Public Health England

NHS

Screening Quality Assurance visit report

NHS Abdominal Aortic Aneurysm Screening Programme North East and North Cumbria

V1.0 23.01.19

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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 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 4 UK countries. PHE advises the government and the NHS so England has safe, high quality screening programmes that reflect the best available evidence and the UK NSC recommendations. PHE also develops standards and provides specific services that help the local NHS implement and run screening services consistently across the country.

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Review / approval

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1.0	21.01.19	Final version approved	Madeleine Johnson

Contents

Scope of this report

	Covered by this report?	If 'no', where you can find information about this part of the pathway
Underpinning functions		
Uptake and coverage	Yes	
Workforce	Yes	
IT and equipment	Yes	
Commissioning	Yes	
Leadership and governance	Yes	
Pathway		
Cohort identification	Yes	
Invitation and information	Yes	
Testing	Yes	
Results and referral	Yes	
Diagnosis	Yes	
Intervention / treatment	Yes	

Executive summary

The NHS Abdominal Aortic Aneurysm (AAA) Screening Programme is available for all men aged 65 and over in England. The programme aims to reduce abdominal aortic aneurysm related mortality among men aged 65 and older. A simple ultrasound test is performed to detect abdominal aortic aneurysms. The scan itself is quick, painless and non-invasive and the results are provided straight away.

The findings in this report relate to the quality assurance visit of the North East and North Cumbria AAA screening service held on 15 November 2018.

Quality assurance purpose and approach

Quality assurance (QA) aims to maintain national standards and promote continuous improvement in abdominal aortic aneurysm (AAA) screening. This is to ensure that all eligible people have access to a consistent high quality service wherever they live.

QA visits are carried out by the PHE screening quality assurance service (SQAS).

The evidence for this report comes from the following sources:

- routine monitoring data collected by the NHS screening programmes
- evidence submitted by the provider(s), commissioner and external organisations
- information shared with SQAS (North) as part of the visit process

Local screening service

The North East and North Cumbria AAA screening programme (the service) was an early implementer site in December 2010 and serves a population of approximately 3.1 million. The service was re-procured during 2016 and had a new contract start date of 1 April 2017. Gateshead Health NHS Foundation Trust (GHFT) is the provider organisation.

The service covers a very large geographical area and has 12 clinical commissioning groups (CCGs) and 19 Local Authorities (LAs). The eligible population is 18,294 with an additional 540 men over the age of 65 who have self-referred in to the service. The service is commissioned by NHS England Cumbria and North East (NHSE CaNE).

The ethnic mix of the LAs within the service boundary area is 99.0% white, 0.66% Asian/Asian British, 0.07% Black/African/Caribbean/Black British, 0.08% other and 0.20% mixed. Middlesbrough and Newcastle upon Tyne have the greatest ethnic mix with 3.5% of the population from non-white groups. Eden and Hambleton had the least variation, 0.3% from non-white populations. Levels of deprivation vary across the LAs.

The service offers screening to all eligible men in the year they turn 65 in line with national guidance. This is delivered by screening technicians across 39 clinic locations, including 5 offender health units.

Men with large aneurysms (5.5cm or greater) are assessed and referred for treatment at 5 vascular treatment centres:

- Sunderland Royal Hospital, City Hospital Sunderland NHS Foundation Trust
- Freeman Hospital, Newcastle upon Tyne Hospitals NHS Foundation Trust
- James Cook University Hospital, South Tees Hospitals NHS Foundation Trust
- The Cumberland Infirmary, North Cumbria University Hospitals NHS Trust
- University Hospital of North Durham, County Durham & Darlington NHS Foundation Trust

Findings

This is the first quality assurance visit to the service. The service has met either the acceptable or achievable level for all measurable national quality assurance pathway standards (1 April 2017 to 31 March 2018). The standards relating to referral and treatment timelines and number of incomplete screening episodes have been achieved.

Immediate concerns

The QA visit team identified no immediate concerns.

High priority

The QA visit team identified no high priority findings.

Shared learning

The QA visit team identified several areas of practice for sharing, including:

- merging of clinical pathways for screened and non-screen patients
- achievement in meeting all pathway standards and national key performance indicator targets
- introduction of the Health Improvement Practitioner role to promote screening and improve uptake
- monthly service user satisfaction surveys
- surveillance patient follow-up including health promotion
- men with special requirements have a longer appointment time

Recommendations

The following recommendations are for the provider to action unless otherwise stated.

