



Rural Screening for Abdominal Aortic Aneurysms

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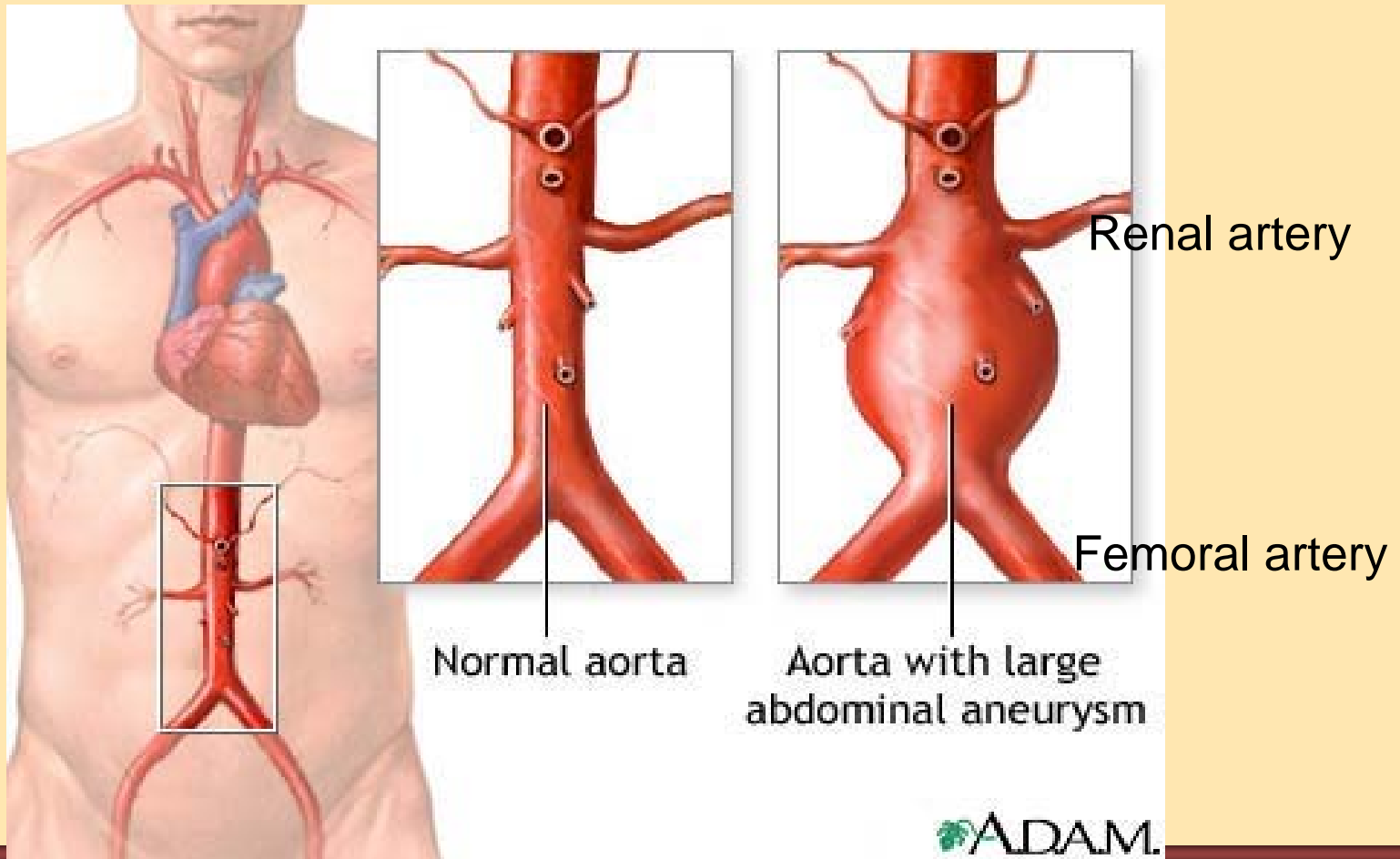
Rural Health



**GREATER WESTERN
AREA HEALTH SERVICE
NSW HEALTH**



Abdominal Aortic Aneurysm





Aim

- Identify silent abdominal aortic aneurysms (AAA), allowing definitive treatment.
 - To assess the feasibility of running a screening programme, for men aged 65-74 years.
 - Serve as a good demonstration of how to achieve this goal in larger-scale, even national, screening programs.
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Phase 1- community engagement

- A Community Round Table considered the issue and founded the Triple A Initiative.
 - Funds were raised through community activities.
 - Westmead Vascular Laboratory specialist vascular ultrasonographers for AAA screening.
 - Men aged 65-74 consulted through focus groups
 - Consulted with local GPs.
 - Policy makers at state and national level
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Phase 2 –recruitment & screening

- Recruitment informed by community input, electoral data and media, service clubs networks
- Lions Club volunteers provided assistance and transport (if required) to local men prior to and after screening.
- Physical and psychological status were assessed by limited medical and physical examination, assessment of AAA risk factors and the validated instruments HADS and MOS-SF36.



