NHS Abdominal aortic aneurysm screening programme failsafe processes

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About the NHS Abdominal Aortic Aneurysm Screening Programme

The NHS Abdominal Aortic Aneurysm (AAA) Screening Programme aims to reduce premature deaths from ruptured abdominal aortic aneurysms among men aged 65 and over by up to 50% through early detection, appropriate follow-on tests and treatment.

Public Health England (PHE) is responsible for the NHS Screening Programmes. PHE is an executive agency of the Department of Health and works to protect and improve the nation’s health and wellbeing, and reduce health inequalities.

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Introduction

The aim of QA is to provide information to the public and professionals about the quality of screening programmes. Quality assurance and performance management are an integral part of all national screening programmes to ensure that all programmes achieve the highest possible standards. Part of this work involves the development of failsafe processes and care pathways.

Further details of cross programme QA, including the work on failsafe, can be found at


What is Failsafe?

Screening should be offered to the eligible population in a timely manner; and those who are screened should receive their results (whether positive or negative) with sufficient information to understand them, and have them acted on appropriately. The value of a screening programme will be diminished if appropriate action is not always taken to ensure that the right people are invited to be screened, or if the right action is not taken to follow up those with abnormal test results.

Failsafe is a back-up mechanism, in addition to usual care, which ensures if something goes wrong in the screening pathway, processes are in place to

- identify what is going wrong and
- what action follows to ensure a safe outcome.

Most risks and errors in a screening pathway can be predicted. They often arise from systems failure occurring along the screening pathway, as opposed to individual error. A failsafe is a mechanism to "design out" or reduce these risks. It is a back-up mechanism, in addition to usual care, which ensures if something goes wrong in the screening pathway, processes are in place to identify the error and correct it before any harm occurs.

The Failsafe Process

Failsafe should be a ‘closed loop’ process. The effective monitoring of failsafe requires the point at which a required activity is commenced and the point at which it is concluded to be noted (usually through a
systematic process and/or an IT system), and a system to ensure that all opened loops have been closed within an appropriate timescale.

**Opening the loop** – a trigger which indicates that a process requiring a failsafe control for an individual has started; for example a pregnancy reported either by self referral or through primary care triggers the offer of an antenatal screening test.

**Closing the loop** – an event or a stage of the screening pathway which denotes the conclusion of a process requiring failsafe control for an individual; for example, the dispatch of a letter to inform parents that the results of newborn blood spot screening are normal. There may be a number of events that can result in a particular loop being closed; for example, a loop which is opened by a 'condition suspected' antenatal screening result might be closed by diagnostic testing confirming that the pregnancy is not affected, by parental choice to continue an affected pregnancy, or by termination of an affected pregnancy.

**Ensuring the loop has been closed** – an additional check, usually on a group of individuals, to identify any individual for whom a failsafe loop has been opened but not closed within a defined timescale; for example a systematic check that a sample card has been received at the screening laboratory for all babies born 17 or more days previously.

Most screening pathways will involve multiple failsafe loops at different levels of detail. Loops can exist within other loops; for example, a failsafe loop to ensure that every screen positive woman is offered diagnostic testing can exist within a broader loop ensuring that every woman who is screened is notified of the screening result.

**Failsafe Strategy**

The failsafe strategy requires action at national, regional and local level. The main roles and responsibilities are outlined below-

**National:** Screening programmes have assessed the screening pathway and identified areas of high risk that require failsafe measures. Assessments have considered the probability of an error occurring and the severity of the consequence, with this drawing on the learning from serious incidents. Each programme has developed a diagram superimposed on the pathway showing the key risks along the screening pathway.
Quality assurance: The regional teams provide expert advice on reducing risks in local programmes to providers and commissioners. They assess the robustness of local arrangements through audit, as part of peer review and in the investigation of incidents. They act as a conduit for information and dialogue between national, regional and local levels.