Governance and leadership

No.	Recommendation	Reference	Timescale	Priority	Evidence required
1	Commissioners to develop a health inequalities strategy. This should be informed by relevant data from health equity audit and other appropriate analysis	NHS England agreement of commissioning intentions National service specification 2018 to 2019	12 month	Standard	Statement documenting how screening inequalities and patient and public engagement advice is provided
2	Implement a local process to monitor the deaths of post-operative referred patients who subsequently die of a ruptured aneurysm	National Guidance: Protocol for reporting deaths	12 month	Standard	Establish a process, incorporate into a local SOP and sign off at programme board

Invitation, access and uptake

No.	Recommendation	Reference	Timescale	Priority	Evidence required
3	Check with the Trust Information Governance Lead that the previously agreed arrangement for the patient text reminder service is still valid	National service specification 2018 to 2019	12 month	Standard	Written confirmation from the IG lead shared during Programme Board or Operational Group meeting

Referral

No.	Recommendation	Reference	Timescale	Priority	Evidence required
4	Ensure service level agreements (SLAs) are agreed and finalised for all vascular units undertaking non-visualised direct referrals	National service specification 2018 to 2019	6 month	Standard	Summary of outcome submitted to the Programme Board or Operational Group meeting

Next steps

The screening service provider is responsible for developing an action plan in collaboration with the commissioners to complete the recommendations contained within this report.

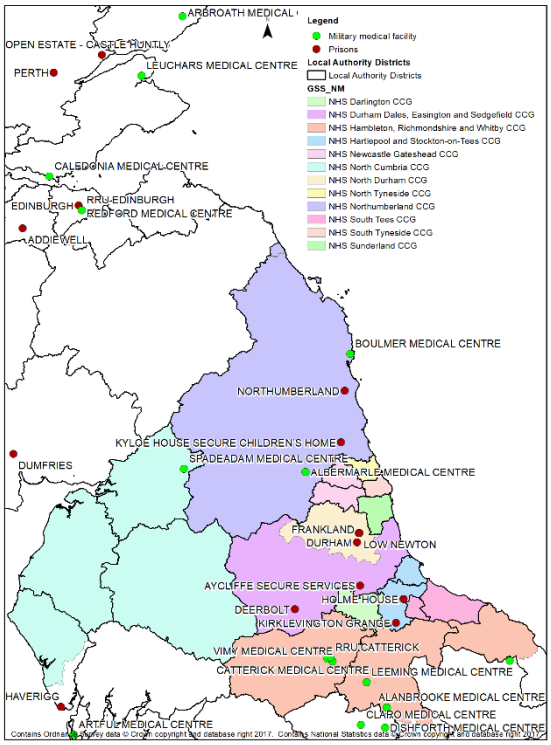
SQAS will work with commissioners to monitor activity and progress in response to the recommendations made for a period of 12 months after the report is published. After this point SQAS will send a letter to the provider and the commissioners summarising the progress made and will outline any further action(s) needed.

Service provider and population served

The service is covered by 12 clinical commissioning groups (CCGs):

- NHS Darlington
- NHS Durham Dales, Easington and Sedgefield
- NHS Hambleton, Richmondshire and Whitby
- NHS Hartlepool and Stockton-on-Tees
- NHS Newcastle Gateshead
- NHS North Cumbria
- NHS North Durham
- NHS North Tyneside
- NHS Northumberland
- NHS South Tees
- NHS South Tyneside
- NHS Sunderland

CCGs within the North East and North Cumbria AAA screening programme



Please note the map shows Scarborough LA also crosses into the North Yorkshire and Humber programme

The service is covered by 19 Local Authorities (LAs):

- Allerdale
- Carlisle
- Copeland
- County Durham
- Darlington
- Eden
- Gateshead
- Hambleton
- Hartlepool
- Middlesbrough
- Newcastle upon Tyne
- North Tyneside
- Northumberland
- Redcar and Cleveland
- Richmondshire
- Scarborough
- South Tyneside
- Stockton-on-Tees
- Sunderland

The ethnic mix of the LAs within the service boundary area is 99.0% white, 0.66% Asian/Asian British, 0.07% Black/African/Caribbean/Black British, 0.08% other and 0.20% mixed. Middlesbrough and Newcastle upon Tyne had the greatest ethnic mix with 3.5% of the population from non-white groups. Eden and Hambleton have the least variation, 0.3% from non-white populations. Levels of deprivation vary across the LAs. Hartlepool and Middlesbrough are in the most deprived tenth of LAs in the country. Hambleton are in the second least deprived tenth.

Governance and leadership

Commissioning and accountability

The North East and North Cumbria AAA screening programme (the service) is provided by Gateshead Health NHS Foundation Trust (GHFT). The service is commissioned by NHS England Cumbria and North East (NHSE CaNE) and serves a population of approximately 3.1 million. In 2017 to 2018, the eligible population was 18,294 with an additional 540 men over the age of 65 who self-referred in to the service.

The service was an early implementer site in December 2010 and was re-procured during 2016 with a new contract start date of 1 April 2017. GHFT remained in place as the provider. The contract is a 3 year contract with an option to extend for a further 2 years (until end March 2022). There are no future plans to reconfigure or recommission the service.

