PATIENT TOOLS

Boost Your IBH Program Performance

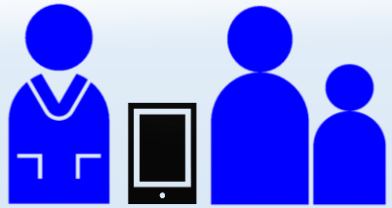
Webinar #1 – More Effective Screening

PATIENT TOOLS

Boost Your IBH Program Performance

Webinar 1

More Effective Screening

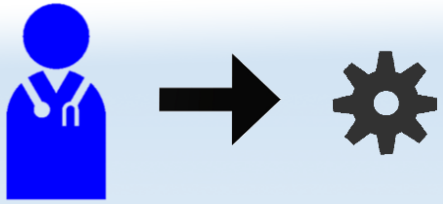


Webinar 2

Simplify the Screening Process

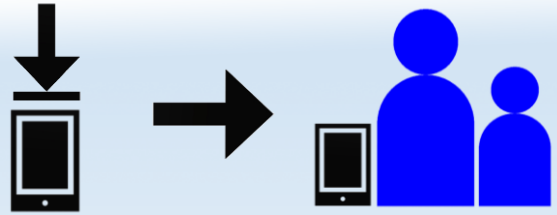
Webinar 3

Making the Business Case



Webinar 4

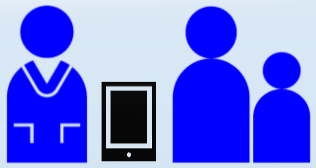
Screening in Your Clinic



PATIENT TOOLS

More Effective Screening

Effective Screening



Uses and Implications

- Clinical view of CJ Peek's three world view model
- A simple study showing how to use the PHQ-9 more effectively for detection
- PHQ-9's role in detection, assessment and monitoring
- Turn screening into a patient interview

PATIENT TOOLS

A Simple Study

Adding **automated, in-depth**, self-report **assessment overcomes** the **cost, burden** and **poor effectiveness** of simple screens like the **PHQ-9**.

Effective Integration Using Electronic Detection and Assessment

Alan D. Malik, Ph.D.

Introduction

Depression screening with the PHQ-2 or PHQ-9 does not yield clinically-actionable information. Due to high false positives, providers either ignore results or spend unreasonable time conducting evaluations patients do not require. Due to high false negatives, patients who require treatment often fall through the cracks. Use of the PHQ-2 or PHQ-9 alone is therefore costly and inefficient. As a viable solution to this problem, we use CJ Peek's three-world view model of medical settings to evaluate the effectiveness of using the PHQ-9 or PHQ-2 as a prescreen to an electronic, in-depth, self-report psychiatric assessment such as the QPD Panel, that easily integrates with the local EMR and clinical decision support.

Methods

- Analyze a dataset of 2495 automated administrations of the PHQ-9 combined with a QPD from a FQHC primary care setting.
- Evaluate the effectiveness of the PHQ as a prescreen to the QPD.
  - Clinical - meets needs and is actionable
  - Operational - minimal impact on staff and work flow
  - Financial – minimize cost, both labor and materials
- Evaluate the results of using the PHQ-9 and PHQ-2 for prescreen detection over a range of cut-scores.
- Compute estimates of total time and cost using a range of configurations of automated PHQ detection and in-depth QPD assessment.