Commissioners: Commissioners should incorporate the national guidance to reduce risk within service specifications and to oversee their implementation and functioning. NHS England regional teams, via their screening leads, are responsible for ensuring that the whole pathway is commissioned and that the elements communicate properly to make all failsafes work. Working with providers, they should ensure that safeguards are in place throughout the screening pathway and for high risk groups. This requires clarity about roles and responsibilities of different providers, particularly at the interfaces.

Providers: All providers should review and risk assess local pathways in the light of the national guidance and work with commissioners to develop, implement and maintain appropriate risk reduction measures. This should involve mechanisms to audit implementation and report incidents. Effective implementation requires routine staff training and development and may need changes to local roles and responsibilities. Provider organisations are also expected to ensure that appropriate links are made with internal governance arrangements, such as risk registers.

The NHS Abdominal Aortic Aneurysm Screening Programme

The NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP) aims to reduce AAA-related mortality by up to 50% by providing a systematic population-based screening programme for the male population during their 65th year and, on request, for men over 65.

More information on the NHS AAA Screening Programme, including the Standard Operating Procedures (SOP) can be found at: https://www.gov.uk/government/publications/aaa-screening-standard-operating-procedures

The standard operating procedures aim to assist local programmes and include a number of back-up mechanisms.
AAA screening failsafe document

Failsafe overview

**Failsafe AAA2**
Identification of eligible population and offer of screen

**Failsafe AAA3**
Follow-up of those who move out of pathway i.e. who do not complete the pathway

**Failsafe AAA4**
Screen those who accept the offer

**Failsafe AAA5a**
All screen results received and recorded

**Failsafe AAA5b**
Follow-up of men whose aorta is non-visualised at screening

**Failsafe AAA11**
All screen results received and recorded

**Failsafe AAA12**
All screen results received and recorded

**Failsafe AAA13**
All screen results received and recorded

**Failsafe AAA15**
All men with screen detected AAA measuring 3.0-5.4 enter next stage of pathway, including nurse appointment

**Failsafe AAA18**
All men with screen detected AAA>=5.5cm referred to vascular services

**Failsafe AAA21**
All who accept referral are referred

Men to be re-invited and seen within 12 weeks of their missed appointment

Invitation sent to men aged 65

Ultrasound scan in the community

Non-visualised

Visualised

Request a scan from medical imaging.

Arrange for repeat scanning test

Normal result (aorta <3.0cm diameter)

No further scans required

Small aneurysm (3.0-4.4cm diameter)

Recall for repeat scan every 12 months after initial scan

Medium aneurysm (4.5-5.4cm diameter)

Recall for repeat scan every three months after the initial scan

Large aortic aneurysm (≥5.5cm diameter)

Refer to surgeon in Vascular Network to consider elective repair of AAA

Medium (4.5-5.4cm diameter) or small (3.0-4.4cm diameter) or medium (4.5-5.4cm diameter)

Invite for ongoing ultrasound surveillance (interval depends on the size of aneurysm)

**Failsafe AAA2**
Identification of eligible population and offer of screen

Abdominal Aortic Aneurysm Screening

**Failsafe AAA3**
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Invite for ongoing ultrasound surveillance (interval depends on the size of aneurysm)
# AAA screening failsafe document