The service is commissioned against the national service specification and there are no formal performance or contractual notices in place. The commissioning team holds quarterly contract review meetings with the provider contract lead and the service. As NHS England North (Yorkshire & Humber) are an associate commissioner of the contract, they attend the contract review meetings and receive minutes of the Programme Board (PB) with quarterly performance data.

There is a single bi-annual PB meeting for the service with operational meetings being held at 3 monthly intervals between. Both meetings have appropriate terms of reference and membership. The PB meetings are chaired by the NHSE CaNE Screening and Immunisation Lead and are well attended. The operational meetings are chaired by the screening service. Performance reports, incidents and risk management are discussed during both meetings.

The Screening and Immunisation Team (SIT) has an established governance structure. The public health oversight group (PHOG) meets every 2 months for all section 7a public health screening programmes and is informed of all serious incidents (SIs). Governance and leadership arrangements for incident management is in accordance with the NHS England and Public Health England (PHE) SQAS incident guidance documents.

The NHSE CaNE Serious Incident Panel Group will close all SIs. Any SIs are notified to CCG Leads, Directors of Public Health, the PHE Centre Director and other relevant stakeholders.

The service has completed health equity audits in 2010 and 2017. This is regularly monitored via an action plan by NHSE CaNE. However, this does not include a local screening inequalities strategy or a patient and public engagement strategy.

NHSE CaNE should develop a health inequalities strategy for all commissioned screening programmes to support and confirm how they work with providers.

Recommendation 1

Programme management and co-ordination

The service is based within the Queen Elizabeth Hospital in Gateshead and manages all programme functions from this base (administration, call/recall, failsafe, clinic management, internal QA and referral). The service sits under the Clinical Support and Screening Division; an organisational chart showing the line management structure within the service was submitted as evidence.

Staff interviewed during the visit are aware of their line management arrangements and appear to be a friendly, cohesive team who work well together. Good working relationships were observed between all staff, the Clinical Director and the wider vascular team.

The Programme Coordinator and Clinical Skills Trainer (CST) role are combined. This role reports to the GHFT Screening Manager. In addition, there is an Administration Coordinator who supports the operational functions of the service. Any issues and/or developments are discussed during the monthly screening management team meeting.

The service will hold several internal meetings per month, i.e. staff meetings, peer management meetings, a safe care group. The visiting team thought there may be some duplication of membership and content however, all interviewees reported each meeting was relevant and had a different focus for each staff group. All meetings had appropriate terms of reference where necessary and the minutes were submitted as evidence. The service protects 1 day per month for the multi-disciplinary team (MDT) meeting and whole team meeting which allows for full staff participation. All staff attend these meetings unless they are on annual leave.

The service has multiple work instructions and standard operating procedures (SOPs) across the screening pathway. There is an index of all SOPs and new staff are allocated time to review each document prior to commencing in their role. This is good practice. The screening technicians have copies of relevant SOPs in their folders which they take to clinic. Local SOPs and work instructions are ratified during MDT meetings and all seem to be in date with appropriate content.

The service acknowledged that although it follows the national SOP for QA of images, there was a period in quarter 4 of 2017 to 2018 where the amount of feedback to individual technicians did not meet the national target. This was discussed openly during the September 2018 PB meeting and has been resolved from quarter 1 of 2018 to 2019, as evidenced through internal data reports.

NHSE CaNE has embedded a 2 year Public and Patient Participation CQUIN in to the current contract, which actively targets users of the service to seek opinions and experience. This feedback will then be reviewed and used to further improve service quality.

The service shares quarterly reporting data during PB and operational group meetings which includes key performance indicators (KPIs) and pathway standards. The service has met either the acceptable or achievable level for all KPIs and measurable national quality assurance pathway standards for the reporting period 1 April 2017 to 31 March 2018. The standards relating to referral and treatment timelines and number of incomplete screening episodes have been achieved.

An annual report is produced each year, shared with stakeholders and uploaded to the service website.

Incident, risk management and escalation

The management of serious incidents and screening safety incidents within the service is the responsibility of the provider organisation and oversight is by the SIT. There is a comprehensive GHFT incident and reporting policy in place. The service actively reports patient safety incidents to SQAS and the SIT.

All staff can report an incident via the GHFT Datix system but it is usually the Administration Coordinator or Programme Coordinator who will complete the screening incident assessment form (SIAF). No serious incidents have been reported within the screening service.

GHFT encourages all staff to report and escalate any concerns they have and has developed a ‘Freedom to Speak Up Guardian’ role who staff can liaise with.

A copy of the local risk register was submitted as evidence and is shared with SQAS and the SIT during PB, operational group and contract review group meetings. There are clear lines of escalation documented within the GHFT policy. Risks with a score of 16 and above are included in the corporate risk register.

