



MICHIGAN MEDICINE
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Introduction of a Universal HIV Screening Electronic Health Record (EHR) Alert at a Midwest Academic Health System

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Background

HIV testing is recommended by the United States Preventative Services Task Force (USPSTF) for patients aged 15-64 at least once in their lifetimes.¹ Screening, however, has lagged behind this recommendation. In Michigan, 16% of people living with HIV are undiagnosed, accounting for an estimated 40% of transmission.^{2,3}

Methods



We performed an analysis of the current state of HIV screening at three university-based clinics serving counties with 2020 HIV prevalence from 51/100,000 to 176/100,000.



We conducted an electronic survey of primary care providers inquiring about their awareness of universal screening and barriers to screening.



Based on analysis of survey data, we implemented an EHR alert for universal HIV screening for patients aged 15-64 during health maintenance exams.



We used odds ratio to compare the proportion of false positives vs true positives pre- and post-intervention. We used control chart methodology to evaluate the effect on the total HIV tests ordered across the institution.

Results

Table 1. Survey Response Rate

	Residents	Attendings
Respondents	97 (57%)	29 (18%)

Figure 1. Common Reasons for Not Performing Universal HIV Screening

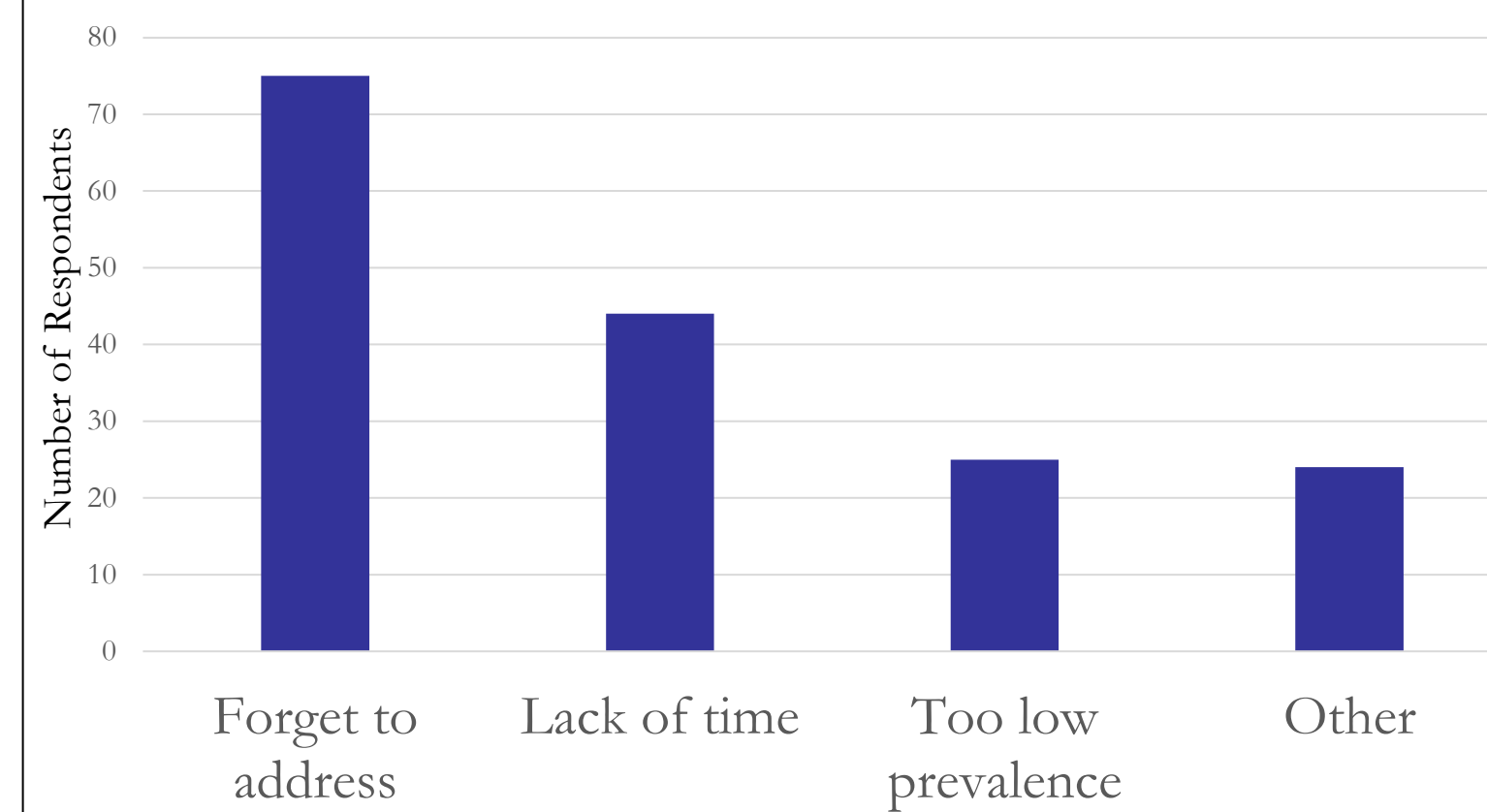


Figure 2. Current State of HIV Screening: January 2020

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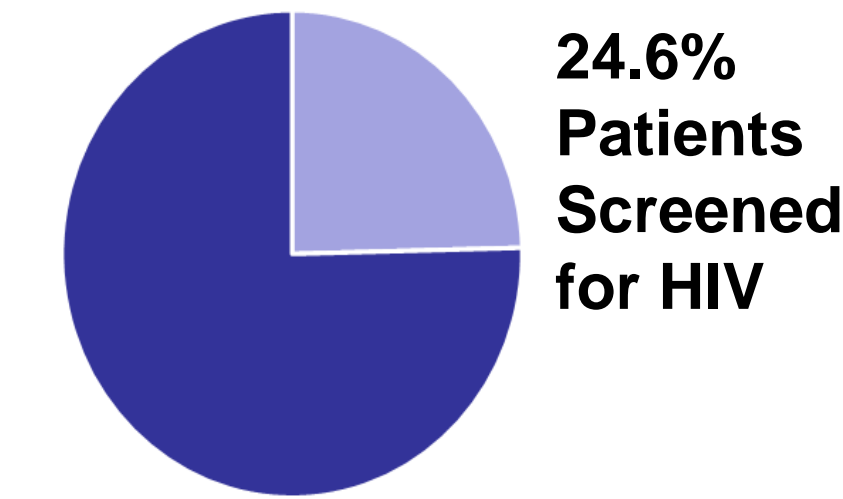


Figure 3. Provider Knowledge of USPSTF HIV Screening Recommendations

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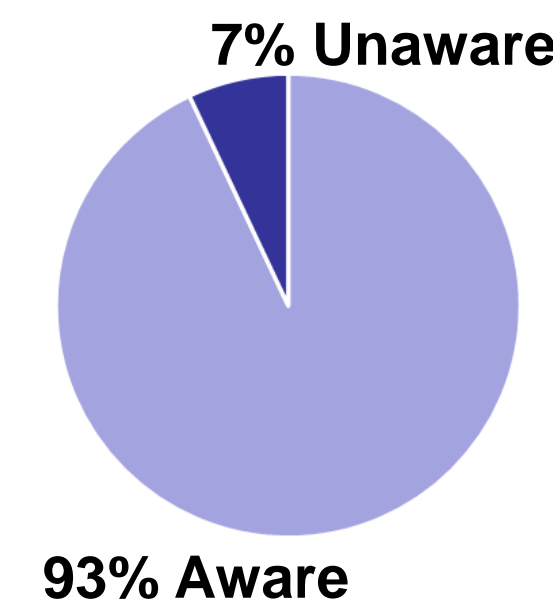
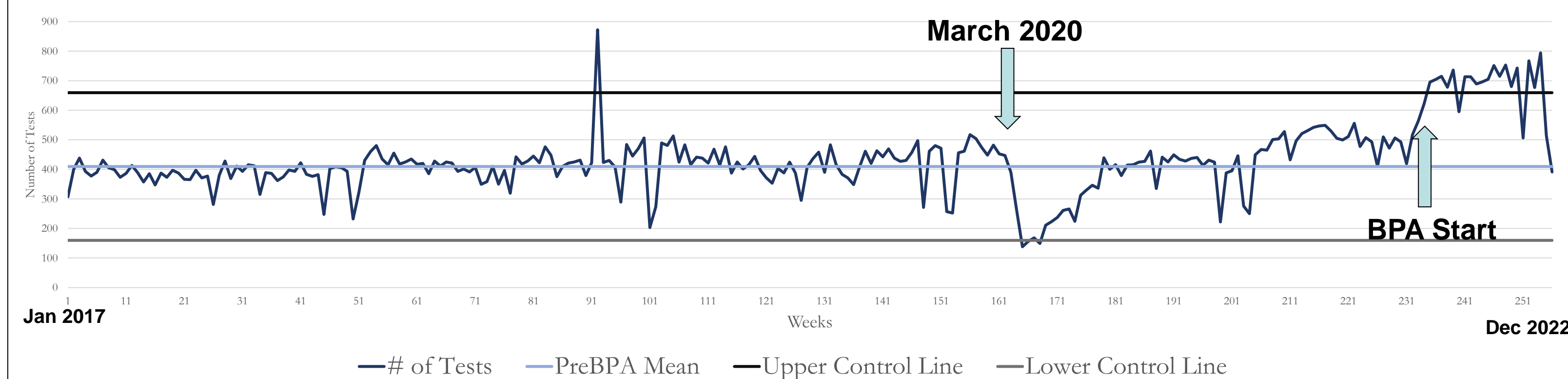


Figure 4. HIV Tests Ordered Institution-wide, 2017-2021



Results

Table 2. Institution-wide HIV testing 2017-2021

Year	Total Tests (n)	False positive (n)	True Positives (n)
2017	19785	38	67
2018	22156	26	95
2019	18918	34	64
2020	23761	37	65
2021 PreBPA	15120	22	46
2021 PostBPA	14930	24	20*

*Statistically significant decrease in proportion of true positives to false positives post-BPA compared to pre-BPA

Conclusion

Resident and attending internal medicine physicians are aware of USPSTF recommendation for universal screening yet patients lacked evidence of prior HIV testing. Implementation of an automated HIV screening EHR reminder increased HIV screening. The proportion of true positive tests decreased, likely due to the low prevalence of HIV in our community.

References

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