

Using Informatics in Management of Depression

VIReC Clinical Informatics

Cyberseminar Series

July 17, 2007



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Objectives

- CHIACC Update
- Overview of depression care management
- Describe informatics tools for mental health



CHIACC Team

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CHIACC Goals

- Detailed discussion of CHIACC presented by Amy Cohen, PhD; VIREC Cyberseminar 1/16/07
- CHIACC: Creating Health eVet Informatics Applications for Collaborative Care
- Define informatics priorities to support chronic illness care, applied to
 - Depression
 - Schizophrenia
 - Adaptable to other disorders
- Develop software prototype
- Conduct limited testing

CHIACC Methods

- QUERI Process Step 4: Identify and implement interventions to promote best practices
- Literature review
- Expert panel
 - Clinical experts
 - Informatics experts
- Software development
- Usability feedback from nurse care managers
- CHIACC team concurrently working on two related projects (ReTIDES & EQUIP)

Depression Care Management

- Collaborative care
 - Informed patient
 - Prepared, proactive clinical team
- ReTIDES Model
 - Depression detected in PC
 - Appropriate patients treated in PC
 - Nurse care manager supports patient & PC provider

Depression Care Manager

- Follows patients for 6 months
- Addresses barriers
- Supports treatment adherence
- Tracks progress
- Favorable reaction from veterans
- End users of CHIACC software

CHIACC Products

- Literature review published
- Expert panel manuscript submitted
- Prototype depression software
- Schizophrenia software in progress
- Currently conducting usability testing for depression prototype

Panel Management

SSN: None Patient Report Special Logout Logged In As: Laure Bonner (badmin)

CHIACC CASELOAD TRACKING REPORT

Records found : 0, Displayed : 0, Per Page : 100, Page : 1 of 1

Active Patient Report for: Core Manager Report Created On: Wednesday, July 11, 2007, 12:30PM

| SSN | NAME | ENROLLMENT DATE | Oef/Osf | INITIAL VISIT | | | # OF SESSIONS | LAST FOLLOW UP | | | | | | CONTINUED CARE PLAN | NEXT APPOINTMENT |
|-------|---------------------|-----------------|---------|---------------|----------|-------|---------------|----------------|----------|-------|-----|-----|------------|---------------------|--------------------|
| | | | | DATE | FUNCTION | PHQ-9 | | DATE | FUNCTION | PHQ-9 | S/I | Mco | Pt | | |
| C0001 | Chiaccpatient, One | 06/28/2007 | ✓ | 06/28/2007 | 2 | 16 | 2 | 07/03/2007 | 1 | 10 | ✓ | | | | 07/11/2007 03:00PM |
| C0002 | Chiaccpatient, Two | 06/25/2007 | | 06/25/2007 | 2 | 20 | 2 | | | | | | 06/24/2007 | | 07/29/2007 10:00AM |
| C0004 | Chiaccpatient, Four | 06/28/2007 | ✓ | 06/28/2007 | 1 | 12 | 1 | | | | | | | | 08/17/2007 09:10AM |

CHIACC Usability Goals

- Determine user reactions to software
- Compare strengths of 3 software approaches
 - CHIACC
 - NetDCMS
 - FileMan
- Inform future development efforts

CHIACC Usability Methods

- Experienced nurse care managers from ReTIDES & TEAM
- Standardized patient role plays
- Quantitative rating forms
- Qualitative feedback & recommendations
 - Content areas (suicide assessment, etc.)
 - Features (panel management, decision support, etc.)

