



*UK National
Screening Committee*



Screening Programmes

Abdominal Aortic Aneurysm

NHS AAA Screening Programme Update, and how screening will be affected by NICE recommendations November 2018

Jonathan J Earnshaw
Clinical Lead



NAAASP – first 10 years

- Implementation 2009-2013
- Quality assurance: first cycle 2014-2019
- Programme optimisation
- Programme outcomes
- Looking ahead.....

Headline results for England Screening Programmes

November 2018

- 1,898,012 men invited
- 1,477,076 men screened (78%)
- Over 2 million men invited
- Prevalence of AAA 1.5 million men screened
- Almost 14,000 men with large AAA
- Some 4465 men with large AAA referred
- Over 3444 men referred for treatment

2 million men invited
1.5 million men screened
5000 men with large AAA referred

results available at <https://www.gov.uk/topics/population-screening-programmes/abdominal-aortic-aneurysm>

Hear all about it: AAA screening's successes and challenges

Jonathan Earnshaw, 8 November 2018 — General Information

Our latest PHE Screening blog post is an [audio blog](#) recorded by NHS Abdominal Aortic Aneurysm (AAA) Screening Programme clinical lead Jonathan Earnshaw.

About PHE
PHE Screening population score which are deliver These identify a people who may or a disease or c earlier treatment

Programme optimisation

- Extend surveillance intervals
- Improve uptake – equality and diversity project
- ?introduce surveillance for men with subaneurysmal aorta

Surveillance intervals

Draft NICE guidelines:

small AAA (3-4.4cm) every 2 years

medium AAA (4.5-5.4cm) every 3 months

Plan :

- start cohort year 2020/21
- move all men onto new schedule
- communication to men on old schedule

Equality and diversity programme

Aim to improve uptake by
5-10% in 2 years

Local reports

Local action

Share good practice

Eur J Vasc Endovasc Surg (2017) 53, 837–843

Editor's Choice — Inequalities in Abdominal Aortic Aneurysm Screening in England: Effects of Social Deprivation and Ethnicity

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²University Hospitals, Newcastle, UK
³Gloucestershire Hospitals NHS Foundation Trust, UK

WHAT THIS PAPER ADDS

This paper adds to existing literature, and confirms the adverse effects of social deprivation on uptake of AAA screening, and the decline rate in a population screening programme. It also confirms the increase in prevalence of AAA in deprived men, and the variation among different ethnic groups. Any efforts to improve uptake will require local action, taking into account local factors.

Objective: Population screening for abdominal aortic aneurysm (AAA) in men is currently ongoing in several countries. The aim was to examine the effects of deprivation and ethnicity on uptake of screening for abdominal aortic aneurysm (AAA) and prevalence of AAA.

Methods: This was a review of outcomes from a population screening programme using data collected contemporaneously on a bespoke national database. Men aged 65 in two annual cohorts (2013/14 and 2014/15) were invited for AAA screening. Attendance and prevalence of AAA (aortic diameter >2.9 cm) were recorded. Results were compared according to measures of social deprivation and recorded ethnicity.

Results: Some 593,032 men were invited and 461,898 attended for ultrasound screening; uptake 77.9%. Uptake was related to social deprivation: 65.1% in the most deprived decile, 84.1% in the least deprived; OR for least deprived 2.84, 95% CI 2.76–2.92, $p < .0001$. Men in deprived areas were more likely to actively decline screening: 6% versus 3.8% in the least deprived decile. AAA were twice as common in the most deprived compared with the least deprived decile: OR 2.1, 95% CI 1.77–2.27, $p < .0001$. AAA were more common in white British men than in black (OR 0.46, 95% CI 0.31–0.71) or Asian (OR 0.18, 95% CI 0.13–0.26) men. There was considerable local variation in all findings.

Conclusions: Social deprivation affects uptake of AAA screening in 65 year old men. Local factors are the most important determinants of uptake, so solutions to improve uptake must be designed at local, not national level.

