



Public Health  
England



# **NHS Abdominal Aortic Aneurysm Screening Programme**

## **Internal quality assurance framework and resources**

**Public Health England leads the NHS Screening Programmes**

## About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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## About PHE Screening

Screening identifies apparently healthy people who may be at increased risk of a disease or condition, enabling earlier treatment or better informed decisions. National population screening programmes are implemented in the NHS on the advice of the UK National Screening Committee (UK NSC), which makes independent, evidence-based recommendations to ministers in the four UK countries. The Screening Quality Assurance Service ensures programmes are safe and effective by checking that national standards are met. PHE leads the NHS Screening Programmes and hosts the UK NSC secretariat.

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[www.gov.uk/topic/population-screening-programmes](http://www.gov.uk/topic/population-screening-programmes)

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## Introduction

All screening staff who perform abdominal aortic aneurysm ultrasound scans under the auspices of the NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP) have to successfully complete approved training before screening independently within the screening programme.

The Diploma for Health Screeners (abdominal aortic aneurysm) was introduced as the mandatory qualification for screening technicians in April 2016. Further information is available on the [PHE Screening website](#).

To ensure a safe and effective service, it is imperative that front line staff who perform the scans are trained to the highest standard and are competent in their work. They must maintain a high level of competence through ongoing development and regular monitoring of their skills and the ultrasound images they take.

These internal quality assurance (IQA) resources provide a format for local quality assurance (QA) leads/clinical skills trainers (CSTs) to assess and record the quality of the images taken by screening technicians. Local programmes should adhere to this framework, to ensure staff competency and quality.

This framework applies to all staff undertaking screening scans working within local screening programmes under the auspices of NAAASP. This includes nurses and screening technicians.

Existing local AAA screening programmes may have developed their own pro formas or tools for the QA of technician images. They can continue to use these tools provided they deliver all the requirements outlined in this document.

The initial training of CSTs within NAAASP was updated from April 2016. Further details are available on the [CPD website](#).

QA leads do not require specific NAAASP training. However, they must have the required experience and knowledge of the screening programme as outlined in the [standard operating procedure](#).

The NAAASP SmART system will be updated to reflect these changes over the coming months, however programmes should follow the requirements set out within this document.

For the purposes of this document and clarification, the role of QA lead and lead ultrasound clinician is interchangeable.

# Screening technician quality assurance

The scans performed by screening technicians must be of the highest possible standard. To achieve this, IQA mechanisms are in place at several points throughout the training and ongoing development of screening technicians. These include:

- oversight of the provision of the Diploma For Health Screeners (AAA)
- local support and monitoring by the clinical skills trainer and QA lead
- local screening programme IQA system (where the QA lead/CST will QA random samples of the images taken by technicians)

Continuing IQA aims to identify omissions and inconsistencies in technique and training to ensure quality and standards are maintained in-line with the NAAASP standard operating procedures and the screening technician's scope of practice.

## Quality assurance framework for screening technicians

Screening technicians need to meet the following criteria in order to achieve and maintain their accreditation and demonstrate competency to deliver screening:

- successful completion of the NAAASP approved qualification for screening technicians
- perform a minimum of 200 scans per year spread over a 12 month period
- a minimum of 8 random scans reviewed by the QA lead/CST once a month. The QA lead/CST will assess the images for quality using the standardised pro forma in the appendix of this document to ensure consistency of assessment (this process must be activated on the SMaRT system by local programmes following completion of the required qualification to ensure that random samples are generated for IQA)
- all abnormal scans reviewed by the QA lead/CST within 30 days following the man's initial screening event. To maintain best clinical practice programmes should attempt to review abnormal images within 7 days
- each screening technician should be clinically observed during 1 clinic by a CST at least once every 4 months (a minimum of 5 men need to be observed having screening). A standardised proforma is available to record outcomes and evidence continuing professional development.
- undertake and successfully complete the NAAASP approved screening technician re-accreditation framework every 24 months. (Technicians have a timeframe of 18 and 30 months with which to achieve their re-accreditation)

- only a trained CST or QA lead can assess images for IQA
- nurses and nurse specialists undertaking screening under the auspices of NAAASP must complete the same initial training and IQA requirements of screening technicians unless they possess an appropriate post graduate degree in medical ultrasound

## Quality assurance criteria for CSTs

CSTs need to meet the following criteria in order to achieve and maintain their status:

- they should be qualified sonographers (CASE accredited or equivalent) or accredited clinical vascular scientists (from the Society of Vascular Technology) with a minimum of two years post registration experience with evidence of ongoing professional development
- they should have demonstrable experience in scanning abdominal aortic aneurysms and mentoring and training others
- they should have successfully completed the NAAASP approved training course for clinical skills trainers
- they should maintain competency in scanning aortas as required by the appropriate professional body
- they should maintain registration with the appropriate professional body and be up to date with their CPD requirements

## Feedback and recovery actions

Feedback to screening technicians is an integral component of the IQA process. Feedback needs to be as contemporaneous as possible to the screening event to enable technicians to effectively alter their practice when an issue is highlighted.