CHIACC Usability Preliminary Results

- Self-scoring PHQ-9-positive
- Strong interest in panel management features
 - Decision support
 - Workload prioritization
 - Graphical display of progress over time
- Suggestions: e.g., increase ease of access to suicide protocol

CHIACC in Context

- CHIACC is intended as a prototype
- Adaptable to other disorders, recently received funding to do this (CHIACCPlus)
- Not currently implemented in clinical sites



Consensus Informatics Needs for Mental Health

- Tracking progress over time
- Decision support
- Assessment tools
- Comorbid conditions: data collection and monitoring
- Communication among team members
- Patient recovery

Patient Health Questionnaire

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- The Patient Health Questionnaire (PHQ-9) is a depression assessment questionnaire named for the nine signs and symptoms of depression, used in the DSM-IV for diagnosing major depression
- 10th question to assess impact on functioning
- The questionnaire can be used as a quick diagnostic screener for depression
- Can also be given to patients at various stages of their treatment to evaluate depression severity and treatment progress
- Tracking patient severity significantly improves outcome

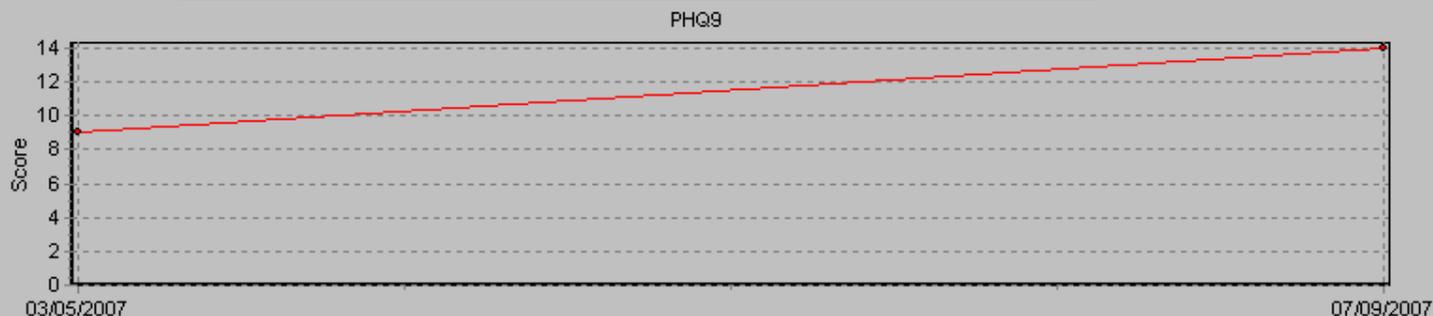
Pt. Info: ZZTEST,CCCC
000-00-0007 Mar 20,1976 (31)

Multi-

MHA Current System

 GAF Dye

| Date | Test |
|------------|-------|
| 07/09/2007 | PHQ9 |
| 06/12/2007 | AIMS |
| 03/08/2007 | PCLC |
| 03/05/2007 | BSI |
| 03/05/2007 | PHQ9 |
| 03/08/2004 | AUDC |
| 10/23/1996 | MMPI2 |



000-00-0007 ZZTEST,CCCC

F AGE 31 07/09/2007 07/09/2007

PRINTED ENTERED

*** Prime-MD Patient Health Questionnaire ***

**** Major Depressive Syndrome suggested ****

PHQ9 score= 14

Guide for Interpreting PHQ-9 scores:

0-4: The score suggests the patient may not need depression treatment.

5-14: Physician uses clinical judgement about treatment based on patient's duration of symptoms and functional impairment.

15 or more: Warrants treatment for depression, using antidepressant, psychotherapy and/or a combination of treatment.

- 2 a. Little interest or pleasure in doing things
- 2 b. Feeling down, depressed, or hopeless
- 2 c. Trouble falling or staying asleep, or sleeping too much
- 2 d. Feeling tired or having little energy
- 1 e. Poor appetite or overeating
- 1 f. Feeling bad about yourself or that you are a failure or hav ...
- 2 g. Trouble concentrating on things, such as reading the newspa ...
- 1 h. Moving or speaking so slowly that other people could have n ...
- 1 i. Thoughts that you would be better off dead or of hurting yo ...