Phase 3 – overall evaluation & reporting

- Number of aneurysms detected
 - 6 month follow up of all those with an aneurysm plus a random sample of those without to document management and clinical outcomes.
 - Feasibility of screening
 - Assess psychological effects using HADS and MOS-SF36
 - Costs of the program
 - Effectiveness of the recruitment strategies
 - Accessibility of screening and treatment
 - Attitudes to screening programs
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1009 letters sent (310 1st round; 699 2nd) to men of all ages.

Deceased 10
Returned 4

995 letters

Refusals 5
AAA already diagnosed 13

977 letters;
545 accepted previously unscreened

12 walk ins

557 previously unscreened

515 men aged 65-74 previously unscreened



Health factors from AAA study (n= 515) or 2007 NSW Population Health Survey

	AAA	GWAHS	NSW
	Prev %	Prev % (95%CI)	Prev % (95%CI)
Current Smoking	11	7.1 (1.3-12.9)	11.4 (8.0-14.7)
Good to excellent self rated health	68*	75.1 (65.8-84.5)	77.3 (73.8-80.8)
Diabetes diagnosis	25	25.7 (14.1-37.2)	21.6 (17.3-25.9)
Overweight/obese	79*	81.1 (71.5-90.7)	69.8 (64.9-74.7)
Obese	32*	22.0 (11.9-32.1)	22.0 (17.6-26.4)
High BP diagnosis	58		38.1 [§] (35.2-41.0)

