Enhancing Depression Screening Rates: A Prospective Quality Improvement Analysis

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INTRODUCTION

- The American Academy of Pediatrics advocates for annual universal screening of individuals aged 12 and older,[1] while the US Preventive Services Task Force recommends depression screening for the general adult population (B recommendation)[2].

- Depression ranks among the primary causes of disability in individuals aged 15 and above, leading to higher mortality rates from suicide and hindering the management of other health conditions.[3]

- According to a recent systematic review and meta-analysis, there is a prevailing upward trend in depression prevalence over time[4]. A national research panel indicates an estimated 30% lifetime risk for experiencing a major depression episode among adults[5].

- Recent research sheds light on the underdiagnosis of depression in primary care settings.[6] One study conducted in Brazil revealed a prevalence of 63.6% for depression underdiagnosis.[7]

- **SMART Aim:** To enhance depression screening rates in our healthcare setting by 10% over two months with a long-term organization goal of 20%.
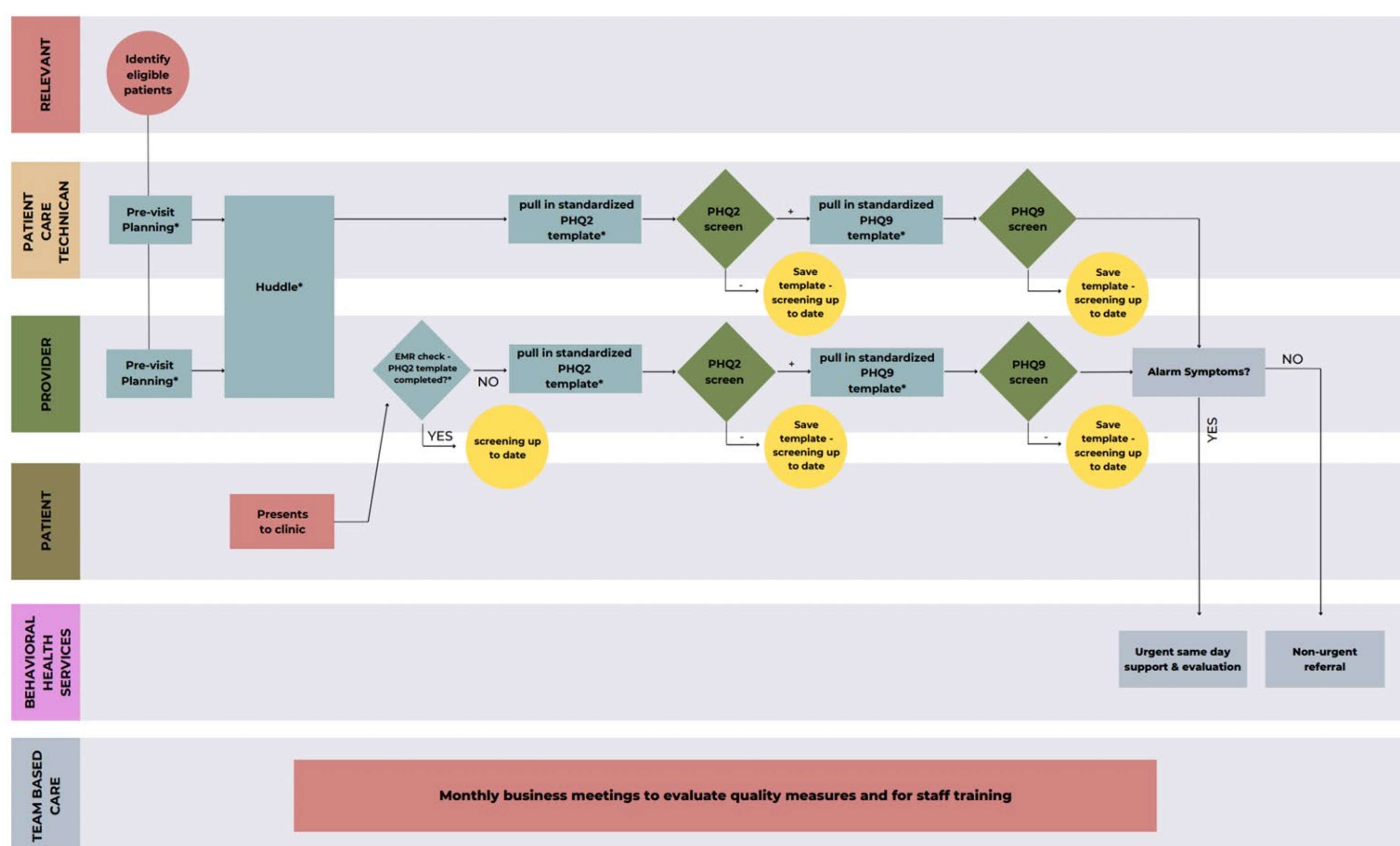
METHODS