## Failsafe Descriptions

<table>
<thead>
<tr>
<th>Failsafe</th>
<th>Process</th>
<th>Opening the loop</th>
<th>Closing the loop</th>
<th>Ensuring the loop has closed</th>
<th>Local AAA programme task</th>
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<tbody>
<tr>
<td>AAA2</td>
<td>Identification of eligible population and offer of screen</td>
<td>Population identified, eligibility established. Men aged over 65 informed of self-referral process via local publicity – posters, press releases etc</td>
<td>All eligible men in cohort offered screen. All eligible men who self-refer offered screen. National programme centre provides guidance on offering screening to men identified through other sources (eg prisons)</td>
<td>Data is downloaded daily from GP systems by Health &amp; Social Care Information Centre (HSCIC). This is integrated with the AAA IT SMaRT call and recall system. Screeners check subject’s details to confirm eligibility before carrying out the screening test. National Programme Centre monitors the use of inappropriate screening outcomes via SMaRT. Local programmes adhere to national guidelines for screening men identified through other sources</td>
<td>Check data included in monthly activity reports for programmes and quarterly KPI AA1 report (completeness of offer)</td>
</tr>
<tr>
<td>AAA3</td>
<td>Follow-up of those who move out of pathway ie who do not complete the</td>
<td>GP notified if screen not completed. Where non completion is due to physical</td>
<td>Local screening programme ensures all subjects who are pending a final DNA (did not attend) decision are offered a further appointment. Further scan declined by</td>
<td>Following a DNA, SMaRT produces letters to be sent to the subject and his GP. After first DNA, subject is offered a new appointment. After second DNA, subject is</td>
<td>DNA patients’ addresses are checked against Personal Demographic Service (PDS) to ensure there have been no changes</td>
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<tr>
<td>AAA4</td>
<td>Screen those who accept the offer</td>
<td>Screeners obtain verbal consent/decline and record in SmaRT. Screener carries out screening</td>
<td>Attendance recorded on SmaRT or paper proformas as soon as subject arrives at clinic</td>
<td>Screener checks SmaRT or proformas at end of clinic to ensure outcome is recorded (DNA or screening test)</td>
<td>Check data included in monthly activity reports for programmes. Review alerts daily and clear incomplete records</td>
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<tr>
<td>pathway</td>
<td>move out of the area, the record is transferred to new local screening programme in SMaRT.</td>
<td>subject. Reasons noted on SMaRT and GP informed they will not be offered an appointment unless they contact the programme. Regular demographic updates are obtained from HSCIC to minimise postal returns. Telephone numbers are collected from men who are placed on surveillance so that the local programme can contact them if they DNA. SMaRT has a system search for subjects requiring appointments following a DNA. Records made on SMaRT of attempts to contact individuals for further investigation since the initial invitation was generated. If a change of address is found then this is amended and a new appointment issued</td>
<td></td>
<td></td>
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<tr>
<td>AAA5a</td>
<td>All screen results received and recorded</td>
<td>Screener enters individual screening test results into SmaRT. Local coordinator/administrator enters any paper-based test results into SmaRT</td>
<td>Screener sets screening outcomes in SmaRT and checks measurement against image. Screener must record two measurements per man – in the longitudinal and transverse planes. Note: SMART suggests correct screening outcome based on test results profile</td>
<td>All images and results are archived and stored as per national guidance. SMART system alert for appointments in the past with no outcomes recorded is checked daily</td>
<td>Check data recorded in monthly activity reports and programme’s annual report. Check alerts.</td>
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<tr>
<td>AAA11</td>
<td>All screens received and recorded</td>
<td>Screener enters individual screening test results into SmaRT. Local coordinator/administrator enters any paper-based test results into SmaRT</td>
<td>Screener sets screening outcomes in SmaRT and checks measurement against image. Screener must record two measurements per man – in the longitudinal and transverse planes. Note: SMART suggests correct screening outcome based on test results profile</td>
<td>All images and results are archived and stored as per national guidance. SMART system alert for appointments in the past with no outcomes recorded is checked daily</td>
<td>Check data recorded in monthly activity reports and programme’s annual report. Check alerts.</td>
</tr>
<tr>
<td>AAA12</td>
<td>All screens reviewed and recorded</td>
<td>Screener enters individual screening test results into SmaRT. Local coordinator/administrator enters any paper-based test results into SmaRT</td>
<td>Screener sets screening outcomes in SmaRT and checks measurement against image. Screener must record two measurements per man – in the longitudinal and transverse planes. Note: SMART suggests correct screening outcome based on test results profile</td>
<td>All images and results are archived and stored as per national guidance. SMART system alert for appointments in the past with no outcomes recorded is checked daily</td>
<td>Check data recorded in monthly activity reports and programme’s annual report. Check alerts.</td>
</tr>
<tr>
<td>AAA13</td>
<td>All screens reviewed and recorded</td>
<td>Screener enters individual screening test results into SmaRT. Local coordinator/administrator enters any paper-based test results into SmaRT</td>
<td>Screener sets screening outcomes in SmaRT and checks measurement against image. Screener must record two measurements per man – in the longitudinal and transverse planes. Note: SMART suggests correct screening outcome based on test results profile</td>
<td>All images and results are archived and stored as per national guidance. SMART system alert for appointments in the past with no outcomes recorded is checked daily</td>
<td>Check data recorded in monthly activity reports and programme’s annual report. Check alerts.</td>
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| AAA5b | Follow-up of men whose aorta is non-visualised at screening appointment | Screeners record non-visualised screening outcome on SmaRT system. Letters sent to GP advising of non-visualisation | Local screening programme arranges further scan appointment and sends further invite. Further non-visualisation: refer to vascular lab/medical imaging. Further scan declined, reasons noted on SmaRT and GP informed | SMaRT allows a decision to recall for screening non-visualised subjects or to refer them to medical imaging. SMaRT alerts for: Subjects awaiting a non-visualised decision. Subjects referred to Vascular Lab/Medical Imaging with no outcome recorded. Search available on SMaRT for subjects in state of ‘Requires Appointment – Rescreened’ | Either re-book non-visualised men into a screening clinic or arrange an appointment with the local medical imaging department / vascular laboratory. |
| AAA15 | All men with screen-detected AAA measuring 3.0-5.4cm enter next stage of pathway | Screeners record AAA measurement in SMaRT. Outcomes are also sent to men and their GP within 1 week. Subjects are offered an appointment with the local screening programme nurse practitioner on or before their first scan in surveillance. | Follow-up appointments offered at regular intervals – annually for 3.0-4.4cm and three-monthly for 4.5-5.4cm. Further scan declined, reasons should be noted on SMaRT and GP/vascular nurse informed. Written instruction should be signed by the subject or his representative to confirm his informed dissent from surveillance recall. | Surveillance scans completed at appropriate time and results entered on to SMaRT. Coordinator acts upon SMaRT alert if surveillance due dates are breached. Note: SMaRT suggests correct screening outcome based on test results profile unless the screener overrides the automatically generated outcome. Co-ordinator acts upon SMaRT alert for outstanding nurse appointments. | Data in monthly activity reports for local programmes. Monitor alerts for surveillance appointments due within 6 weeks and surveillance due date has passed with no recall appointment booked. |