0= Not at all 1= Several days 2= More than half the days 3= Nearly every day

PRIME-MD (r) is a trademark of Pfizer Inc.

PHQ Copyright (c) 1999 Pfizer Inc.

Sort Tests By:

 1 Date
 2 Name

Test Results

Order Tests

ASI

GAF

Instruments:

| Date | Name |
|------------|------------------|
| 03/01/2007 | AUDC |
| 05/10/2007 | AUDC |
| 03/13/2007 | AUDC |
| 03/08/2004 | AUDC |
| 05/10/2007 | AUDIT |
| 05/10/2007 | AUDIT |
| 03/13/2007 | BPRS |
| 05/10/2007 | BRADEN SCALE |
| 03/05/2007 | BSI |
| 03/13/2007 | BUSS |
| 05/10/2007 | IEQ |
| 10/23/1996 | MMPI2 |
| 05/10/2007 | MORSE FALL SCALE |
| 05/10/2007 | PC PTSD |
| 03/15/2007 | PC PTSD |
| 05/10/2007 | PCLC |
| 05/10/2007 | PCLC |
| 03/15/2007 | PCLC |
| 05/10/2007 | PHQ-2 |
| 05/10/2007 | PHQ9 |
| 05/10/2007 | PHQ9 |
| 05/10/2007 | PHQ9 |
| 03/05/2007 | PHQ9 |
| 05/10/2007 | SF36 |

Patient Health Questionnaire Depression Scale

Date Given: 05/10/2007 03:34:56 PM

Clinician:

Location:

Veteran: Zztest, Cccc

SSN: 000-00-0007

DOB: Mar 20, 1976 (31)

Gender: Female

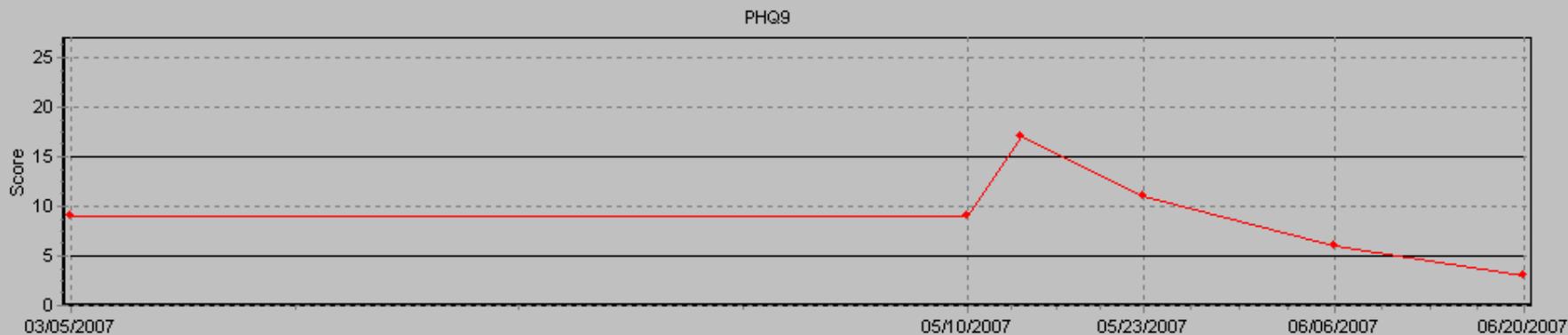
1. Little interest or pleasure in doing things
Several days
2. Feeling down, depressed, or hopeless
Several days
3. Trouble falling or staying asleep, or sleeping too much
Several days
4. Feeling tired or having little energy
Several days
5. Poor appetite or overeating
Several days
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down
Several days
7. Trouble concentrating on things, such as reading the newspaper or watching television
Several days
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 around a lot more than usual
Several days
9. Thoughts that you would be better off dead or of hurting yourself in some way
Several days
10. 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?
Somewhat difficult

PHQ9 Total: 9

Guide for Interpreting PHQ-9 scores:

- 0-4: The score suggests the patient may not need depression treatment.
- 5-14: Physician uses clinical judgement about treatment based on patient's duration of symptoms and functional impairment.
- 15 or more: Warrants treatment for depression, using antidepressant, psychotherapy and/or a combination of treatment.