- A dedicated team for improving Depression Screening Rates was formed to analyze the screening process and identify areas for improvement. A swim lane diagram helped visualized the ideal flow (Figure 1).

- An impact-effort matrix (Figure 2) was utilized in parallel with the swim lane diagram to prioritize workflow interventions that are low-effort, high impact, including utilization of a standardized screening tool (PHQ-2) in the electronic health record as a SMART form, individual pre-visit planning as well as daily huddles between providers and patient care technicians (PCTs), and checking for completion/saving of templated forms in the EMR during the visit even if eligible patients were not initially identified by our digital analytical health platform tool (Relevant).

- Initial registry data over 1 year intervals at Sleepy Hollow Open Door Family Medical Center (SHODFMC) was reviewed to establish baseline depression screening rate and to monitor rate changes every month.

- Screening rates/goals, process flow, and interventions were reviewed with all organizational members during monthly meetings (Figure 4).

- Inclusion Criteria: patients aged 12 years and older and screened using an age-appropriate standardized depression screening tool, and, if positive, for whom a follow-up plan is documented on the date of the positive screen.

- Exclusion Criteria: patients with an active diagnosis for depression or a diagnosis of bipolar disorder

RESULTS

FIGURE 1: SWIM LANE DIAGRAM IDENTIFYING AREAS TO IMPROVE DEPRESSION SCREENING RATES, HIGHLIGHTED WITH ASTERISKS*
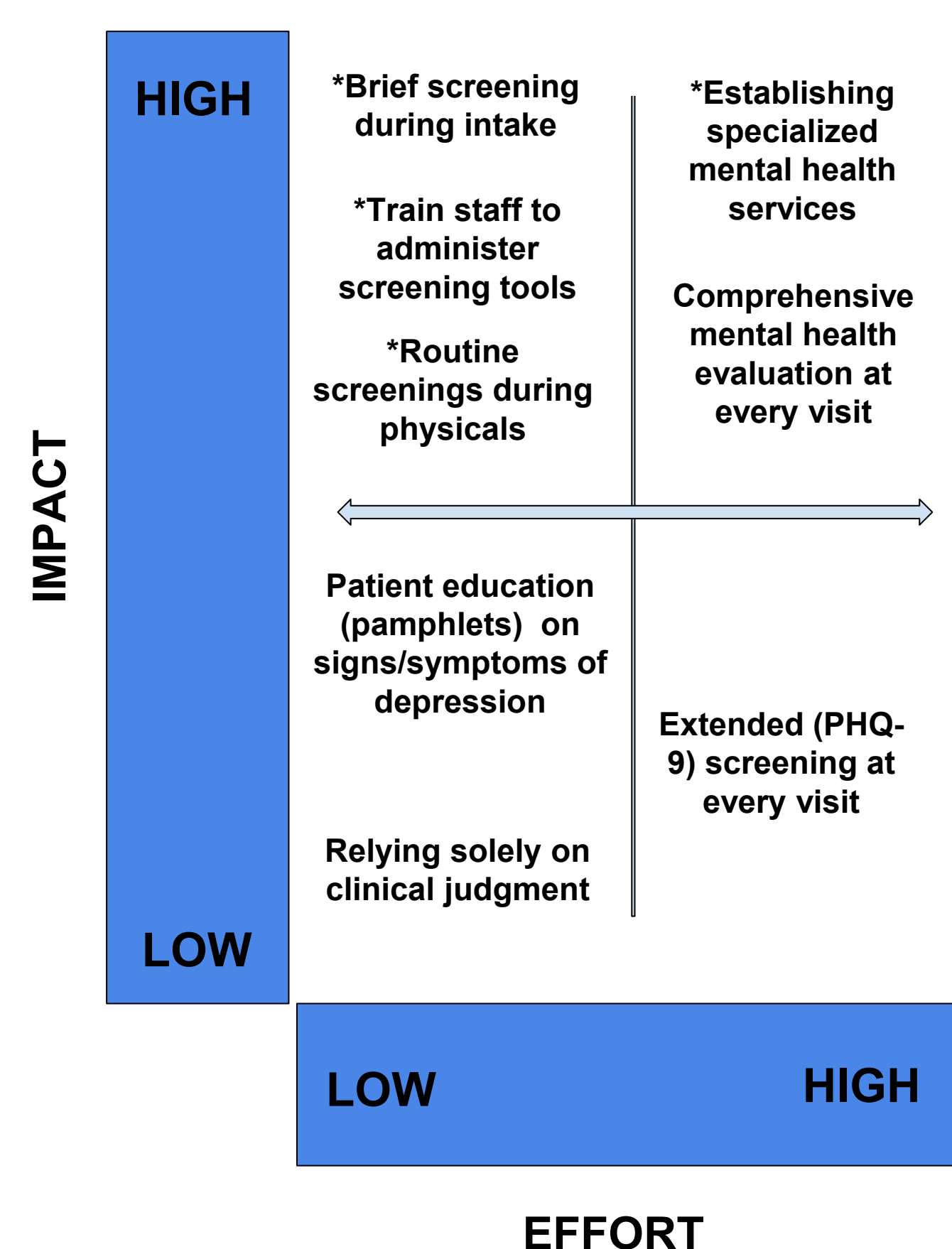

