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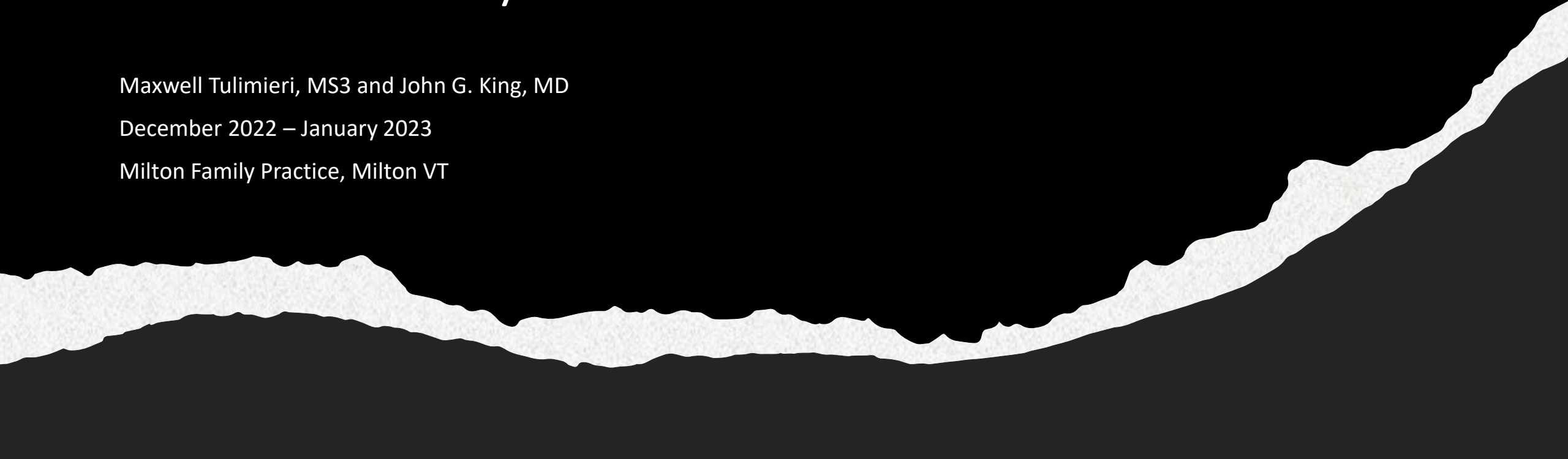
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Current Landscape of Screening for Abdominal Aortic Aneurysms in Females

Maxwell Tulimieri, MS3 and John G. King, MD

December 2022 – January 2023

Milton Family Practice, Milton VT



The Problem

- Females are under-screened for Abdominal Aortic Aneurysms (AAAs)
 - The USPSTF 2019 AAA screening guidelines give a I recommendation for females 65-75 who smoke¹, yet the Society for Vascular Surgery (SVS) highly recommends with strong evidence a 1-time US screening for men or women 65-75 with a tobacco history²
 - The USPSTF relies solely on randomized control trials, and the 5 they used only included 9,342 females with the rest of the 190,000 patients being males³
 - The SVS will use registry data and population level studies, showing that certain subpopulations of females have similar AAA rates to men³
 - Despite this, not all insurance companies cover AAA screening in females without a tobacco or AAA family history^{3,4}
- AHEC area:
 - Interprofessional Education and Medical Practice Transformation