Instrument Results Review: PHQ9



Scores

| | 03/05/2007 | 05/10/2007 | 05/10/2007 | 05/10/2007 | 05/14/2007 | 05/23/2007 | 06/06/2007 | 06/20/2007 |
|-------|------------|------------|------------|------------|------------|------------|------------|------------|
| Total | 9 | 9 | 9 | 9 | 17 | 11 | 6 | 3 |

Graphing and Table Display in MHA-3

PM Screening for Depression

VistA CPRS in use by: ZZTEST.CCCC Primary Care Team Unassigned Remote Postings

File Edit View Action Options Tools Help

Reminder Resolution: Screen for Depression

Depression screening using the PHQ-2 is due yearly. The questions must be asked exactly as written or given to the patient on a questionnaire. A copy of the screening questionnaire is available: [NCHCS PC Screening - Short Form](#)

PHQ-2

Perform PHQ-2

Over the past two weeks, how often have you been bothered by the following problems? Little interest or pleasure in doing things

- Not at all
- Several days
- More than half the days
- Nearly every day

Over the past two weeks, how often have you been bothered by the following problems? Feeling down, depressed, or hopeless

- Not at all
- Several days
- More than half the days
- Nearly every day

Clear Clinical Me Finish Cancel

Clear OK Cancel

<No encounter information entered>

* Indicates a Required Field

New Note

Cover Sheet Problems Meds Orders Notes Consults D/C Summ Labs Reports

ZZTEST.CCCC
 000-00-0007 Mar 20,1976 (31)

Primary Care Team Unassigned

Flag Remote Data

Postings
CWA

Last 100 Signed Notes

MH INDIVIDUAL THERAPY

Jul 09,2007@14:40

Change...

- [-] New Note in Progress
 - [+] Jul 09,07 MH IND
- [-] All unsigned notes for LYS
 - Jul 09,07 MENTA
 - Jul 09,07 MENTA
 - Jul 09,07 MENTA
 - Jul 09,07 MENTA
 - May 10,07 MENT
 - May 10,07 MENT
 - May 10,07 MENT
 - Mar 15,07 MENT,
 - Mar 15,07 MENT,
 - Mar 13,07 MENT,
 - Mar 13,07 MENT,
- [-] All signed notes
 - May 10,07 MENT
 - Mar 01,07 PRIMA
 - Feb 26,07 LATEX
 - Dec 21,06 PATIE
 - Dec 12,06 HBPC
 - Nov 17,06 PTSD
 - Nov 08,06 INFOF
 - Nov 08,06 INFOF
 - Sep 19,06 PNEUI
 - Sep 12,06 MED C
 - Sep 12,06 WOME
 - Sep 06,06 INFOR
 - Aug 07,06 PHYSI
 - Aug 07,06 INFOR
 - Jul 10,06 INFORM
 - Jul 10,06 INFORM

Screen for Depression:
 PHQ-2

A PHQ-2 screen was performed. The score was 4 which is a positive screen for depression.

1. Over the past two weeks, how often have you been bothered by the following problems? Little interest or pleasure in doing things: More than half the days

2. Over the past two weeks, how often have you been bothered by the following problems? Feeling down, depressed, or hopeless: More than half the days

Templates
 Reminders
 Encounter
 New Note

<No encounter information entered>

Initial follow-up to a positive depression screen (positive PHQ-2) is a PHQ-9. Have the patient complete the PHQ-9 questionnaire and enter the responses.

A positive PHQ-9 should be followed up with questions about risks for suicide by whoever performed the PHQ-9. Also, positive PHQ-9s should be followed up by a provider for assessment for the need for intervention and treatment.