Feedback should be face-face where possible with clear and defined mechanisms to record feedback given and monitor any actions highlighted. The CST or QA lead should be providing the feedback and it should be face to face.

As part of the IQA process, all screening technicians should be regularly assessed as to their competency to screen within NAAASP. If a screening technician fails to meet any of the standards in 2 or more clinical assessments then appropriate recovery action should be taken such as:

- close mentoring and supervision
- retraining
- review of all images for a period of time
- review of past images and possible recall of men

## Reporting

These resources have been developed to provide programmes with proformas that can be used as evidence of ongoing training, education, CPD and IQA mechanisms within local screening programmes. A suggested IQA reporting form is available as resource 6 to enable programmes to report to programme board meeting. It and can be submitted as evidence as part of any quality assurance visit by the screening quality assurance service (SQAS).

If a potential incident or serious incident is identified during any of these QA processes the regional SQAS should be informed and a screening incident assessment form completed.

# IQA resources for screening technicians undertaking AAA scans within NAAASP

## Trainee and newly qualified screening technicians

### Resource 1:

As part of initial training, screening technicians are expected to complete a minimum of 100 supervised and assessed scans. The results and learning support are recorded in the technician's portfolio that can be downloaded from the [PHE Screening CPD website](#).

Following the completion of the initial training period as outlined in the portfolio, the first 100 scans need to be reviewed by the QA lead/CST to build upon the initial training and ensure that technicians receive ongoing support and guidance. The review of the first 100 scans needs to take place after the technician has completed the technician portfolio and is deemed fit to scan independently. Up to this point all scan images will still need to be reviewed by the CST/QA lead.

Resource 1 should be used to monitor and provide feedback to the screening technicians to ensure all scans are undertaken and reported in line with NAAASP protocol.



Resource 1: Record of 100 image reviews – conducted by CST/ QA lead

**NAAASP screening review of 100 images following completion of mandatory training**

Name of Technician.....  
Date.....

**Feedback on:**

Gain

Depth

Focus

Calliper placement

Correct NHS number/Patient ID

**Suggested areas to concentrate on next/agreed action:**

Screening technician:  
CST/QA lead:

Date:  
Date:

	Good or exceeds standard
	Meets minimum standard
	Below standard

**Review of 100 images**

	Date of scan	Scan ID	Depth			Gain			Focus			Calliper			Comment	Signed:
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
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	Date of scan	Scan ID	Depth			Gain			Focus			Calliper			Comment	Signed:
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	Date of scan	Scan ID	Depth			Gain			Focus			Calliper			Comment	Signed:
81			█	█	█	█	█	█	█	█	█	█	█			
82			█	█	█	█	█	█	█	█	█	█	█			
83			█	█	█	█	█	█	█	█	█	█	█			
84			█	█	█	█	█	█	█	█	█	█	█			
85			█	█	█	█	█	█	█	█	█	█	█			
86			█	█	█	█	█	█	█	█	█	█	█			
87			█	█	█	█	█	█	█	█	█	█	█			
88			█	█	█	█	█	█	█	█	█	█	█			
89			█	█	█	█	█	█	█	█	█	█	█			
90			█	█	█	█	█	█	█	█	█	█	█			
91			█	█	█	█	█	█	█	█	█	█	█			
92			█	█	█	█	█	█	█	█	█	█	█			
93			█	█	█	█	█	█	█	█	█	█	█			
94			█	█	█	█	█	█	█	█	█	█	█			
95			█	█	█	█	█	█	█	█	█	█	█			
96			█	█	█	█	█	█	█	█	█	█	█			
97			█	█	█	█	█	█	█	█	█	█	█			
98			█	█	█	█	█	█	█	█	█	█	█			
99			█	█	█	█	█	█	█	█	█	█	█			
100			█	█	█	█	█	█	█	█	█	█	█			

**General comments:**

I confirm that \_\_\_\_\_ (name of technician)

Has completed 100 scans which are In line with national protocols and meet the quality required for the programme.

This technician can now follow the internal quality assurance programme for established staff.

Signed \_\_\_\_\_ Full name \_\_\_\_\_

CST/QA lead \_\_\_\_\_

Date \_\_\_\_\_

## Resource 2:

This resource is to be used to review and comment on all abnormal scans performed within the programme by all screening technicians. This must happen at least once every 30 days by the QA lead/CST (programmes should aim to QA abnormal images within 7 days to ensure best practice).