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Keywords: Aortic aneurysm, Aneurysm screening, Social deprivation, Ethnicity

INTRODUCTION

The aim of the NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP) is to reduce the risk of death from ruptured abdominal aortic aneurysm (AAA) in men. Approximately 3,000 to 4,000 people die from the condition annually in England and Wales, concentrated mainly in men over 65 years of age.¹ Population screening of men in their 65th year commenced in April 2009, and was fully implemented in England in April 2013.² Similar programmes have also been implemented in Wales, Scotland, and Northern

Ireland. Men aged 65 are invited by standard letter to attend for a portable abdominal ultrasound scan as close as possible to their homes. Those with an abdominal aorta less than 3.0 cm in inner diameter are reassured and discharged; men with an aortic diameter 3.0–5.4 cm are offered regular ultrasound surveillance; men whose initial aortic diameter is greater than 5.4 cm, or whose aneurysms grow to that diameter during surveillance are referred to a vascular service for possible intervention. Men over 65 are not invited, but can refer themselves for screening at their local programme.

The beneficial effects of screening are maximised when uptake is high, and the test is acceptable to invitees. Screening programmes have a responsibility to ensure that information about the programme is easily and widely available to all the target population.³ Using available data to ensure equity of access and uptake is a fundamental part of the screening process.

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<http://dx.doi.org/10.1016/j.ejvs.2017.03.006>

Plan for QoL assessment partnership with SCHaRR

Systematic review of evidence

Project plan

- Use web-based tool – aPAQ-vasc
- All men invited to complete form before initial scan, and before every surveillance scan (service improvement)
- Add-on study: discrete choice experiment (research)

Pilot phase – spring 2019

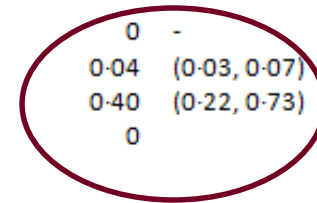
Optimal management of men in surveillance (n=18,000)

Circulation (2019, in press)

AAA rupture in surveillance

Screening Programmes

	Number of men	Ruptures (N)	Follow-up (person-years)	Incidence rate per 100 person-years (95% CI)
Overall	18,652	31	50,095	0.06 (0.04, 0.09)
Routinely invited	15,527	25	42,220	0.06 (0.04, 0.09)
Self-referred	3,125	6	7,876	0.08 (0.03, 0.17)
Initial aortic measurement				
Grouping 1				
3.0-4.4cm	16,430	20	46,576	0.04 (0.03, 0.07)
4.5-5.4cm	2,222	11	3,519	0.31 (0.17, 0.56)
Grouping 2				
3.0-4.9cm	17,883	28	49,349	0.06 (0.04, 0.08)
5.0-5.4cm	769	3	746	0.40 (0.13, 1.25)
Last known aortic measurement				
Grouping 1				
<3.0cm	-	0	1,713	0 -
3.0-4.4cm	-	13	41,788	0.03 (0.02, 0.05)
4.5-5.4cm	-	18	6,532	0.28 (0.17, 0.44)
5.5cm+	-	0	32	0 -
Grouping 2				
<3.0cm	-	0	1,713	0 -
3.0-4.9cm	-	20	45,594	0.04 (0.03, 0.07)
5.0-5.4cm	-	11	2,726	0.40 (0.22, 0.73)
5.5cm+	-	0	32	0



