Primary Care - Mental Health Integration: Improving Mental Health Care Access for VA Primary Care Patients

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No relationships to disclose.
Learning points

1. What are challenges in caring for Veterans with mental illness in primary care?

2. How can we better structure primary care to deliver evidence-based mental health care for Veterans?

3. Are team-based models that provide integrated care (i.e., PC-MHI) working as intended in the VA?
Poll Question #1

• What is your primary role in VA?
  a. PACT clinician
  b. PC-MHI or mental health specialty clinician
  c. Researcher
  d. Administrator, manager or policy-maker
  e. Other
Caring for Veterans with mental illness

30% with MH dx\(^1\)

Primary care team models that integrate mental health care

Patients with co-morbid depression are dying ~10-20 years earlier from chronic *medical* illness.\(^3\)

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Integrated care models are effective

Integrated care models are effective

Primary Care - Mental Health Integration

“Blended model that includes co-located collaborative care and care management”
-- VHA Handbook 1160.01, Section 21

• Nationally implemented in VA clinics\(^6\)
• Aims to improve access to care for common mental illnesses (depression)

\(^6\)Pomerantz et al, *Fam Syst Health*, 2010
### Levels of Mental Health Care

<table>
<thead>
<tr>
<th>Level 1 Primary Care (includes PC MHI)</th>
<th>Level 2 General Mental Health Team based Care</th>
<th>Level 3 Specialty Outpatient Programs</th>
<th>Level 4 Residential Rehabilitation &amp; Treatment Programs</th>
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## PC-MHI vs Mental Health Specialty (MHS) visits

<table>
<thead>
<tr>
<th></th>
<th>PC-MHI (inside primary care)</th>
<th>MHS (outside primary care)</th>
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<tbody>
<tr>
<td><strong>Location</strong></td>
<td>On-site</td>
<td>Different floor or building</td>
</tr>
<tr>
<td><strong>Target diagnoses</strong></td>
<td>Mild-to-moderate depression, anxiety, alcohol misuse</td>
<td>Serious mental illness (SMI), often psychotic disorders</td>
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<tr>
<td><strong>Service delivery structure</strong></td>
<td>Limited number of brief appointments</td>
<td>50-90 min appointments for a minimum of 14 weeks</td>
</tr>
<tr>
<td><strong>Typical provider</strong></td>
<td>Nurse care managers, psychologists, social workers</td>
<td>Psychiatrists, psychiatric nurse practitioners</td>
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Poll Question #2

• Which best describes mental health (MH) arrangements in your primary care clinic?
  a. Embedded MH clinicians providing PC-MHI care
  b. Embedded MH clinicians & MH nurse care mgmt.
  c. Co-located MH clinicians providing independent MHS care
  d. No on-site MH clinicians, but MH nurse care mgmt. available
  e. No on-site MH clinicians, but tele-mental health available
PC-MHI Penetration (PACT 15)

- The percent of assigned primary care patients seen in a primary care mental health integration (PCMHI) clinic
  - PC-MHI primary stop code (534, 539)
  - HBPC MH provider primary stop code (156, 157)
  - Telephone encounters primary stop code (338, 527) and secondary stop code (534)
- Only required for large (5,000 or more core uniques) and very large (10,000 or more core uniques) divisions
PC-MHI penetration map by VISN in 2017

Legend
PACT15 Penetration Rate is:
- 6.1% or Less
- 6.2% to 8.1%
- 8.2% or Greater

Primary Care-Mental Health Integration Dashboard on VSSC
### VISN 22 clinic engagement in PC-MHI (FY09-13)

<table>
<thead>
<tr>
<th>Time (Fiscal Year)</th>
<th>PC-MHI engagement (Percent)</th>
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<tbody>
<tr>
<td>FY09</td>
<td></td>
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<tr>
<td>FY10</td>
<td></td>
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<tr>
<td>FY11</td>
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<tr>
<td>FY12</td>
<td></td>
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<tr>
<td>FY13</td>
<td></td>
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</table>

- **Median**: (↑8.2% points)
- **25% (1st quartile)**
- **75% (3rd quartile)**

- **Clinic PC-MHI engagement** = 
  - # PC-MHI patients
  - # primary care patients

- **30% Vets with mental health diagnosis**

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7Leung et al, *J Am Board Fam Med*, 2018
Innovations in VA primary care

Implemented nationally in all primary care clinics
PACT builds on PC-MHI

• Based on Patient-Centered Medical Home model
• All patients assigned to a PACT teamlet
• Enhanced primary care staffing
  • Core team - 3 staff:1 PCP
  • Expanded (specialty) team - pharmacists, social workers, mental health providers, etc.
Study Rationale

Did PC-MHI also play a role in recent reductions in MHS visits and total VA costs?

