

How do the screening rates for Abdominal Aortic Aneurysm at Mountainside Family Practice Group compare to the national average?

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INTRODUCTION

- Abdominal aortic aneurysm (AAA) is defined as dilation of the abdominal aortic to a diameter of at least 3 cm or 1.5 times normal size.
- AAA affects 1.4% of the U.S. population with around 10,000 deaths annually to AAA rupture with a mortality rate of 80%.
- USPSTF recommends a one-time AAA ultrasound screening for all men aged 65 to 75 years who have ever smoked.
- Screening is estimated to increase life expectancy with an average gain of 131 life years per 1,000 people screened for AAA compared to 95 to 128 life years per 1,000 women for breast cancer screening.
- National screening average is about 1.4% based on Center of Medicare and Medicaid Services data.

PURPOSE

- This study aims to evaluate the AAA screening rate at Mountainside Family Practice Group (MFPG) compared to the U.S. national average, while analyzing other variable factors that could be associated with increased risk of developing AAA.

HYPOTHESIS

- As an ACGME-accredited family medicine residency program and a resident-run clinic, our MFPG's screening rate will be higher than the U.S. national average of 1.4%

METHODS

- A retrospective chart review study using data from MFPG's electronic medical record from July 2021 to December 2021.
- Data was collected and analyzed for screening rate of AAA in eligible patients who completed abdominal ultrasound based on USPSTF guidelines.
- Abdominal ultrasound reports were analyzed for positive AAA and abdominal aortic size in correlation to age, smoking status, obesity with BMI > 30, diabetes, and COPD.
- One-sample t-test and chi-square test were used for data analysis.

RESULTS

Table 1. AAA Screening Rates

	MFPG	Medicare and Medicaid
Eligible Patients	73	6,630,954
AAA Screening Rates	10.90%	1.40%
Difference	9.50%	
95% CI	4.2177% to 18.6916%	
Chi-square	47.687	
DF	1	
P	< 0.0001	

Table 2. Correlation between Abdominal Aorta Size and Age

	Age	Abdominal aorta size (cm)
Age	1	
Abdominal aorta size (cm)	-0.529256124	1

Table 3. Abdominal Aorta size in correlation to variable factors

	N	Median	Mean	SD	p	95% CI's
Active Smoker	4	1.95	2.025	0.434933	1	1.251 14.749
Former Smoker	4	2.05	2.075	0.386221		
Obese	2	1.7	1.7	0.141421	0.1798	0.1552 11.8448
Not Obese	6	2.2	2.166667	0.36697		
Diabetes	3	1.8	2	0.43589	0.8808	0.9653 14.0347
No Diabetes	5	2.1	2.08	0.396232		
COPD	2	2.2	2.2	0.565685	0.5024	0.1552 11.8448
No COPD	6	1.95	2	0.357771		

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DISCUSSION

- Although the screening rate at MFPG was 10.9%, significantly above the national average of 1.4%, continued work is needed compared to other resident-run clinics with a screening rate of 12.5% and 36.7%.
- We did not find a positive AAA or any statistically significant correlation between abdominal aorta size and variable factors, likely due to the low prevalence of AAA and low number of patients in this study.
- Ten eligible patients had ultrasound ordered but they were not available in the patient's chart that could have increased the screening rate of MFPG to 24.6%.
- Possible reasons include barriers related to the patient: cost, transportation, or lack of radiographic availability.
- Other reasons could be due to failure of ultrasound reports sending to MFPG or the faxed reports failed to be scanned into the patient's chart.
- Methods to increase the screening rate include assessing for smoking history and screening eligibility during office visits, sending electronic reminders to residents and patients, adding AAA screening questions to check out forms, and discussing AAA screening during quality measure huddles.

CONCLUSION

- This study demonstrated that the AAA screening rate of MFPG was significantly better than the U.S. national average based on Center of Medicare and Medicaid Services data.
- Future research projects should examine the effects of interventions (e.g., the checkout form, quality measure huddle, mailed reminder, resident follow-up on overdue ultrasound orders) on the AAA screening rate at MFPG.