Results

N=2495	Count	Percent
QPD (+)	1101	44.1%
PHQ9 > 9	782	31.3%
PHQ2 > 2	763	30.6%
PHQ2 > 1	1241	49.7%
PHQ2 > 0	1625	65.1%

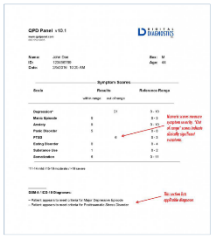
False Results Created	PHQ(+), QPD(-)		QPD(+), PHQ(-)	
	Count	Percent	Count	Percent
PHQ9 > 9	76	3.0%	395	15.8%
PHQ2 > 2	158	6.3%	496	19.9%
PHQ2 > 1	378	15.2%	238	9.6%
PHQ2 > 0	624	25.0%	100	4.0%

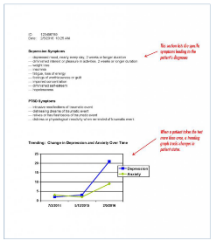
Administrations Total			PHQ + BHT interview			Electronic		
Cut Score	QPD tot	PHQ tot	Staff (hrs)	BHT (hrs)	Cost	Staff (hrs)	BHT (hrs)	Cost
PHQ9 > 9	782	2495	41.6	130.3	$9,858	0	0	$2,121
PHQ2 > 2	763	2495	41.6	127.2	$9,668	0	0	$2,093
PHQ2 > 1	1241	2495	41.6	206.8	$14,448	0	0	$2,810
PHQ2 > 0	1625	2495	41.6	270.8	$18,288	0	0	$3,386

Discussion

While the rate of positive results may be high compared to your practice, they are not uncommon. It is easy to see there is a significant savings of time and cost using electronic detection and assessment. However, you need to also consider the cost associated with the "**QPD(+), PHQ(-)**" column in the **False Results Created** table, which shows a significant cohort of patients that are being missed using just a PHQ prescreen. Expanding the prescreen to include say a GAD-2, would go a long way toward detection of these missed patients.

Other considerations are that electronic assessment enables detailed clinical findings to be automatically loaded in the EMR in a format easily understood by medical providers. Last, in a recent study, providers prescreening with the PHQ-2 did not refer on, 95% of the time, primarily because they did not think there was useful information to be found.





The problem - screening using the PHQ-9 is actually expensive, labor intensive and not very effective

The solution - use the PHQ-9 as a prescreen and add automated, in-depth assessment to drive down labor and cost, while producing actionable, integrated results

PATIENT TOOLS

Introduction

Introduction

Depression screening with the PHQ-2 or PHQ-9 does not yield clinically-actionable information. Due to high false positives, providers either ignore results or spend unreasonable time conducting evaluations patients do not require. Due to high false negatives, patients who require treatment often fall through the cracks. Use of the PHQ-2 or PHQ-9 alone is therefore costly and inefficient. As a viable solution to this problem, we use CJ Peek's three-world view model of medical settings to evaluate the effectiveness of using the PHQ-9 or PHQ-2 as a prescreen to an electronic, in-depth, self-report psychiatric assessment such as the QPD Panel, that easily integrates with the local EMR and clinical decision support.

- PHQ-2 or PHQ-9 as a screening tool
  - Do not yield clinically-actionable assessment information
  - High false positives and false negatives create work and cost
- Explore using PHQ-2 or PHQ-9 as a prescreen
  - Add in-depth, electronic assessment to meet clinical needs
  - Automate to meet operational needs
  - Reduced labor to meet financial needs