Do PC-MHI visits…

• Improve mental health care access?
• Substitute (and reduce) MHS visits?
• Decrease total cost of VA care?
Specific Aims

To assess whether increased clinic engagement in PC-MHI is associated with changes in mental health visits and costs

Hypothesis 1: (Utilization)

\[ \uparrow \text{PC-MHI engagement} \rightarrow \uparrow \text{all VA mental health visits} \]
\[ \downarrow \text{non-PC based MHS visits} \]

Hypothesis 2: (Cost)

\[ \uparrow \text{PC-MHI engagement} \rightarrow \downarrow \text{Total cost of VA care} \]
Study design

Retrospective longitudinal cohort study using VA data

Setting: 29 VA primary care practices in S. California

Patients: Had ≥2 primary care visits in FY09 & ≥1 mental health diagnosis over study period (n=66,638)
  • Assigned to a “home clinic” where he/she received majority of primary care services in initial year
Study outcomes
(patient-level)

Healthcare utilization

Mental Health Care

PC-MHI

Non-PC based MHS

Secondary outcomes: Primary care, other specialty care, emergency (ED) visits, hospital stays

Total costs of VA-directly provided care

Main Predictor
(clinic-level)

Clinic PC-MHI engagement =

# PC-MHI patients

# primary care patients
Multivariable analyses

Multi-level negative binomial & linear regression models

3-level model
1. Patients
2. Years
3. Clinics

Random effects

Fixed effects

Adjusted SEs (for patients clustered within clinics)

• Patient characteristics (age, gender race/ethnicity, marital status, VA eligibility, disability service connection, health insurance, homelessness, distance from home to primary care clinic, Charlson Comorbidity Index, mental health diagnoses)

• Time-variant clinic characteristics (medical home implementation support)
Clinic and patient differences (high vs low PC-MHI clinics)

High PC-MHI clinics

- Bigger, ≥5000 patients/year
- VA medical center-based
- Received medical home implementation support

Patients in high PC-MHI clinics

- Older, ≥65 years
- Male
- Black
- Single/Divorced
- Chronically ill
- Homeless
- Uninsured
- Lived farther away

High PC-MHI clinics have sicker patients

- Similar rates of schizophrenia and bipolar disorder

7Leung et al, J Am Board Fam Med, 2018
PC-MHI substitutes non-primary care MHS visits

Substitution of ↑1.5 PC-MHI per ↓1 non-PC based MHS visit

↑1%-point clinic PC-MHI engagement ⇒
- ↑0.5% (0.2%, 0.9%) all VA mental health care (including PC-MHI) (p=0.003)
- ↓1.0% (-1.6%, -0.3%) non-primary care based MHS visits (p=0.002)

*Clinic PC-MHI engagement = # PC-MHI patients / # Primary Care patients

7Leung et al, J Am Board Fam Med, 2018
20%-point clinic PC-MHI engagement

- ↑10% all mental health visits
- ↓20% non-PC MHS visits
No PC-MHI effect on other utilization/cost outcomes

<table>
<thead>
<tr>
<th>Healthcare Utilization</th>
<th>Adjusted Δ (CI)</th>
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<tbody>
<tr>
<td>Primary Care</td>
<td>-0.2% (-0.7%, 0.3%)</td>
</tr>
<tr>
<td>Specialty</td>
<td>-0.02% (-0.3%, 0.2%)</td>
</tr>
<tr>
<td>ED</td>
<td>0.5% (-0.1%, 1.0%)</td>
</tr>
<tr>
<td>Hospitalizations</td>
<td>0.1% (-0.4%, 0.6%)</td>
</tr>
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<table>
<thead>
<tr>
<th>Costs</th>
<th>Adjusted β (SE)</th>
</tr>
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<tr>
<td>Log of VA healthcare costs</td>
<td>-0.2 (0.2)</td>
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</tbody>
</table>

