



The Impact of Data Communication Style in Quality Reports on Depression Screening in Primary Care

User- and Patient-centered Interventions - Informatics Implementation Track

VS11

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One Medical

#IS20



Disclosure

I disclose the following relevant relationship with commercial interests:

- Employee at One Medical
- Shareholder of One Medical

Learning Objectives

After participating in this session the learner should be better able to:

- Assess best practices for routine depression screening through data driven experimentation.
- Understand data communication factors associated with increased rates of depression screening.

One Medical

- Primary Care
- Membership model
- In person & virtual care
- 13 markets by 2021
- 422k members
- Home-grown EHR system



Depression

HEALTH MAINTENANCE +

Colon cancer screening no due date ✕

Depression screening due 06/30/20 ✕

Goal

Depression Screening Declined

Action **Due Date**

PHQ-2 06/30/2020

Notes

Last modified by: at 10:25 AM 12/03/19

SCREENING HISTORY

05/22/2018	PHQ-2 - positive	Edit
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+ Add Screening History

▼ Show Tips For Depression Screening

[Update Health Goal](#) [Cancel](#) [Delete](#)

- 16m adults have major depressive episode each year
- Estimated two-thirds of patients with depression are undiagnosed.

Depression Screening (PHQ-2):

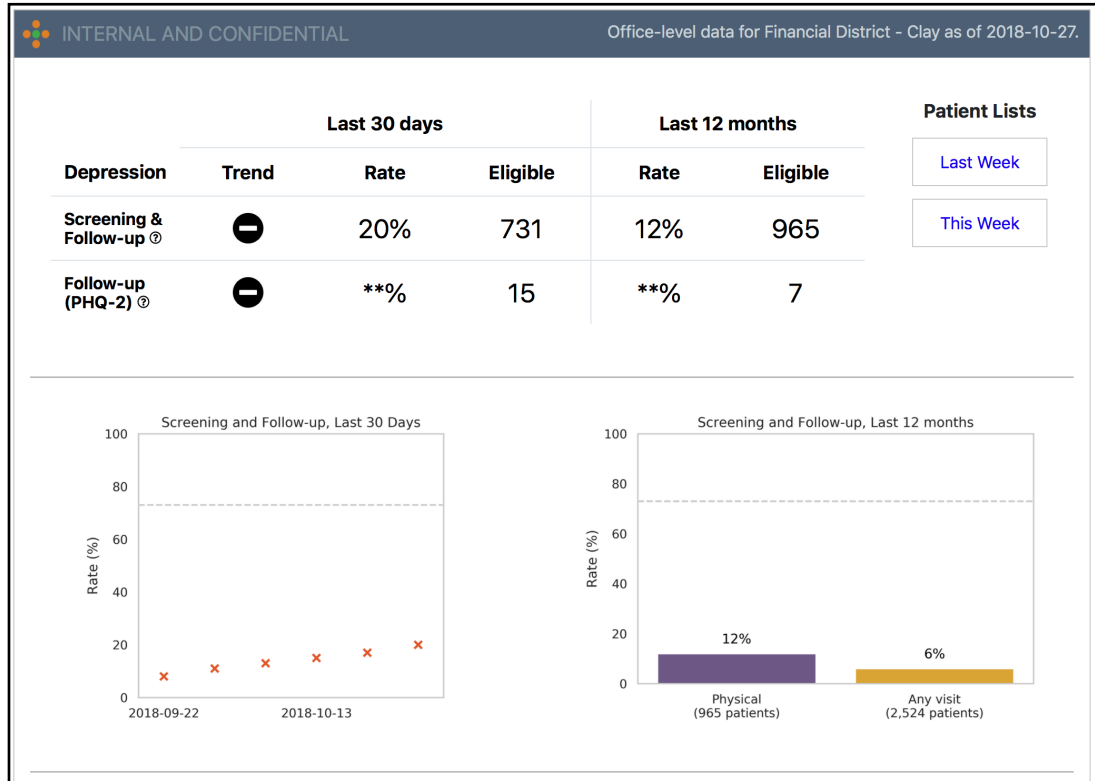
- Little interest or pleasure in doing things
- Feeling down, depressed or hopeless

Quality Improvement

- Launched routine depression screening at wellness visits
- Clinic-designed “Quality Champion”
- Quality Improvement Collaborative model
 - Weekly data reports, sent via email
 - Improvement coaching
 - Clinic-based iterative experimentation
 - Regular group check-ins for Quality Champs
- Depression Screening was second quality collaborative