PATIENT TOOLS

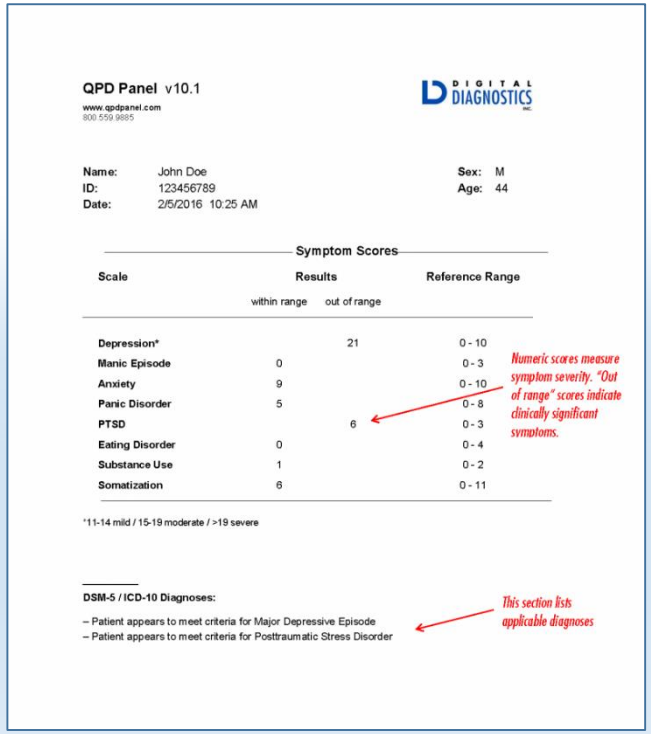
Methods

Methods

- Analyze a dataset of 2495 automated administrations of the PHQ-9 combined with a QPD from a FQHC primary care setting.
- Evaluate the effectiveness of the PHQ as a prescreen to the QPD.
  - Clinical – meets needs and is actionable
  - Operational – minimal impact on staff and work flow
  - Financial – minimize cost, both labor and materials
- Evaluate the results of using the PHQ-9 and PHQ-2 for prescreen detection over a range of cut-scores.
- Compute estimates of total time and cost using a range of configurations of automated PHQ detection and in-depth QPD assessment.

- Analyze dataset of 2495 PHQ-9/QPD administrations
- Evaluate effectiveness of using PHQ as prescreen to QPD using three-world view
- Compute false-positives, false negatives
- Compute estimates of total time and cost savings using electronic in-depth assessment

Results – A Positive QPD



QPD Panel v10.1

www.qpdpanel.com
800.559.9895

DIGITAL DIAGNOSTICS INC.

Name: John Doe
ID: 123456789
Date: 2/5/2016 10:25 AM

Sex: M
Age: 44

Symptom Scores

Scale	Results		Reference Range
	within range	out of range	
Depression*		21	0 - 10
Manic Episode	0		0 - 3
Anxiety	9		0 - 10
Panic Disorder	5		0 - 8
PTSD		6	0 - 3
Eating Disorder	0		0 - 4
Substance Use	1		0 - 2
Somatization	6		0 - 11

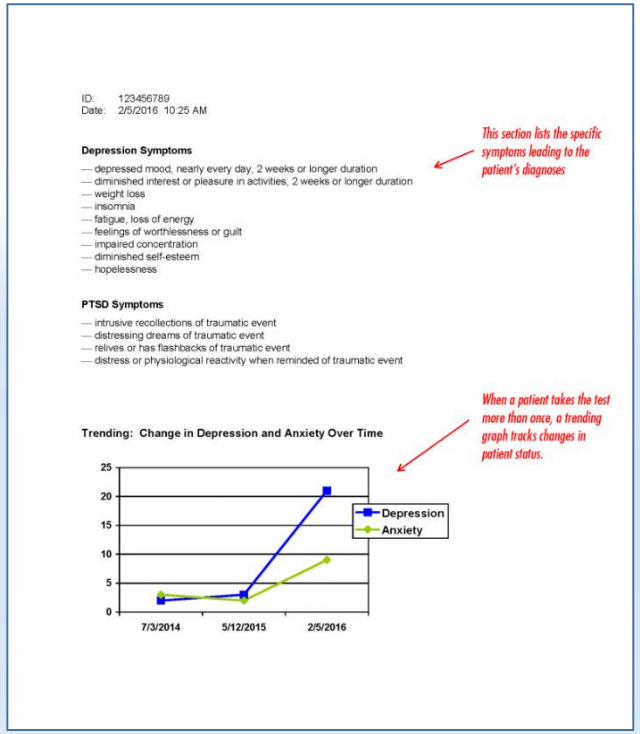
*11-14 mild / 15-19 moderate / >19 severe

Numeric scores measure symptom severity. "Out of range" scores indicate clinically significant symptoms.