It should be used not only for QA purposes but also to check for accuracy and appropriateness of the care pathway for screened positive patients. The pro-forma should be used to ensure consistency. It covers elements such as:

- gain
- depth
- focus
- calliper placement
- correct NHS number

To ensure standards are maintained and to help identify omissions and inconsistencies in technique images must be quality assured by a suitably qualified individual. This includes providing feedback to screening technicians. Only a trained CST or QA lead can undertake image review. It is best practice that a CST or QA lead provides the feedback to screening technicians.

The minimum measurement at which a screening result is referred for abnormal quality assurance review can be altered on the SMaRT system.

Standard image assessment pro forma for abnormal scans

	Good or exceeds standard
	Meets minimum standard
	Below standard

**To be completed every 4 weeks by the QA Lead/CST**  
**Screening period ( / / ) to ( / / )**

	Date of scan	Scan ID	Tech ID	Depth			Gain			Focus			Calliper			Comment
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
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**General comments:**

**Good practice identified:**

**Areas needing improvement:**

Signed \_\_\_\_\_ Full name \_\_\_\_\_  
CST/QA lead \_\_\_\_\_ local screening programme  
Date \_\_\_\_\_

### Resource 3:

Each screening technician must have a minimum of 8 random or surveillance scans reviewed every month.

It should be used not only for IQA purposes but also to check for accuracy and appropriateness of the care pathway for screened positive patients. The pro-forma should be used to ensure consistency. It covers elements such as:

- gain
- depth
- focus
- calliper placement
- correct NHS number
- correct measurement of aortic diameter

To ensure standards are maintained and to help identify omissions and inconsistencies in technique accredited screening technicians must have their images quality assured by a suitably qualified individual. This includes providing feedback to screening technicians. Only a trained CST or QA lead can undertake image review.

Local screening programmes must alter the number of random scans in the QA admin section of SMaRT to ensure the minimum requirement is selected on a monthly basis.



Standard image assessment pro forma for random scans

**To be completed every month by the QA lead/CST**  
**8 random scans (adjustable on SMaRT system)**

Name of technician \_\_\_\_\_

Local screening programme \_\_\_\_\_

1	Date of scan	Scan ID	Depth			Gain			Focus			Calliper			Comment
			Good	Meets	Below	Good	Meets	Below	Good	Meets	Below	Good	Meets	Below	
1															
2															
3															
4															
5															
6															
7															
8															

	Good or Exceeds Standard
	Meets Minimum Standard
	Below Standard

**NAAASP Monthly review of 8 random scans**

Name of technician.....

Date.....

**Feedback on:**

Gain

Depth

Focus

Calliper Placement

Correct NHS number/Patient ID

Correct measurement of aorta

**Suggested areas to concentrate on next/agreed action:**

Technician  
CST/QA lead:

Date:  
Date:

## Resource 4:

Each screener should be observed during 1 clinic by the CST at least every 4 months. A minimum of 5 men need to be observed and the resource pro forma should be used. It covers the following elements:

- introduction, explanation and consent
- communication and interpersonal skills
- use of equipment correctly
- image optimisation
- appropriate sonographic technique
- correct calliper placement
- correct patient NHS number and input of information and results
- giving appropriate outcome to man
- screening technician performance
- reflective practice
- suggested areas to concentrate on

## Standard clinical observation pro forma for NAAASP screening events

Technicians to be observed during one clinic (minimum 5 men) by the clinical skills trainer at least every four months.

Local Screening Programme \_\_\_\_\_

Name of technician _____	Date _____
<b>Feedback on:</b>	
<u>Overall management of the examination</u>	
<ul style="list-style-type: none"><li>• introduction</li>          <li>• explanation of screening event and potential risks</li>          <li>• consent</li>          <li>• communicating correct outcome</li>          <li>• correct NHS number to patient ID</li></ul>	

- time management of screening event
- communication/interpersonal skills with men
- communication/interpersonal skills with healthcare professionals

Use of equipment and imaging

- gain
- depth/zoom
- focus
- calliper placement

Sonographic technique:

- positive identification of aorta
  
- correct recognition of widest diameter
  
- Image optimisation

Screening technician performance

- Reflection on practice since last session

Screening technician comments:

CST comments:

Number of men screened in the last 4 months:

Number/rate of non-visualisations in the last 4 months:

Aneurysm detection rate:

**Suggested areas to concentrate on next:**

Clinical skills trainer:

Date:

## Resource 5

### NAAASP screening technician training record

Name	
------	--

Screening programme	
---------------------	--

Completion date of certificate of semi-independent scanning (if applicable)	
Completion date of initial accreditation or Diploma for Health Screeners qualification	

Reaccreditation dates				
1	2	3	4	5

Additional continual professional development activities can be listed below

Activity	Date



**Resource 6**

**Screening technician internal quality assurance record template**

Screening technician name	Scans completed in last 12 months	Random scan quality assurance to be completed every month												Clinical observation dates (once every 4 months)			
		J	F	M	A	M	J	J	A	S	O	N	D	Q1	Q2	Q3	Q4