* Significantly different (p < 0.05) to NSW males aged 65-74

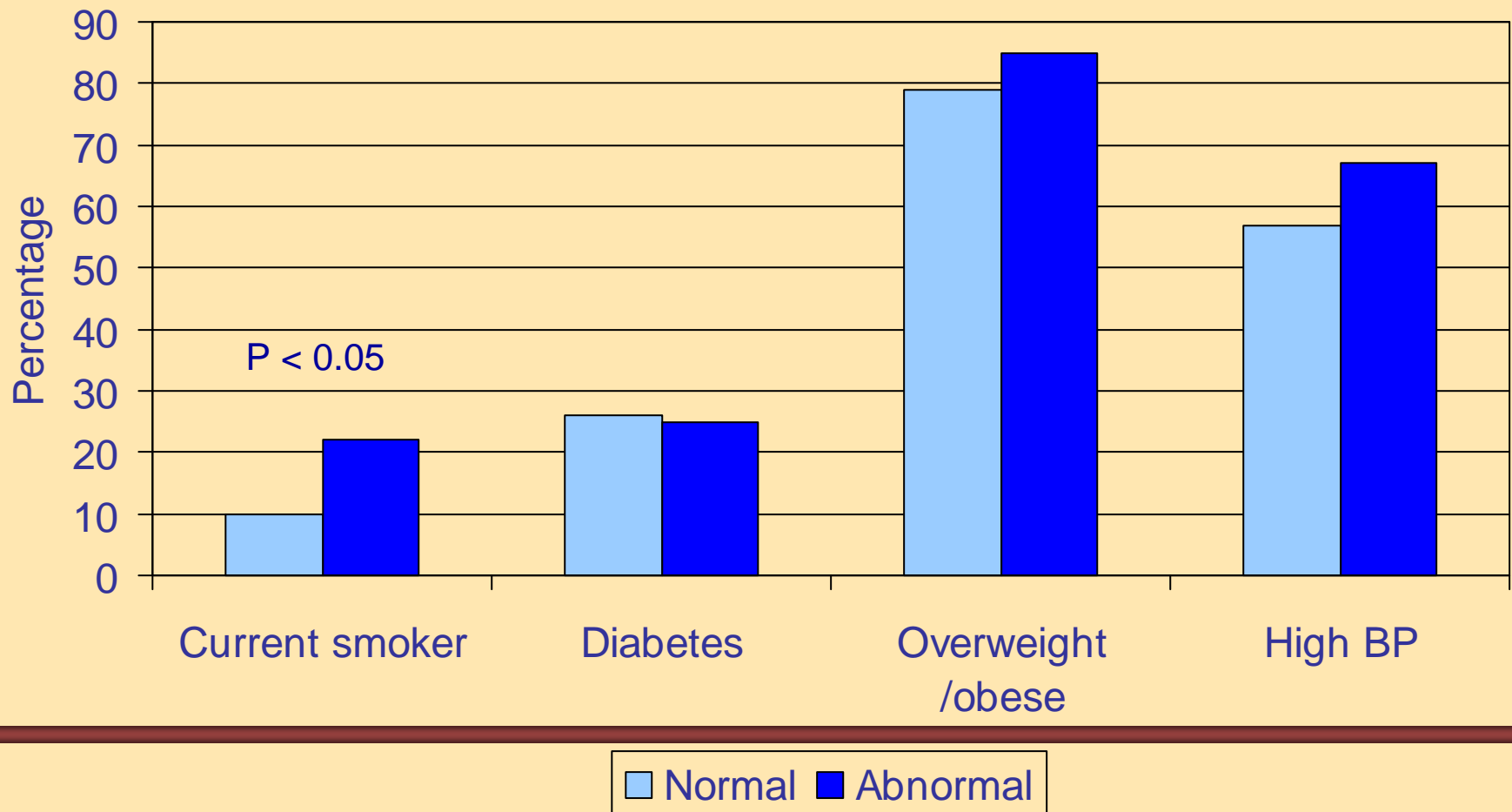


Males aged 65-74 previously unscreened by aorta diameter (n=515)

Aorta diameter	N	%	Outcomes
Normal (<2.6cm)	462	89.7	
Dilated (2.6-2.9 cm)	28	5.4	Follow up ultrasound in 2 yrs
Small (3.0-4.9 cm)	23	4.5	Follow up ultrasound in 12mo
Significant (≥ 5.0 cm)	2	0.4	Surgery



A comparison of risk factors between men aged 65-74 years by aorta diameter





Beliefs around screening in men by aorta diameter

	Normal aorta (n=462)		Dilated or aneurysm (n=53)	
	N	%	N	%
<2 yr Prostate screen	158	34	14	26
< 2yr Skin screen	71	15	10	19
Early detection cancer saves lives	141	31	8	15 #
Early detection cancer effective Tx	197	43	12	23 #
Early detection AAA saves lives	150	32	8	15 #
Early detection AAA effective Tx	200	43	13	25 #
Likely diagnosis AAA	83	18	11	20

significantly different p<0.05



Recruitment

- 50% Receiving a letter
 - 44% Prevention important
 - 34% Wanting to know if had an AAA
 - 25% Increasing age
 - 19% Media coverage
 - 17% Spouse encouraged me
 - 14% It was free
 - 10% Family history/ friend with AAA
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Estimated costs associated with 3 wks screening

Cost of equipment and technician's time

- \$47,666:

The cost of screening

- \$10,220.

Cost of the facility where the screening takes place

- \$1620:

Cost to the participant

- Average cost just under \$5.
- 84% estimated their travel time < 15 minutes, 11% between 15-30 minutes, 2% 30-60 minutes and 4% taking an hour or more to get to screening venue.



MOSF36 scores pre screen by aorta diameter.

MOSF 36	Normal aorta		Dilated or aneurysm	
	Mean	N	Mean	N
Physical functioning	41.3	436	40.4	51
Role physical	42.6	443	42.2	49
Bodily pain	46.0	443	45.4	49
General health	45.6	421	42.9	47
Vitality	50.6	432	49.8	49
Social functioning	48.9	444	47.2	49
Role emotional	45.4	442	44.0	50
Mental Health	51.6	430	49.6	50



HADS scores pre screen by aorta diameter

	Depression				Anxiety			
	N#	%	N*	%	N#	%	N*	%
Normal	8	2	0	0	153	35	15	33
Mild	44	10	5	11	185	43	24	52
Moderate	349	81	33	73	84	19	7	15
Severe	32	7	7	16	11	3	0	0
Total	433	100	45	100	433	100	46	100

AAA screened men with normal aorta

* AAA screened men with an enlarged aorta



Lessons Learned

- The community can be an effective driver for innovation in health services.
 - Form and maintain robust partnerships.
 - Frame the project within a population health approach.
 - Phased implementation allowed review and improvements.
 - Realistic administrative assistance must be included in the budget.
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Future scope

- Analysis of 6 month follow up from 2nd screening
 - AAA screening referred by DOHA to Subcommittee
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