FIGURE 2: Impact-Effort Matrix

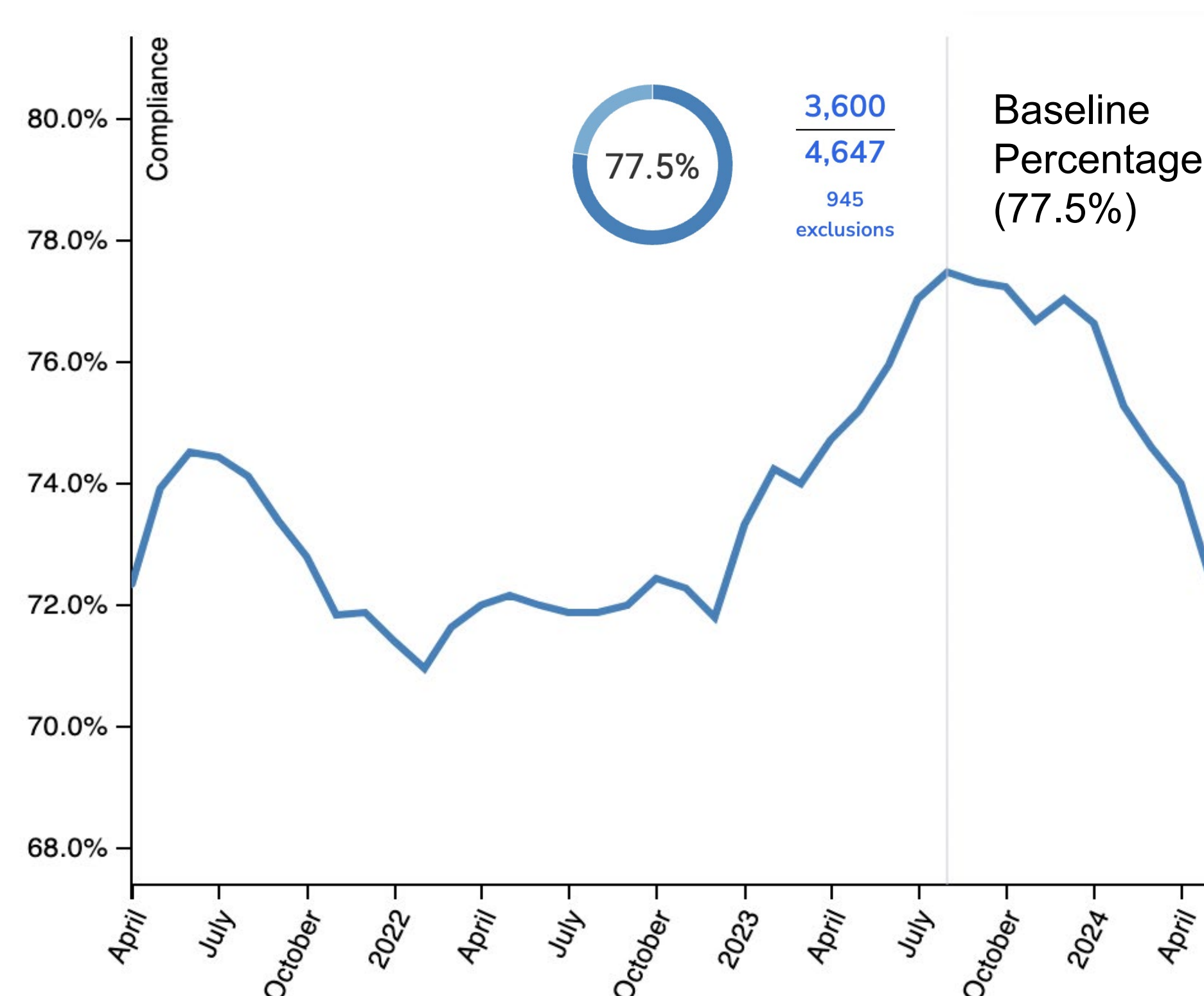**FIGURE 3: Percentage of Screened Patients at Sleepy Hollow Open Door FMC Over Time**