PHQ-9 Questionnaire

Record PHQ-9

Perform PHQ9 *

Question 10. 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 Somewhat difficult Very difficult Extremely difficult

Ask the patient: "Have you had thoughts of killing yourself in the last month?"

Yes

No

FOR PROVIDERS AND MENTAL HEALTH ONLY:

Click for additional instructions on evaluation of a positive depression screen

Depression to be Managed in Primary Care

Visit Info

Finish

Cancel

<No encounter information entered>

* Indicates a Required Field

Initial follow-up to a positive depression screen (positive PHQ-2) is a PHQ-9. Have the patient complete the PHQ-9 questionnaire and enter the responses.

A positive PHQ-9 should prompt a PHQ-9. Also, positive PHQ-9 should prompt an intervention and treatment plan.

[PHQ-9 Questionnaire](#)

Record PHQ-9

Question 10. If you have difficulty with your work, take care of your home, or your relationships, is it difficult to do?
* Not difficult

Ask the patient: "Have you been bothered by any of the following problems?"

Yes

No

FOR PROVIDERS AND MENTAL HEALTH PROFESSIONALS

Click for additional information

Depression to be Managed

PHQ9

Over the past 2 weeks, how often have you been bothered by any of the following problems? Please read each item carefully and give your best response.

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television

PHQ-9 Test Form in MHA3

Over the past 2 weeks, how often have you been bothered by any of the following problems?

Please read each item carefully and give your best response.

1. Little interest or pleasure in doing things

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

2. Feeling down, depressed, or hopeless

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

3. Trouble falling or staying asleep, or sleeping too much

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

4. Feeling tired or having little energy

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

5. Poor appetite or overeating

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day

6. Feeling bad about yourself or that you are a failure or have let yourself or your family down

CR Patient List

- Patients with PHQ-9 score >9
 - 5-9 - Mild/Minor Depression
 - 10-14 - Moderate Depression
 - 15-19 - Moderately Severe Depression
 - 20-27 - Severe Depression
 - *A positive PH-Q9 or affirmative question 9 merits suicide risk assessment.*

Reminder Report Identifying Patients with PHQ9 Score>9

PHQ9>9: 5 patients have the reminder due

| | Date Due | Last Done | Next Appt |
|---------------|----------|-----------|-----------|
| 1 ZZTEST,AAAA | DUE NOW | N/A | None |
| 2 ZZTEST,BBBB | DUE NOW | N/A | None |
| 3 ZZTEST,DDD | DUE NOW | N/A | None |
| 4 ZZTEST,EFEF | DUE NOW | N/A | None |
| 5 ZZTEST,GGGG | DUE NOW | N/A | None |

Report run on 16 patients.

Applicable to 5 patients.

Use of Individual Mental Health Instrument Item Response in Reminder Logic

- Patch 6 of reminders (PXR^M*2.0*6) will allow reminders to work at the level of scale scores or individual item responses with MH Instruments
- For instance, you could track patients with positive response to suicidal ideation question on PHQ-9

9. Thoughts that you would be better off dead or of hurting yourself in some way

- 1. Not at all
- 2. Several days
- 3. More than half the days
- 4. Nearly every day



Additional Enhancements under Development--MHA

- MHA3– revising file structure of the Mental Health Assistant
- Current system scores tests on the fly; new structure will save responses, scale scores on local VistA system
- Creation of national testing database, storing results of MHA instruments from all local VistA systems



Additional Enhancements Under Development– CPRS and Clinical Reminders

- Reminders will work with any mental health instrument, following rules for restricted instruments
- MH results will be available in Health Summary components
- MH results will be an available option for graphing in CPRS against other variables (lab, vitals)



Issues and Obstacles in Data Interoperability and Standards

- Lack of standardized quality measures
- Lack of standardized electronic patient information
- Lack of standardized EHR functionality for quality measurement purposes

Office of the National Coordinator for Health
Information Technology

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