| AAA18 | All men with screen-detected AAA>=5.5cm referred to vascular services | Screen outcomes are given to subjects verbally by the screener at the time of test. Outcomes are also sent in. | Assessment appointment date recorded in SMaRT. Further investigations declined, reasons should be noted on SMaRT and GP/nurse informed. | Screening coordinator checks screen positives appointed in vascular services as per national guidance. The programme’s pathway standards state that all referrals should be seen in a vascular outpatients | Referrals included in monthly activity reports. Monitor alerts for referrals required and alerts in referral tracking to ensure timeliness of appointments and |
AAA screening failsafe document

| AAA21 | All who accept referral get it | Appointment for vascular assessment received by patients | Vascular assessment completed and results entered into SMaRT | Screening coordinator checks referrals attended vascular assessment as per national guidance. Screening coordinator audits time from screen detection to first attended vascular assessment is within two weeks as per pathway standards. Screening coordinator audits time from screen detection is within eight weeks as per pathway standards. The progress of each referral made to a provider of vascular services | Referrals included in monthly activity reports and in annual report. Timeliness of assessments and surgery managed in referrals tracking module within SMaRT with alerts for those who have breached the waiting times. |
| shall be tracked and ensure action is taken to detect and rectify any delays in the man being seen for assessment or subsequent treatment. The Provider shall ensure it is also aware of all final outcomes for each man referred. |