Audits

The service has undertaken numerous audits of the screening pathway including:

- attended not seen
- do not attend (DNA)

- surveillance (focusing on nurse assessments, impact of nurse intervention and preferred delivery method (telephone or face to face))
- right results
- cardiovascular Risk (focusing on cardiovascular risk in the surveillance men and nurse assessment impact)
- non-visualisation

All service audits are logged on the GHFT Ulysses system and progress reports are provided through the Safe Care team on monthly basis to the Screening Manager and discussed during the peer management group and operational board. Audit results are regularly presented at PB meetings.

The vascular units linked to the service comply with compulsory reporting to the National Vascular Registry (NVR) on unit data and individual surgeon data. Mortality rates for AAA surgery are recorded including the rates for elective and non-elective deaths.

Ruptures and death of men in surveillance are monitored and reported according to national guidance. Summary reports are shared with the programme board.

The service does not undertake a mortality audit of post-operative deaths and was unaware that these death notifications would not be available through the SMaRT system. A review of post-operative deaths for referred patients should be undertaken and the results recorded within SMaRT.

Recommendation 2

Communication and user feedback

There is evidence of sustained engagement with patients and service users, and survey results have been used to focus improvement initiatives such as new screening venues, surveillance telephone appointments and accessibility.

Satisfaction survey questionnaires are conducted at all clinic sites 1 week per month. Friends and family (F&F) cards are available each day at all clinics. There is evidence that survey results are discussed at meetings and shared with screening staff. If staff are named in F&F cards, they are sent a letter of congratulations from the GHFT Director of Nursing.

The service is promoted through its own dedicated page on the GHFT website. There is a GHFT SOP for patient complaints and feedback which was submitted as evidence.

The amount of service user engagement undertaken is exemplary and is to be commended.

Infrastructure

Workforce

The service has an experienced and stable workforce who are committed to providing an effective service to patients and service users. The current service structure appears to promote skill mix, staff retention and professional development.

The service has a large screening team but this is necessary to support the difficult programme geography and cohort size. The staffing structure was reviewed as part of the reprocurement process to maximise clinical safety and efficiencies, and new roles were introduced to support key personnel. The service has a slightly different structure to other programmes but this does not cause any problems and works well for service need.

Not all roles within the service meet the whole time equivalent (wte) of individual role to population ratio as documented within national guidance. The Clinical Director, Lead Ultrasound and Technicians are below the wte for 800,000 population.

As the wte is a recommendation and can be amended to suit local programme circumstances, the service should continue to review workforce capacity on a regular basis through ongoing contract and senior management team meetings.

The service is led by the Clinical Director (consultant vascular surgeon) contracted for 1 PA per week. The Clinical Director is enthusiastic and dedicated, providing high quality patient care and promotes professionalism and team working.

The Programme Coordinator and Clinical Skills Trainer (CST) role are combined. The role is 1.0wte and has responsibility for the day to day management of the service. This role reports directly to the GHFT Screening Manager who oversees 3 screening services (bowel, breast and AAA screening). The Administration Coordinator (1.0wte) supports the operational functions of the screening service.

The Lead Ultrasound Clinician role (consultant radiologist) is contracted for 1 PA per week and will mainly focus on image review, incidental findings and non-visualisation advice. There is ability for this role to provide cross cover for the CST as part of the workforce contingency plan.

The service has 2 CSTs. 1 is combined with the Programme Coordinator role, the other is a 0.26wte registered sonographer.

The AAA Nurse Practitioner (0.8wte) is solely employed by the service and has no other GHFT clinical commitments. At the time of the QA visit, a second nurse practitioner post (0.8wte) had been recruited to and the new staff member attended the visit interview session.

The nurse provides line management support to the screening technicians and will directly discuss any technical issues and surveillance patient queries at the start of each clinic. The nurse and screening technicians meet regularly and the nurse undertakes annual appraisals, 1:1 sessions and CPD sessions. The service was originally established by the nursing team so the nursing aspect features highly and is well supported.

The visiting team were informed that the service is advertising for 2 Band 5 Team Leader Screening Technician posts who will take over the line management responsibilities of the technicians to alleviate nurse capacity and to further enhance skill mix and existing staff development.

All staff have job descriptions, training and reaccreditation is up to date. All staff complete CPD and mandatory training in line with GHFT policy. The service promotes the 'every contact counts' ethos and various role-appropriate courses; presentations are provided by external trainers during MDT/staff meetings.

The Screening Manager encourages staff to attend national and regional training events/networking days; and several members of staff are involved in national workstreams, such as the SMaRT user group, NAAASP equipment procurement and undertaking a PCA role for SQAS.

The amount of personal and professional development provided for all service staff is good practice and is commended.

Facilities

Service facilities are not visited as part of the QA visit process. The screening technicians and CST did not report any significant problems with facilities during the visit day interview.

Clinic venues are assessed and monitored for suitability and provision of facilities prior to use. The risk assessment evaluation criteria was submitted as evidence.

