting the screening programme to request an appointment. The results below only include men who have not previously been invited by the programme.

Result for 2022-23

242 self-referred men were scanned with 12 (5.0%) AAAs detected.

Three-year trend

242 self-referred men were scanned (12 (5.0%) AAAs detected) in 2022-23,197 (4 (2.0%) AAAs detected) in 2021-22, and 99 (6 (6.1%) AAAs detected) in 2020-21.

Comment

It is anticipated that the number of men self-referring for AAA screening will decline as the programme matures.

Abdominal aortic aneurysms detected

Definition and standard

Men with AAA (≥3cm) detected are only counted on the first definitive scan, not surveillance scans. Instances where the aorta is not visualised are not counted as a definitive scan result.

The standard is that of those screened, 1% will have an AAA (≥3cm).

Result for 2022-23

189 AAAs were detected (0.9% detection rate).

Three-year trend

89 AAAs were detected in 2022-23 (0.9% detection rate), 134 AAAs were detected in 2021-22 (0.9% detection rate), and 44 AAAs were detected in 2020-21 (1.1% detection rate).

Figures and tables

Table 5: Number of those screened that have an AAA (≥3cm) detected by health board of residence

Health Board	Attended	AAA Total	Detection Rate (%)
Aneurin Bevan University	3,697	36	1.0
Betsi Cadwalader University	4,384	42	1.0
Cardiff & Vale University	2,549	14	0.5
Cwm Taf Morgannwg University	2,880	27	0.9
Hywel Dda University	3,337	33	1.0
Powys Teaching	1,070	8	0.7
Swansea Bay University	2,796	29	1.0
Unknown	4	0	0.0
All Wales	**20,717**	**189**	**0.9**

Unknown refers to men who cannot be allocated to a health board, however they are included in the all-Wales total.

AAA surveillance uptake

Definition and standard

The percentage of men that attended their surveillance scan appointment. Surveillance uptake includes both men with a medium (≥4.5cm and <5.5cm) AAA detected, who are invited for quarterly surveillance, and men with a small (≥3cm and <4.5cm) AAA detected, who are invited for annual surveillance.

The standard for medium AAAs is that at least 90% of participants attend a quarterly surveillance appointment within 11 to 15 weeks of a previous successful scan. The standard for small AAAs is that at least 90% of participants attend an annual surveillance appointment between 50 to 56 weeks of a previous successful scan.

Result for 2022-23

Surveillance uptake was 88.1%.

Three-year trend

Surveillance uptake 88.1% in 2022-23, 90.0% in 2021-22, and 47.0% in 2020-21.

Figures and tables

Table 6: AAA Surveillance Uptake by health board of residence

Health Board	Invited	Screened	Uptake (%)
Aneurin Bevan University	224	199	88.8
Betsi Cadwalader University	310	281	90.6
Cardiff & Vale University	159	145	91.2
Cwm Taf Morgannwg University	153	138	90.2
Hywel Dda University	174	142	81.6
Powys Teaching	59	47	79.7
Swansea Bay University	146	127	87.0
Unknown	0	0	0.0
All Wales	**1,225**	**1,079**	**88.1**

Referral to the multi-disciplinary team and timeliness of intervention

Definition and standard

Referral to the elective vascular network MDT is the interval between a scan being taken and the referral being sent to the elective vascular network multidisciplinary team (MDT).

The standard is referral within two working days.

Timeliness of intervention is the interval between the referral being received by the MDT on screen-detected AAAs who are deemed suitable for intervention to the time of surgical intervention by open repair or an EVAR.

The standard is surgery should be completed within four weeks of the referral for very large aneurysms (7cm and above) and within eight weeks of referral for large aneurysms (5.5cm to 6.9cm).

Result for 2022-23

83.3% (50) of referrals to the elective vascular network MDT occurred within 2 working days.

12.2% (6) who were suitable for open repair or EVAR had their surgery with 4/8 weeks.

Three-year trend

83.3% (50) of referrals to the elective vascular network MDT occurred within 2 working days in 2022-23, 90.0% (54) in 2021-22, and 90.9% in 2020-21.

12.2% (6) who were suitable for open repair or EVAR had their surgery within 4/8 weeks, 23.2% (13) in 2021-22, and 5.4% (2) in 2020-21.

Comment

During 2022-23, 60 men were scanned and needed a referral to the elective vascular network MDT, with 83.3% being referred within two working days of the scan being taken. This does not include referrals to on call vascular services (i.e. those with a very large AAA detected).

49 men had open or endovascular surgery. This is a different cohort to the men who were scanned and referred in the year. 6 (12.2%) of these had their surgery completed within four or eight weeks of the referral being received, depending on size of AAA detected. Compliance with this timeliness standard has been discussed at the joint WAAASP and EVN MDT Coordinators meetings. The MDT coordinators submit an exception report for all men who breach the timeliness of repair standard and/ or have the repair in a spoke hospital rather than the agreed centralisation site.

There is a decrease in compliance of this standard from the previous Annual Statistical Report. In 2021-22, 13 men (23.2%) had their surgery within the timeliness standard. The reasons for the delay in treatment during both years are multifactorial and include:

- Men with co-morbidities
- Reduction in theatre capacity
- Delays in pre-operative diagnostic tests
- Variation in progress in the development of the regional elective vascular networks

Covid-19 pandemic; during the first wave of the pandemic the Vascular Society for Great Britain and Ireland recommended that elective AAA repair should only be undertaken if AAA was larger than 7cm. This affected the timeliness of AAA repair for men referred during the latter months of 2022-23.

Definitions

Eligible

For uptake calculations, eligible men were those resident in Wales invited in the time period. Men who were registered manually (such as self-referrals) are excluded. Men invited who were ceased from the programme in the time period due to being out of cohort are removed.

Uptake

Men were counted as having responded to their invitation if they were invited during the April – March time period and attended by 30 June 2023.

Deprivation

Deprivation quintiles were assigned using the Welsh Index of Multiple Deprivation (WIMD) 2014, measured at lower super output area (LSOA) level. LSOAs are ranked into quintiles at an all-Wales level so they can be compared between health boards. This means that there will not be an equal proportion of people in each quintile within each health board e.g. in Monmouthshire, 40% of the population live in the least deprived quintile of Wales but no areas fall into the Welsh most deprived quintile.

Health board

This is health board of residence.

Result

A definitive scan result excludes those where the final outcome is that the abdominal aorta could not be visualised.

Production team

The production team for this report are all employed within Public Health Wales and are listed below.

Jeremy Surcombe	Head of Wales Abdominal Aortic Aneurysm Screening Programme
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Gareth Denton	Programme Manager of Wales Abdominal Aortic Aneurysm Screening Programme

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