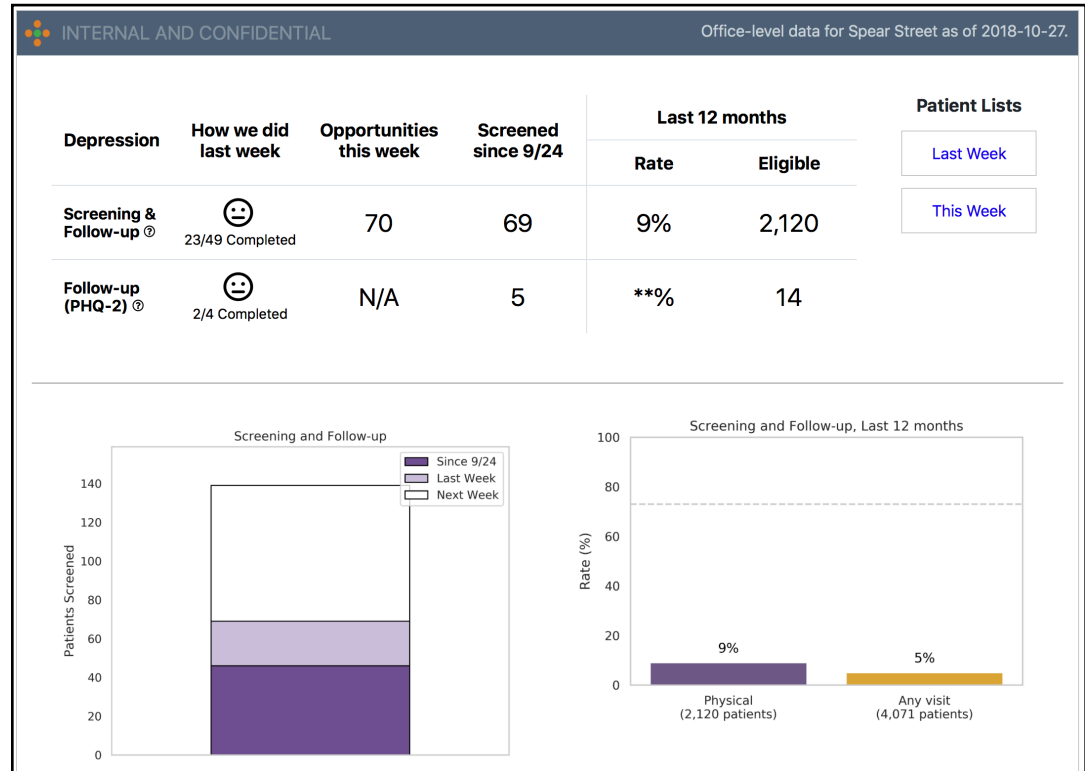
Interpretive Report

- Requires office staff to *interpret* the rates into actions in their office
- Contains 30 day rates and associated trend information.
- Graph shows 30 day rate over time.



Directive Report

- Report *directs* office staff to patients who require particular action.
- Data is generally around number of patients, with fewer rates shown
- Emotive smiley faces change based on number of opportunities met in the past week.



Study

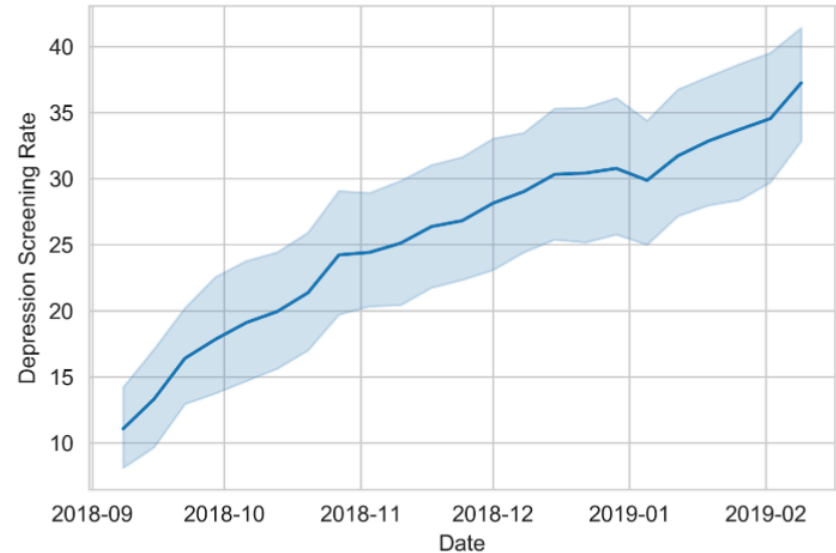
- Clinics grouped into geographic districts
- Districts matched based on:
 - Size of patient population
 - Average patient tenure
 - Perceived engagement
 - Enterprise membership
- Matched districts were split and randomized to either report
- Collaborative ran for three month period starting Sept 2018

Analysis

- Built model predicting patient screening status post-visit
- Stepwise logistic regression, using R stats v3.4.1

Results

- Sent ~176 reports each week.
- Open rate: 78%
- On average, reports opened within 2 hours of being sent
- Screening rates increased from 12% to 39%
- Two-thirds of clinics saw at least a 20 percentage point increase



	OR	95% CI
Saw PCP	2.69	2.57 - 2.82
Patient > 1yr	1.43	1.36 - 1.51
Opened Report	1.19	1.08 - 1.31
CCI	0.89	0.87 - 0.92
Interpretive Report	0.82	0.79 - 0.86

- Findings:
 - Sending directive reports seems better than sending interpretive reports
 - Don't understand why, could be...
 - Being direct helps limit “analysis paralysis”
 - Keeping patient-focused is helpful for clinic staff
 - Smiley faces are motivating
 - Unaddressed confounding in study design
- Limitations/Further Study
 - Difficult to disentangle engagement from improvement initiative
 - Unclear if effect is specific to depression and screening
 - Difficult to separate user requirements from data-driven findings

Thank You

- Our wonderful providers and quality champs :)
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- Raj Behal, MD, MPH

Thank you!

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