Local armed forces health units, long term mental health units, prisons and learning disability units are contacted on a quarterly basis to ascertain whether screening is required.
The service is able to arrange ad-hoc screening sessions at various hospital outpatient departments such as James Cook University Hospital, for men requiring hoists or bariatric facilities. This is good practice.

Clinics appear to be well organised with travel time included for the technicians. This is important for screening staff given the travel distances involved across the programme geography. Depending on the clinic venue technicians are travelling to, there may be 3 technicians for each clinic, with breaks rota'd and the use of a GHFT fleet car to accommodate the travel distance.

Equipment and IT

The service utilises the national Screening Management and Referral Tracking (SMaRT) software system. All IT systems are operated by GHFT and comply with the requirements of the Information Governance (IG) Toolkit.

All clinic venues have a live N3 connection to the server enabling staff to access the SMaRT database from all screening sites. Technicians will directly input screening consent and results to the patient record in the SMaRT software and then return to base after each clinic to download images and upload clinic lists for the next working day.

There is no national requirement for the service to have separate disaster recovery as the NHS AAA Screening Programme has a service level agreement (SLA) with the national IT supplier (Northgate). This confirms disaster recovery and business continuity policies, processes and procedures are in place based on the appropriate ISO standard.

Several local trackers are used outside of SMaRT as a failsafe in the event of a system failure. The Administration Coordinator retains a printed copy of the planned clinic sessions, rota, staff contact details and emergency contacts for the screening venues and staff.

The service has 7 Esaote Mylab Alpha ultrasound machines which have been recently purchased (April 2018). The scanners are checked for function at each clinic and there is a monthly detail check for transducer function (crystal drop-out) and performance (in-air reverberation test), as per the national equipment QA policy.

National guidance recommends the CST should quality assure the machines every month, however the service has delegated this task to the screening technicians who have received training from the medical physics department. The overall responsibility remains with the CST and medical physics continues to provide test object support.

The service reported a safety screening incident (June 2018) which continues to be investigated as there are frequent problems with image transfer and corrupt images from the new Esaote machines. The National Screening Programme, Northgate, Esaote and Visbion are working to resolve the incident.

Identification of cohort

Population served

The service has a well-defined boundary and all GP practices (470 practices) participate. The screening cohort is identified through SMaRT and men are invited by GP cohort. Screening is also offered to English residents registered with 5 Scottish GP practices (situated within NHS Lothian and Borders and NHS Dumfries and Galloway); there is a comprehensive cross-border policy in place to support this arrangement.

The service monitors men who transfer in/out of the programme from neighbouring services in Lancashire, Manchester and Yorkshire.

The service sends prior notification lists (PNLs) to GP practices 6 weeks prior to the clinic date requesting they are notified of any men who are known to have an AAA, have had previous surgery, have died within the last 4 weeks or require an extended appointment. Outstanding screens are monitored on a monthly basis using the summary screen through SMaRT to ensure all men have been allocated an appointment by the end of the screening year.

The service sends invite letters to all of their unregistered men in quarter 3 of the cohort year encouraging them to register with a GP and attend screening.

Men can self-refer into the service. Additional clinics are planned into the annual clinic plan to accommodate this demand and all self-referrals are allocated an appointment and seen within 90 days. A quarterly audit of self-referrals is undertaken to determine the most effective promotional events.

Screening is offered to prisoners in accordance with the national SOP. There are 5 prisons within the service boundary and screening is undertaken each quarter (and ad-hoc if requested). After each screening session the Administration Coordinator will complete a ‘progress form’ documenting any issues, concerns or positive feedback. This is shared with the Prison Healthcare Lead and a summarised report shared during the Programme Board meeting. This is good practice.

The Health Improvement Practitioner is beginning to explore how the service can offer screening for men who are homeless and living in Traveller communities.

Exclusions

Exclusion criteria are in line with national guidance and the service follows the national eligibility criteria for screening.

Exclusions are usually identified via the GP response to prior notification letters or direct contact from the man. If a man contacts the service requesting to temporarily defer his appointment, the review date is set at the time of the call and a reason is included in the notes.

Alerts are monitored on a daily basis and monthly reports on temporarily deferred men are produced by the Administration Coordinator to ensure all men are offered appointments by the end of the screening year.

Invitation, access and uptake

The service begins to plan clinics in November for the following year once cohort data from Northgate is available; this ensures there is adequate workforce capacity and secures screening venues. Clinics are organised 8 weeks before the clinic due date with appointments booked between 8 to 5 weeks in advance of the men's appointment date. Clinic slots are allocated in order of surveillance, special requirements, previous did not attends (DNA), then initial screens. Demand for screening venues continues to be reviewed on a monthly basis throughout the year.

Screening is offered at 39 static venues usually hospitals, primary care centres, health centres and GP practices. Mobile facilities are not used. The service does not offer evening or weekend clinics. The service will regularly review their venues to assess access restrictions and has recently introduced some new clinic locations following a review of the more poorly attended clinics.