FIGURE 4: Example of Monthly Quality Measure Report presented and sent to organizational members

Team	Quality Measure	Aim Statement	Organizational Goal	January	February	March	April	May	June	July	August	September	October	November	December
Attending: Dr.Greenberg Residents: Dr.Sherpa, Dr.Zhang, Dr.Philipps PCT: Jorge, Jessica, Yeymmy	Depression Screening	Improving our PHQ2 and PHq9 depression screening by 10% over 2 months (mid-end of July mark) with organizational goal of 85%.	85%	74%	74%	74.70%	75.20%	75.90%	77%	77.50%	77.30%	77.20%	76.70%	77%	76.60%

CONCLUSIONS

- There is no notable increase in depression screening rates within Sleepy Open Open Door Family Medical Center over two months or over eight months despite interventional targeting of workflow areas identified by our swim lane diagram.

- Potential confounding factors include high turnover of staff, including providers and patient care technicians during course of data collection necessitating repeat training, and patient attribution.

- In addition to the confounding factors above, several other barriers to depression screening were identified through monthly quality measure meetings, including unfamiliarity with the EMR/documentation, staff training limitations, and workflow integration challenges (patient refusal, high acuity patient visit).

- Prior research in our clinic has shown that Integrating behavioral health services into our existing healthcare frameworks positively impact screening rates. This suggests that screening rates may be impacted by provider, patient care technician, and patient hesitancy and/or bias - further research is needed to assess screening motivations/barriers.

- Additional research is needed to determine optimal screening intervals across different populations, assess the accuracy of population-specific screening tools compared to general ones like the PHQ-2 (for example, the Geriatic Depression Scale for older patients), and explore socio demographic influences on depression screening outcomes.

REFERENCES

1. Rachel A. Zuckerbrot, et. al. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): Part I. Practice Preparation, Identification, Assessment, and Initial Management. *Pediatrics* March 2018; 141 (3): e20174081. 10.1542/peds.2017-4081

2. Siu AL, and the US Preventive Services Task Force (USPSTF). Screening for Depression in Adults: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2016;315(4):380–387. doi:10.1001/jama.2015.18392

3. Lépine, J. P., & Briley, M. (2011). The increasing burden of depression. *Neuropsychiatric Disease and Treatment*, 7(sup1), 3–7. https://doi.org/10.2147/NDT.S19617

4. Moreno-Agostino, et al. Global trends in the prevalence and incidence of depression:a systematic review and meta-analysis. J. Affect Disord., 281 (2021), pp. 235-243, 10.1016/j.jad.2020.12.035

5. Witters, D. (2024, February 7). *U.S. depression rates reach new highs*. Gallup.com. https://news.gallup.com/poll/505745/depression-rates-reach-new-highs.aspx

6. Fekadu, A., Demissie, M., Birhane, R. et al. Under detection of depression in primary care settings in low and middle-income countries: a systematic review and meta-analysis. *Syst Rev* 11, 21 (2022). https://doi.org/10.1186/s13643-022-01893-9

7. Faisal-Cury A, et.al. Depression underdiagnosis: Prevalence and associated factors. A population-based study. J Psychiatr Res. 2022 Jul;151:157-165. doi: 10.1016/j.jpsychires.2022.04.025. Epub 2022 Apr 23. PMID: 35486997.