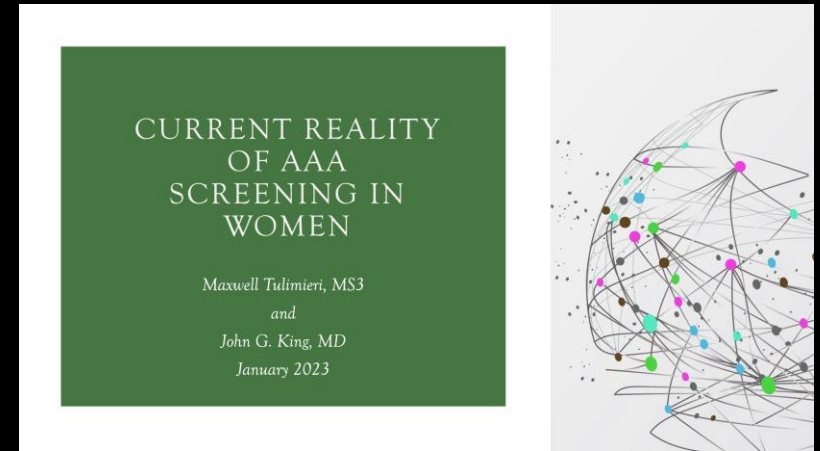
Cost

- Abdominal ultrasound (US) costs around \$53, and using Markov modeling this would indicate it is cost effective if there is a population prevalence of 0.5%⁴
 - All the following carry a greater than 1% prevalence with additive effects (1=1%, 2=3.4%, 3=6.8%):
 - Age > 65, Male sex, Smoking, Family history of AAA, COPD, Atherosclerotic cardiovascular disease, HTN, HLD
 - However, billing estimates from UVMHC's Vascular Lab suggests that a screening US cost can range from \$650 for those insured to a cash discounted \$350 for those uninsured
- "Although AAA prevalence is lower in women, the rate of rupture and overall life expectancy are higher, which suggest that screening may be more cost-effective in women"²
- In 2014, CMS started covering AAA screening for females with a family history of AAA⁴ but not for the other conditions listed above

Community Perspective

- Dr. John G. King, MD – Family Practice doctor in Milton, VT
 - Regarding AAA screening, “I don’t know anyone else [specialists] who orders it” suggesting this responsibility falls on Primary Care Physicians
- Will Farmer – Tech Director of the UVMHC Vascular Lab
 - “Our [AAA] screening numbers are smaller than they should be”
 - When asked to roughly estimate the population screened, he stated the vascular lab “... definitely sees more men [than women]”

Intervention and Methodology



- In office education

- Voice recorded 9-minute PowerPoint presentation regarding guidelines, data, and insurance coverage of AAA screening in women
- Anonymous short survey after video regarding information, quality, and suspected integration into practice
- Benefits
 - Ensures teaching information's longevity and ability to return to presentation after student leaves
 - Anonymous survey decreasing biased responses
- Drawbacks
 - Presentation may lack the engagement of live in office presentation
 - No print materials provided to hang in office space

Results/Response

- 50% of providers stated they have already run into instance where they felt AAA screening was warranted in a female, but they either feared denial or experienced complete insurance denial of a screening US
- 100% of providers found the presentation informative
- 50% of providers said they knew most of the information, but a small amount was new, and the other 50% said they knew a little of the information but most was new
- 100% stated they will use some information from the presentation moving forward
- Constructive feedback was mostly around wishing there was more emphasis on the risk of screening as well as some numbers on risks

Evaluation of Effectiveness/Limitations

- Effectiveness:
 - Effective in addressing a problem that some providers have faced, providing new information that providers did not previously know, and useful enough information to integrate into future practice
 - Based on opinion of $\geq 50\%$ of physicians via anonymous survey
 - Ineffective in providing enough details on the risks of increasing screening
- Limitations:
 - Unable to compare in office rates of AAA screening in women before and after presentation
 - Responses are not bias free as both preceptors and student will evaluate each other and the end of the clerkship, though anonymous
 - Unable to work with billing or insurance personnel to obtain more detailed information regarding billing, coverage, and cost to patient

Recommendations for Future Projects

- Based on provider feedback: provide a more in-depth perspective into the risks of increasing AAA screening in females
- Retrospective study to see provider's rates of AAA screening before and after presentation (1/17/2023)
- Retrospective study to see rates of AAA screening US insurance denials and how providers/patients handled the denials

References

1. "Screening for Abdominal Aortic Aneurysm: Recommendation Statement." American Family Physician, 15 May 2020, <https://www.aafp.org/pubs/afp/issues/2020/0515/od1.html>.
2. Chaikof, Elliot L., et al. "The Society for Vascular Surgery Practice Guidelines on the Care of Patients with an Abdominal Aortic Aneurysm." Journal of Vascular Surgery, vol. 67, no. 1, 2018, <https://doi.org/10.1016/j.jvs.2017.10.044>.
3. O'Donnell TFX, Schermerhorn ML. Abdominal aortic aneurysm screening guidelines: United States Preventative Services Task Force and Society for Vascular Surgery. J Vasc Surg. 2020 May;71(5):1457-1458. doi: 10.1016/j.jvs.2020.01.054. PMID: 32334726.
4. O'Donnell TFX, Landon BE, Schermerhorn ML. The case for expanding abdominal aortic aneurysm screening. J Vasc Surg. 2020 May;71(5):1809-1812. doi: 10.1016/j.jvs.2019.10.024. Epub 2019 Dec 9. PMID: 31831309.

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Consented

- Name: John G. King, MD
- Name: Will Farmer

Did NOT Consent

- Name: N/A
- Name: N/A