The service sends out invitations 3 weeks prior to appointments. A text reminder is sent the week before the appointment. The use of text reminders prior to the screening examination is against national guidance due to potential breach of information governance (IG), however it was implemented following a recommendation from commissioners as part of the 2014 to 2015 CQUIN. Mobile numbers are obtained from the NHS Spine or from men who opt-in to the hospital text service. Monthly patient surveys indicate men like the text reminder service and the screening service has not received any complaints.

The text reminder service has been approved by the GHFT Information Governance Lead and is used by all the hospital outpatient departments. The service should check with the IG Lead that the previously agreed arrangements are still valid.

The service complies with national guidance for men who do not attend (DNA). Men will receive a second appointment and if they do not attend 2 consecutive appointments, a letter is sent to the GP advising the man did not attend. The service will review how many DNA patients they have and plan the clinics to suit demand, the service will also double book DNA slots in areas of known low uptake.

Men within the surveillance programme are managed in line with national guidance. All surveillance men are invited for screening in a timely manner and the service consistently meets the relevant surveillance pathway standards.

The initial nurse consultation for surveillance men is carried out on the telephone due to the large geographical area and is usually booked within 7 days of the patient's AAA being detected. Subsequent surveillance appointments are face to face with the men so health and lifestyle advice can be monitored.

The service has translation facilities for non-English speaking patients and patients using sign-language. Language Empire/BSL can be pre-booked for appointments if the service is advised. If the patient presents at clinic without prior notification and translation is needed, Language Empire can be contacted via telephone.

As part of the service development work from the Health Equity Audit plan, GHFT employs a 0.6wte Health Improvement Practitioner (HIP). The HIP has identified areas (via the HEA, publicity work with CCGs/GPs and the inequalities plan) where men are less likely to use English as their first language and attend screening. Information leaflets in other languages and promotional videos have been supplied to those GP practices. Weblinks to information in other languages are available through the GHFT website.

Recommendation 3

The screening test – accuracy and quality

Image QA and feedback

Screening is performed in line with national guidance.

Appointments are booked per screening session (morning and afternoon) and clinics run with either 2 or 3 technicians. Clinic attendance rates are continually reviewed to facilitate a minimum 80% attendance at each venue.

If there are 2 technicians they alternate between consent and scanning (4 scans maximum then swap to consent to reduce the risk of repetitive strain injury). If there are 3 technicians, they alternate duties and work through the lunch period so there is no break in clinic continuity. If only 1 technician is available due to unforeseen circumstances, the Nurse Practitioner or Programme Coordinator will attend the clinic

The GHFT lone worker SOP was submitted as evidence however, it is acknowledged that Screening Technicians do not lone work so the policy is rarely applied for clinical staff. The Health Improvement Practitioner will attend health promotion events as a lone worker and will follow the SOP and be issued with a Trust mobile phone for emergency use.

Consent to transfer patient information from the GP practice to the service is in line with national guidance. Consent is also gained verbally prior to the examination and the outcome recorded within SMaRT. The consent process follows the national pre-screening checklist.

When an aneurysm is detected it is measured by 2 screening technicians to ensure accurate measurement. A consensus is reached before the measurement is recorded in SMaRT. The technicians will measure blood pressure (BP), height, weight and body mass index (BMI), the results of which are used by the Nurse Practitioner for surveillance follow-up. There are a number of well documented processes for the technicians to refer to.

Technicians verbally inform men of their results during the appointment. Initial normal result letters are generated and posted the day after the appointment by the screening administration team following completion of the right results audit.

Surveillance men’s result letters are sent out within 7 days by the nurse practitioners, following the nurse practitioner review of compliance to health promotion, lifestyle advice and observations in clinic.

The nurse will monitor patient BP readings, discuss smoking cessation, cardiovascular risk, healthy lifestyle and any queries regarding the rate of growth. Patient results are shared with

the GP. As the Nurse Practitioner is accredited to scan, she will also double-scan AAAs to verify the measurement if supporting a clinic.

All result timescales are reviewed through the monthly letter audits and any exceptions to local timeframes are discussed at monthly Senior Management Meetings.

The SMaRT alerts dashboard is used to provide assurance that all men attending screening have a recorded result. Alerts are reviewed on a daily basis. If the number of alerts exceed 50, the Administration Coordinator and Programme Lead are notified. Specific alerts are allocated to certain individuals within the team, for example the Team Leader manages the DNA alerts.

Internal QA processes and failsafe

All screening technicians perform equipment QA under the supervision of the CST. At the time of the QA visit, the service had 3 trainee technicians at the semi-independent scanning stage.

QA feedback to technicians is provided by the CST and QA Lead, usually by email but can be phone or face to face. The CST and QA Lead are exploring options of introducing more face to face feedback sessions following feedback from Screening Technicians. Performance is monitored by image QA, non-visualisation rates and 4-monthly observation visits.