Men safe in surveillance in NAAASP
No need to change referral threshold

Deaths in surveillance

	Number of men	Deaths (N)	Follow-up (person-years)	Mortality rate per 100 person-years (95% CI)	
Overall	18,652	981	50,103	1.96	(1.84-2.08)
Routinely invited	15,527	802	42,226	1.90	(1.77-2.04)
Self-referred	3,125	179	7,877	2.27	(1.96-2.63)
Initial AAA measurement					
Grouping 1					
3.0-4.4cm	16,430	912	46,581	1.96	(1.83-2.09)
4.5-5.4cm	2,222	69	3,522	1.96	(1.55-2.48)
Grouping 2					
3.0-4.9cm	17,883	966	49,354	1.96	(1.84-2.08)
5.0-5.4cm	769	15	749	2.00	(1.21-3.32)
Last known AAA measurement					
Grouping 1					
<3.0cm		19	1,713	1.11	(0.71-1.74)
3.0-4.4cm		826	41,790	1.98	(1.85-2.12)
4.5-5.4cm		134	6,535	2.05	(1.73-2.43)
5.5cm+		2	33	6.02	(1.51-24.08)
Grouping 2					
<3.0cm		19	1,713	1.11	(0.71-1.74)
3.0-4.9cm		896	45,597	1.97	(1.84-2.10)
5.0-5.4cm		64	2,729	2.35	(1.84-3.00)
5.5cm+		2	33	6.02	(1.51-24.08)

Mortality around 2%/annum

Causes of death in surveillance

AAA 3%

Cancer 31%

Vascular or cardiac 26%

Other (non cancer, non cardiac) 29%

Unknown 10%

Options for men in surveillance

- weight (BMI)
- smoking
- antiplatelet/statin
- blood pressure

Options for men in surveillance: prehabilitation

- breathing exercises
- fitness
- weight loss
- smoking

Nursing workshop: proposal

Nurse assessments

(i) 'fit for open repair'

(ii) cardiovascular risk reduction

All

Within 3 months of diagnosis (face to face)

Three months later (telephone)

Men with small AAA

Repeat above at intervals (? Every 2/4/6 years)

Men with medium AAA

Repeat annually + prehabilitation

Treatment by programme

April 2009 to March 2018

Percentage



Screening provider

■ % open 64-66
 ■ % open ≥67
 ■ % EVAR 64-66
 ■ % EVAR ≥67

NICE guidelines on AAA: draft, for consultation (1)

Tell all men aged 66 and over who have not already been screened about the NHS AAA screening programme, and **advise them that they can self refer**.

Encourage men aged 66 or over to self-refer to the NHS abdominal aortic 30 aneurysm (AAA) screening programme if they have not already been screened and they have any of the following risk factors: COPD, coronary, cerebrovascular or peripheral arterial disease, European family origin, family history of AAA, hyperlipidaemia, hypertension, they smoke or used to smoke.

Consider an aortic ultrasound for women aged 70 and over if AAA has not already been excluded on abdominal imaging and they have any of the following risk factors: COPD, coronary, cerebrovascular or peripheral arterial disease, European family origin, family history of AAA, hyperlipidaemia, hypertension, they smoke or used to smoke.

Draft NICE guidelines (2)

Endorse ITI method of ultrasound assessment

Offer surveillance with aortic ultrasound to people with an asymptomatic AAA:

every 3 months if the AAA is 4.5–5.4 cm

every 2 years if the AAA is 3.0–4.4 cm.

Draft NICE guidelines (3)

For people with unruptured AAAs meeting the criteria (for intervention), offer open surgical repair **unless there are anaesthetic or medical contraindications**.

Do **not** offer endovascular repair (EVAR) to people with an unruptured infrarenal AAA if open surgical repair is suitable.

Do **not** offer EVAR to people with an unruptured infrarenal AAA if open surgical repair is unsuitable because of their anaesthetic and medical condition.

Do **not** offer complex EVAR to people with an unruptured AAA if open surgical repair is a suitable option, except as part of a randomised controlled trial comparing complex EVAR with open surgical repair.

Do **not** offer complex EVAR to people with an unruptured AAA if open surgical repair is unsuitable because of their anaesthetic and medical condition.

NICE implications for NAAASP

- Don't start surveillance in men unlikely to be fit for open repair
- Monitor health of men in surveillance and discharge those who become unfit for open repair
- Consider improving health of men who are borderline fit for open repair

What is: 'fit for open repair'?