DSM-5 / ICD-10 Diagnoses:

– Patient appears to meet criteria for Major Depressive Episode
– Patient appears to meet criteria for Posttraumatic Stress Disorder

This section lists applicable diagnoses



ID: 123456789
Date: 2/5/2016 10:25 AM

This section lists the specific symptoms leading to the patient's diagnoses

Depression Symptoms

— depressed mood, nearly every day, 2 weeks or longer duration
— diminished interest or pleasure in activities, 2 weeks or longer duration
— weight loss
— insomnia
— fatigue, loss of energy
— feelings of worthlessness or guilt
— impaired concentration
— diminished self-esteem
— hopelessness

PTSD Symptoms

— intrusive recollections of traumatic event
— distressing dreams of traumatic event
— relives or has flashbacks of traumatic event
— distress or physiological reactivity when reminded of traumatic event

When a patient takes the test more than once, a trending graph tracks changes in patient status.

Trending: Change in Depression and Anxiety Over Time

- QPD Domains
  - Depression
  - Manic Episode
  - Anxiety
  - Panic Disorder
  - PTSD
  - Eating Disorder
  - Substance Use
  - Somatization
- Any domain out-of-range is a positive QPD result

Results – Positive Results Total

N=2495	Count	Percent
QPD (+)	1101	44.1%
PHQ9 > 9	782	31.3%
PHQ2 > 2	763	30.6%
PHQ2 > 1	1241	49.7%
PHQ2 > 0	1625	65.1%

- 44% positive QPDs
- 31% positive PHQ9 – cut score > 9
- 31 – 65% positive PHQ2s – cut scores > 2, 1, 0
  (PHQ2 score is computed from first two questions of the PHQ9)
- These results are high, but not uncommon

Results – False Results Created

False Results Created	PHQ(+), QPD(-)		QPD(+), PHQ(-)	
	Count	Percent	Count	Percent
PHQ9 > 9	76	3.0%	395	15.8%
PHQ2 > 2	158	6.3%	496	19.9%
PHQ2 > 1	378	15.2%	238	9.6%
PHQ2 > 0	624	25.0%	100	4.0%

- Using different cut scores produces a trade off between false positive and false negative results
- ***Using PHQ9, wrong 19% of the time***
- ***Using PHQ2, wrong 26%, 25% and 29% of the time respectively***

Results – Estimated Time and Cost

Administrations Total			PHQ + BHT interview			Electronic		
Cut Score	QPD tot	PHQ tot	Staff (hrs)	BHT (hrs)	Cost	Staff (hrs)	BHT (hrs)	Cost
PHQ9 > 9	782	2495	41.6	130.3	$9,858	0	0	$2,121
PHQ2 > 2	763	2495	41.6	127.2	$9,668	0	0	$2,093
PHQ2 > 1	1241	2495	41.6	206.8	$14,448	0	0	$2,810
PHQ2 > 0	1625	2495	41.6	270.8	$18,288	0	0	$3,386

- Manual processing assumes PHQ = 1 min, BHT interview = 10 min, Staff = $40/hr, BHT = 60$/hr, paper = $0.15
- Electronic assumes processing fee (PHQ + QPD) = $0.38/admin, QPD license fee = $1.50/admin

Discussion – Primary Results

Discussion

While the rate of positive results may be high compared to your practice, they are not uncommon. It is easy to see there is a significant savings of time and cost using electronic detection and assessment. However, you need to also consider the cost associated with the "**QPD(+), PHQ(-)**" column in the **False Results Created** table, which shows a significant cohort of patients that are being missed using just a PHQ prescreen. Expanding the prescreen to include say a GAD-2, would go a long way toward detection of these missed patients.