All screening test results are entered in to SMaRT and recorded on the paper clinic list. Both records are checked for error in conjunction with ultrasound images at the end of clinic to minimise incorrect recorded results. Any errors are recorded on a non-compliance spreadsheet and the audit findings discussed during the monthly MDT meeting.

Due to the ongoing incident with the Esaote scanners (page 18), every transferred image is checked to ensure complete transfer and to record if there are any concerns with image quality or corruption.

Referral

Men are verbally informed of their results by the screening technician at their appointment in line with national guidance.

The service has a process for the management of non-visualisation (non-vis) patients and there is a specific 'referral to medical imaging for non-visualised patients' SOP. National guidance is followed and the service has a consistently low non-vis rate at 0.2% (achieveable threshold <1.0%). The service attributes the low non-vis rate to having 3 technicians in a number of clinics and is looking to undertake an audit on patient comfort during the screening examination.

As screening technicians work in pairs or threes, there is an opportunity for a second or third review of the aorta during the patient's appointment. If the man remains non-vis after 2 separate appointments (reported during interview to be mainly attributed to high BMI), the patient will be referred directly to the vascular unit by the Programme Lead or CST via non-medical referrer request cards.

The non-vis direct referral protocol has been agreed by all vascular units however, some service level agreements (SLAs) remain outstanding. The programme should ensure these SLAs are finalised and implemented for all units.

Referral letters for men with a AAA >5.5cm are sent to the vascular unit within 24 hours by the Administration Coordinator. There is a named link contact at each vascular unit.

Referral units are mapped by GP practice however, patients can choose an alternative vascular treatment centre if requested. The Administration Coordinator has a whiteboard in the office with patients listed and their target dates to track appointment progress. This is good practice.

The national pathway standard for men appropriately referred within 2 weeks is being met at 94.4% (acceptable threshold >90%). The pathway standard for men appropriately referred and fit for intervention was met at 67.6% (acceptable threshold >60%).

The service commented during interview that the 67.6% figure for 1 April 2017 to 31 March 2018 was lower than previous years but they had noticed more patients with comorbidities requiring fenestrated endovascular repair (FEVAR).

Any unexpected or incidental findings have representative images taken (in 2 planes) and the man informed of his aortic measurement and subsequent pathway. The man is informed that images will be reviewed by the CST in a QA process and his result will be shared following this

process. There is a local SOP in place to support this. The QA Lead is a Consultant Radiologist and can provide expert opinion where incidental findings have been identified.

Iliac aneurysms were discussed during interview; these are occasionally detected and referred as an incidental finding in line with national guidance. The technicians do not measure iliac aneurysms but will place a calliper on the area for the QA Lead to measure. The service does not undertake iliac artery surveillance.

Recommendation 4

Failsafe

The service uses SMaRT internal processes, a whiteboard system and a number of local spreadsheets to monitor referrals, capacity planning, tracking surveillance patients, patient deaths, incidental findings and non-visualised cases.

The Administration Coordinator reports a good working relationship with the named contacts at each referral centre, contacting each referral centre on a weekly basis for treatment updates, which in-turn supports the flow of patient information. If potential delays are expected, the Clinical Director will contact vascular consultants directly to expedite treatment.

Intervention and outcome

Vascular services within the Cumbria and North East region are part-way through a service reconfiguration which will be complete by May 2019. The reconfiguration will see Sunderland Royal Hospital and the University Hospital of North Durham merging, reducing the number of referral centres from 5 to 4 units.

The ratio of endovascular repair (EVAR) to open surgery varies significantly between the vascular centres. All Trusts offer open and EVAR, with the majority of complex cases being referred to the Freeman Hospital. The vascular reconfiguration should distribute the number of referrals more evenly across the network.

Currently, men with large aneurysms (5.5cm or greater) are assessed and referred for treatment at 5 vascular treatment centres:

- Sunderland Royal Hospital, City Hospital Sunderland NHS Foundation Trust
- Freeman Hospital, Newcastle upon Tyne Hospitals NHS Foundation Trust
- James Cook University Hospital, South Tees Hospitals NHS Foundation Trust
- The Cumberland Infirmary, North Cumbria University Hospitals NHS Trust
- University Hospital of North Durham, County Durham & Darlington NHS Foundation Trust

Interviews were conducted with the Clinical Director and a consultant vascular surgeon from each of the 5 referring centres. All consultants were engaged and supportive towards the service.

There are 30.0wte consultant surgeons in total across the 5 treatment centres; some centres are below the required number of surgeons recommended for a vascular centre but are in the process of recruitment or the shortfall may improve through the vascular service re-configuration. Consultants from the Freeman Hospital reported during interview that while they have streamlined processes to enable them to also provide a tertiary complex service, they are under significant pressure as they are well below the required number of consultants per 100,000 population.

