



An investigation to examine if an automated enhancement in EHR help physician management of clinical depression

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Background Information

8.1% of American adults aged 20 and over had a depressive episode in any given 2-week period

Over 80% of adults with depression reported some difficulty with work, home or social activities due to their depression

>60% of mental health care delivery happens in the primary care setting.

PHQ9 is a nine item self-assessment based directly on the nine major diagnostic criteria for major depressive disorder. Every 1-point increase in PHQ9 score = mean productivity loss of 1.65%

Regular patient symptom monitoring with feedback to physicians improved outcomes of depression treatment in primary care settings (COMET Trial)

Our clinic currently does not have a mechanism in place to monitor patients diagnosed with depression in between recommended follow-up visits. One potential underutilized resource is the electronic health record (EHR)

Objective

To investigate if implementing an automated PHQ-9 monitoring process, which alerts providers through EHR, improved physician decision making in patients with documented diagnosis of depression shown by the length of time to remission score threshold

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)				
Over the last 2 weeks, how often have you been bothered by any of the following problems? (Circle "0" to indicate your answer)	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving about a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Five score items: 0, 1, 2, 3
Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all (0)	Somewhat difficult (1)	Very difficult (2)	Extremely difficult (3)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

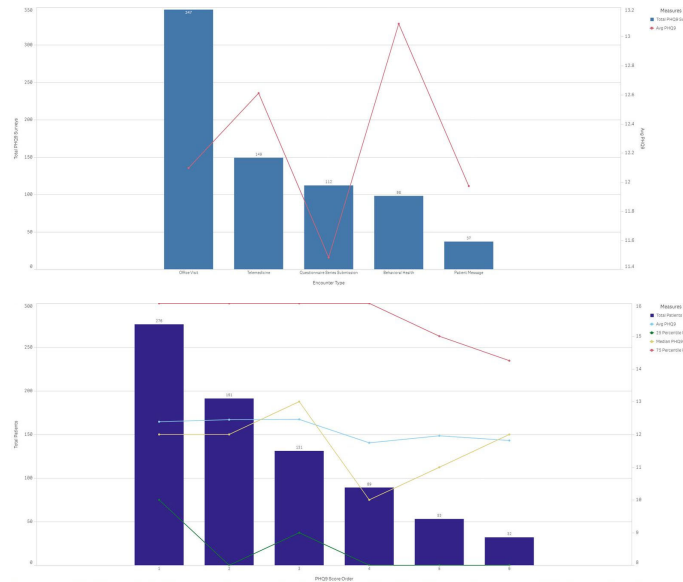
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Design and Methods

Project Design:

- o IRB Approved, Mixed-methods longitudinal study
- o Location: NGPG Family Medicine Gainesville Clinic
- o Participants: 12 Family Medicine Residents in their first year of training and 6 faculty members practicing at this location. Consent of physicians was obtained
- o Methods:
 - o A monthly PHQ9 series was assigned to all adults aged ≥ 18 years old who were diagnosed with moderate, moderate-severe or severe depression based on PHQ9 scores. Patients without MyChart were excluded.
 - o EHR enhancement built a best practice advisory that prompted clinicians to assign a PHQ9 series for a patient who score was ≥ 10 on the PHQ9.
 - o This advisory gave the provider an option to either assign or do not assign the questionnaire series
 - o Once assigned, the patient received the PHQ9 questionnaire via MyChart portal monthly, terminated at 6 months or if PHQ is <5 whichever, came first.
 - o The results were to be returned to provider in task box in EHR
 - o Providers would then use these results in their decision-making process

Data



Results

Technical difficulties: The questionnaires did not return to the provider inbox but rather the clinical staff pool

Physician action could not be examined

- o Due to high degree of attrition and missing dates we encountered too much data loss
- o Only a few (8) patients continued their measurements for 6 months
- o Data was inconclusive

Discussion & Next Steps:

- o Epic enhancement process: needs leadership intervention
- o PDSA to improve this process
- o Route the PHQ9 questionnaires to the provider task box
- o Marked Drop-out rate
 - o Technology factor vs human factor
 - o Low uptake on MyChart portal reduced sample size
 - o Alert Fatigue
 - o Response rate over time within context of patient adherence
 - o Natural course of depression

Next Steps:

- o PDSA for Epic enhancement process
- o Future study to look at physician action
- o MyChart vs mail-in vs Care management out-reach
- o Further studies needed to compare technology vs Human outreach in depression treatment.

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