- The QPD follows the DSM-V and requires electronic administration which dramatically reduces time and cost
- Tradeoffs in cut scores using the PHQ-9 or PHQ-2 still has significant error so potentially over detect and use the QPD to get specific
- Alternatively, depression is generally 70% comorbid with anxiety so can be false negative to many anxiety related conditions - consider using the GAD-7 or GAD-2 as part of the prescreen

PATIENT TOOLS

Results – Missing Information

N=2495	Population (n=1101)			PHQ9 > 9 (n=782)			QPD(+), PHQ9(-) (n=395)	
QPD_MajDep	579	23.2%		481	61.5%		98	24.8%
QPD_Dysthym	44	1.8%		25	3.2%		19	4.8%
QPD_Dep_NOS	223	8.9%		142	18.2%		81	20.5%
QPD_Bipolar	442	17.7%		330	42.2%		112	28.4%
QPD_GenAnx	260	10.4%		216	27.6%		44	11.1%
QPD_Panic	161	6.5%		120	15.3%		41	10.4%
QPD_PTSD	739	29.6%		430	55.0%		171	43.3%
QPD_OCD	20	0.8%		18	2.3%		2	0.5%
QPD_Anx_NOS	299	12.0%		112	14.3%		187	47.3%
QPD_Anx2Dep	353	14.1%		290	37.1%		63	15.9%
QPD_Bulimia	29	1.2%		20	2.6%		9	2.3%
QPD_SubAbuse	99	4.0%		60	7.7%		32	8.1%
QPD_Somatiz	220	8.8%		177	22.6%		43	10.9%
QPD_SuicIdea	176	7.1%		151	19.3%		22	5.6%
QPD_SuicRisk	25	1.0%		18	2.3%		7	1.8%

- Underlying population
- When PHQ-9 is positive
- When PHQ-9 is false negative

Discussion – Other Considerations

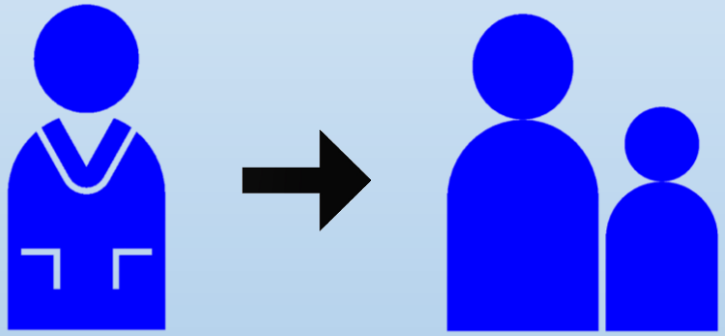
Discussion
Other considerations are that electronic assessment enables detailed clinical findings to be automatically loaded in the EMR in a format easily understood by medical providers. Last, in a recent study, providers prescreening with the PHQ-2 did not refer on, 95% of the time, primarily because they did not think there was useful information to be found.

- QPD does initial assessment (often only visit)
- The value of time in a 30 min session
- In a recent study using the PHQ-2 as the screener, providers did not refer 95% of the time[1]
- The QPD report is designed for medical providers and engages them into the process using DSM
- Electronic administration enables seamless integration with EMRs and clinical decision support as lab results

1. Fuchs CH, Haradhvala N, Hubley S, et al. Physician action s following a positive PHQ- 2: Implications for the implementation of depression screening in family medicine practice. Fam Syst Health. 20l5 j33(1): 18-27.

PATIENT TOOLS

Turn Screening into a Patient Interview

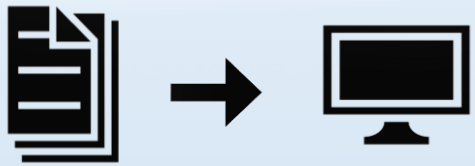


- PHQ-9 is a measure of distress
- Expand breadth, bio-psycho-social
- Detect, assess, monitor
- Outcomes, registry tracking
- Population management
- Practice-based research

Screening in the real world

Webinar 2

Simplify the Screening Process



PATIENT TOOLS