Effect of A Visual Intervention on Providers Addressing Depression

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Background

Maliheh Free Clinic is a safety net clinic that serves the greater Salt Lake area and provides services to patients without insurance with a household income less than 150% of the federal poverty level. PHQ-9 screening for depression is not consistently administered, nor addressed, with patients who access the clinic. This study explores whether the implementation of a magnet intervention will increase the rate of healthcare providers addressing depression.

Does the use of magnets at Maliheh Free Clinic improve provider action in addressing PHQ-9 scores of 15 or more, resulting in greater rates of treatment of depressed patients?

Methods

- **STEP 1** • All Maliheh patients given PHQ-2 screening form at check in
- **STEP 2** • Patients scoring ≥ 4 on PHQ-2 are given full PHQ-9 assessment
- **STEP 3** • Patient technician charts PHQ, PHQ-9, or Depression into the patient's chief complaint for patients with PHQ-9 ≥ 4
- **STEP 4** • Patient technician places blue PHQ-9 magnet outside of patient's room at eye level, as a visual cue for providers

*PHQ-9 scores ≥ 15 were utilized in the analysis. These scores are considered moderate to severe, in which treatment is recommended.

Inclusion criteria: All patients seen for provider visits between 1/28/2019-4/30/2019 with PHQ-9 ≥ 15.Exclusion criteria: <18 years of age, patients with current diagnosis of depression. Outcomes assessed whether patient technicians and/or providers addressed PHQ-9 depression scores ≥ 15. Chi square test was used in the statistical analysis.

Results

320 patients met inclusion criteria. There was an overall positive trend in the number of patients addressed by both the patient technician and provider from pre-intervention to intervention (Table 1). There was a decrease in the number of patients that had a technician note that were not addressed by the provider. Additionally, the number of patients without a technician note that were addressed by the provider showed a positive trend. In contrast, the number of patients without a technician note that were not addressed by the provider remained consistent from pre-intervention to intervention.

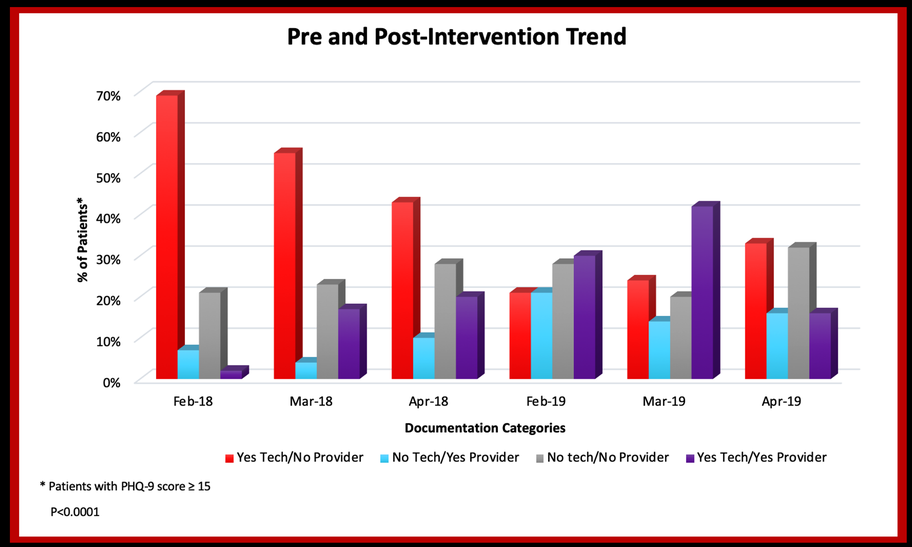

Table 1. Frequency of Providers Addressing Depression

Month	Yes Tech/No Provider	No Tech/Yes Provider	No Tech/No Provider	Yes Tech/Yes Provider	Total # of patients w/ PHQ-9 ≥15	P-values
February 2018	29	3	9	1	42	
February 2019	9	9	12	13	43	<.001
March 2018	26	2	11	8	47	
March 2019	22	13	18	38	91	.006
April 2018	17	4	11	8	40	
April 2019	19	9	20	9	57	.6190

Pre-intervention 1/28/18-4/30/18 compared to post-intervention 01/28/19-04/30/19
Yes Tech/No Provider: Patients with a technician note that were not addressed by the provider.
No Tech/Yes Provider: Patients without a technician note that were addressed by the provider.
No Tech/No Provider: Patients without a technician note that were not addressed by the provider.
Yes Tech/Yes Provider: Patients that were addressed by both technician and provider.

Discussion

The results of the study determined that visual blue magnet reminders with 'PHQ-9' printed on them can be implemented in safety net clinics to increase the rates of providers addressing depression in patients with PHQ-9 scores greater than or equal to 15.This approach requires staff/provider training and adaptation in order to be successful, which shows to be difficult in volunteer clinics where provider staffing varies. Further research is necessary to determine the long-term effectiveness of visual reminders on provider addressment of PHQ-9 scores greater than or equal to 15. Further studies could consider changing the color of the magnet quarterly along with quarterly training. Arrows can be added to the magnet as studies have shown effectiveness of arrows on visual reminders.
There were limitations to this study. The multistep process allowed for an increased probability in errors. A majority of staff at Maliheh Free Clinic are volunteers allowing for a large variability in clinic operations. The intervention was only tracked for 3 months which may not be a sufficient amount of time to observe trends.

Conclusion

This visual intervention increased the rates of depression being addressed by providers, regardless of a technician note; although the technician note was found to be an important reminder. Both reminders combined lead to the highest probability of a PHQ-9 score being addressed by the provider. It was a low-cost intervention with little training and downtime for execution that lead to significant results. It was a multistep process that increased reminder opportunities.

References

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