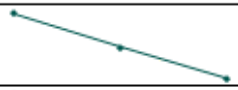
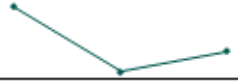
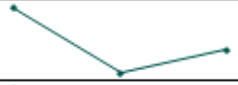
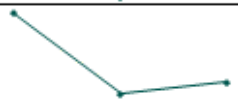
All referrals are discussed during hospital MDT meetings and any false positives/false negatives are discussed with clinical and radiology leads. MDT meetings are well attended with good documentation (minutes submitted as evidence) and there is regular feedback to the Programme Coordinator. It is expected the MDT structure for Sunderland and North Durham vascular centres will change as the reconfiguration takes place.

Each of the consultants reported during interview that it can be difficult to meet the 8 week treatment timescale, however the service has successfully met the >60% achievable target since the 2016 to 2017 reporting year.

The majority of the 5 vascular centres have merged the management of screen and non-screen patients to further improve monitoring for all patients.

Appendix A: Data

Code	Standard	Thresholds		Performance			Trend	2017/18
		Acceptable	Achievable	2015/16*	2016/17	2017/18	15/16 to 17/18	Threshold attainment
1a	Percentage of eligible subjects who are offered an initial screen	≥90.0%	≥99.0%	99.9	100.0	100.0		Achievable met
1bi	Percentage of appointments offered within 6 weeks of annual surveillance appointments due	≥95.0%	100.0%	-	98.0	98.6		Acceptable met
1bii	Percentage of appointments offered within 4 weeks of quarterly surveillance appointments due	≥95.0%	100.0%	-	90.2	98.7		Acceptable met
2a	Percentage of eligible subjects who are tested: initial screen	≥75.0%	≥85.0%	77.8	80.4	82.8		Acceptable met
2bi	Percentage of annual surveillance appointments due where there is a conclusive test result within 6 weeks of the due date	≥85.0%	≥95.0%	-	90.2	90.1		Acceptable met
2bii	Percentage of quarterly surveillance appointments due where there is a conclusive test result within 4 weeks of the due date	≥85.0%	≥95.0%	-	90.9	90.3		Achievable met
3	Percentage of subjects not responding to first offer to whom a second offer is made within the screening year plus 3 months	≥90.0%	100.0%	99.2	99.5	97.0		Acceptable met
4a	Percentage of subjects offered screening who are tested: initial offer	≥75.0%	≥85.0%	77.8	80.4	82.8		Acceptable met
4bi	Percentage of annual surveillance appointments offered where there is a conclusive test within 6 weeks of the due date	≥90.0%	≥95.0%	-	92.0	91.4		Acceptable met
4bii	Percentage of quarterly surveillance appointments offered where there is a conclusive test within 4 weeks of the due date	≥90.0%	≥95.0%	-	94.1	91.5		Achievable met

Code	Standard	Thresholds		Performance			Trend	2017/18
		Acceptable	Achievable	2015/16*	2016/17	2017/18	15/16 to 17/18	Threshold attainment
5	Percentage of assessed images of acceptable quality	≥95.0%	≥99.0%	-	-	-		
6	Percentage inaccurate calliper placement determined by review of static images	≤2.0%	0%	-	-	-		
7	Percentage of screening encounters where aorta could not be visualised	≤3.0%	≤1.0%	0.41	0.30	0.20		Achievable met
8	Percentage of incomplete screening episodes	≤0.75%	≤0.20%	0.46	0.33	0.37		Acceptable met
9	Percentage of subjects with AAA ≥5.5cm referred within one working day	≥95.0%	100.0%	100.0	100.0	100.0		Achievable met
10	Percentage of referred men subsequently found to have an aorta <5.5cm on confirmatory CT or MRI scan	≤3.0%	≤1.0%	0.0	2.0	0.0		Achievable met
11	Percentage of subjects with AAA ≥5.5cm seen by vascular specialist within 2 weeks	≥90.0%	≥95.0%	100.0	91.8	94.7		Achievable met
12	Percentage of subjects with AAA ≥5.5cm deemed fit for intervention and not declining, operated on within 8 weeks	≥60.0%	≥80.0%	78.3	63.6	65.7		Acceptable met

Appendix B: References

ONS 2017 midyear LA population estimates: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland

Men aged 65 years and over by ethnic group from NOMIS using the 2011 census data: https://www.nomisweb.co.uk/

IMD2010 scores for Local Authorities: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010

NHS public health functions agreement 2018-19. Service specification No.23 NAAASP: https://www.england.nhs.uk/publication/public-health-national-service-specifications/

Essential elements in developing an Abdominal Aortic Aneurysm (AAA) screening and surveillance programme (standard operating procedures): https://www.gov.uk/government/publications/aaa-screening-standard-operating-procedures

NAAASP Protocol for reporting deaths: https://www.gov.uk/government/publications/aaa-screening-protocol-for-reporting-deaths