NAAASP 2019

Research Day 7th February 2019 (Newcastle)

Abstracts to Gerry Stansby (NAAASP research lead):

gerard.stansby@nuth.nhs.uk

NAAASP 2019

New clinical leads:

Akhtar Nasim (Vascular)

Tim Hartshorne (Imaging)



Thank you



Thank you

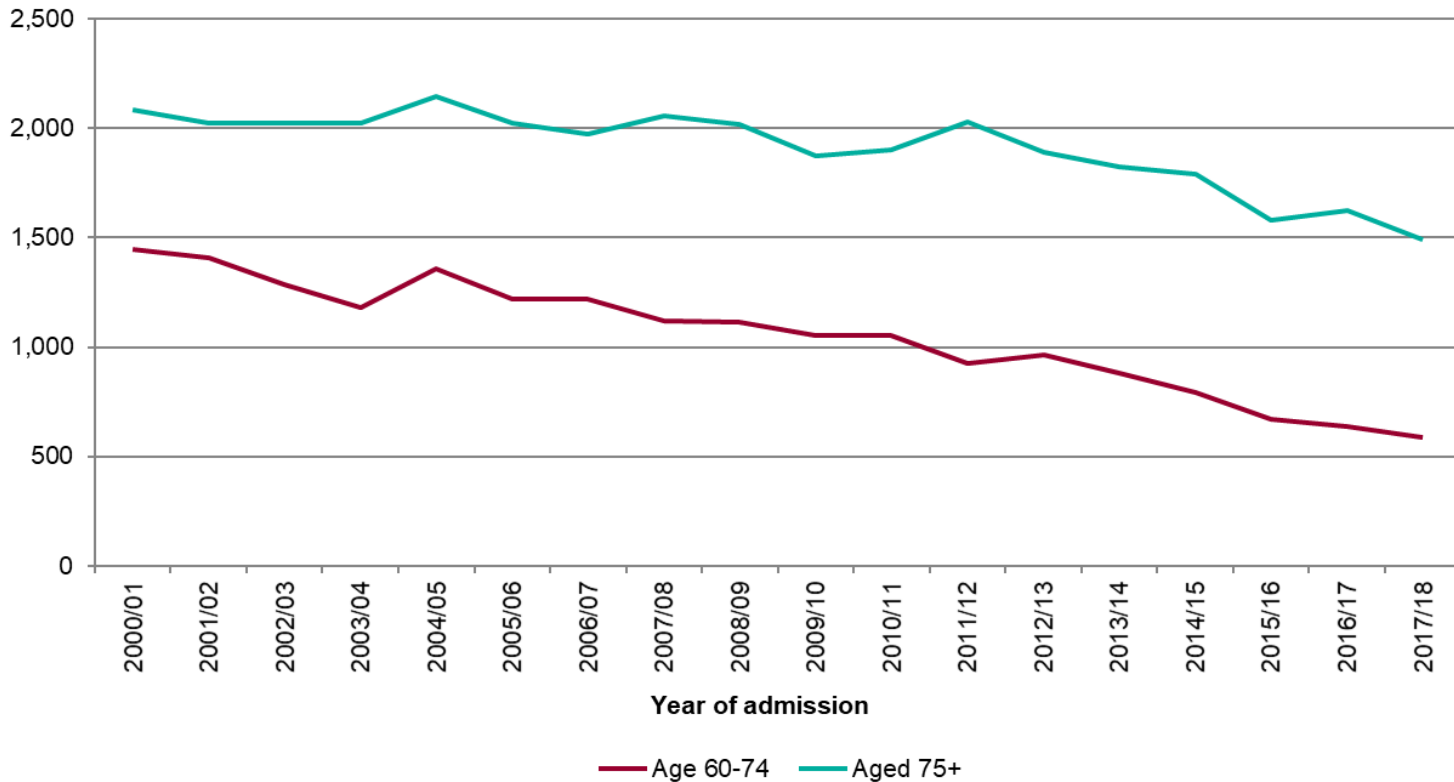


4-nations approach

Is AAA screening working?

Number of finished consultant episodes

Hospital admissions for rAAA (men and women)



Screening Programmes

A SIMPLE SCAN
COULD SAVE YOUR LIFE