** p<0.05

Clinic
PC-MHI engagement*

- Primary care
- Specialty care
- ER/Hospitalizations
- Total VA costs of care
Corroborating previous research

• **Covariates associated with ↓ mental health utilization**
  - Over time, clinics with PACT implementation support, older patients, male patients

• **Covariates associated with ↑ mental health utilization**
  - Single, service-connected disability, uninsured, homeless, shorter distance to clinic, chronically ill, mentally ill (except sociopathy) patients

• **No significant racial-ethnic differences**
Sensitivity and additional analyses

- Mortality outcome
- Clinics where PC-MHI programs are required or not
- Others:
  - All primary care patients, including those without mental illness
  - Medical comorbidities (≥2 Charlson Comorbidity Index)
  - 65 years or older (eligible for Medicare)
  - Died or left VA outpatient care (no FY13 visits)
Study Rationale

Substitution of ↑1.5 PC-MHI per ↓1 non-PC based MHS visit

Does this substitution reflect appropriate assessment/triage in primary care or indiscriminate reduction of MHS visits?
Poll Question #3

- For which condition is your PC-MHI team most helpful?
  a. Depression
  b. Alcohol and substance use disorder
  c. PTSD and anxiety
  d. Schizophrenia and bipolar disorder
  e. Other (sleep, pain, etc.)
Specific aims

To assess

(1) which non-PC based MHS visits are reduced by increasing clinic PC-MHI engagement over time

(2) which patient subgroups are affected by this reduction

**Hypothesis 1:**

\[ \text{Clinic PC-MHI} \rightarrow \downarrow \text{general MHS visits} \]  
engagement \quad \text{No } \Delta \quad \text{in more specialized MHS visits}

**Hypothesis 2:**

\[ \downarrow \text{ in general MHS visits, occurring in only patients with depression} \]  
and \textbf{not} in patients with schizophrenia and bipolar disorder
More mental health utilization outcomes

Mental Health Care

PC-MHI

Non-PC based MHS

General MHS

Level 1 Primary Care (includes PC MHI)

Level 2 General Mental Health Team based Care

Level 3 Specialty Outpatient Programs

Level 4 Residential Rehabilitation & Treatment Programs

More specialized MHS

Levels of Mental Health Care
Multivariable analyses

Multi-level negative binomial & linear regression models

3-level model
1. Patients
2. Years
3. Clinics

Random effects

Fixed effects

Adjusted SEs
(for patients clustered within clinics)

• **Patient characteristics** (age, gender race/ethnicity, marital status, VA eligibility, disability service connection, health insurance, homelessness, distance from home to primary care clinic, Charlson Comorbidity Index, mental health diagnoses)

• **Time-variant clinic characteristics** (medical home implementation support)
Multivariable analyses

Multi-level negative binomial & linear regression models

Stratified analysis by patients with...

- Depression (n=37,616)
- Psychotic disorders (i.e., schizophrenia, bipolar disorder) (n=7,662)
- Interactive effect (diagnosis*clinic PC-MHI engagement)
PC-MHI substitutes lower level MHS visits

↑ 1%-point clinic PC-MHI engagement →
↓ 1.2% general MHS visits (CI=-2.0, -0.4%; p<0.001)

No PC-MHI effect on more specialized MHS visits

*Clinic PC-MHI engagement = # PC-MHI patients / # Primary Care patients

8Leung et al, Psychiatr Serv, 2017
PC-MHI substitution targets depressed patients

↑1%-point clinic PC-MHI engagement →
↓1.1% general MHS visits (CI=-1.8%. -1.4%; p=0.01)

No PC-MHI effect on general MHS visits for patients with schizophrenia and bipolar disorder. Subset difference was not statistically significant when PC-MHI interactive effect included.

*Clinic PC-MHI engagement = # PC-MHI patients / # Primary Care patients

8Leung et al, Psychiatr Serv, 2018
Limitations

• Administrative data limited by incompleteness/inaccuracies
• Longitudinal cohort study affected by patient dropouts or clinic switches
• Study represents VA primary care clinics in S. California

Strengths

• First longitudinal examination of full-range of healthcare utilization and costs related to PC-MHI
• Early effort toward development of quality measures for dissemination and implementation of integrated care
Conclusions

As intended, PC-MHI shifts mental health care from specialty to primary care for targeted Veterans – improving access to mental health care, without increasing costs, acute care use, or mortality.
Policy implications

Recommend VA continue to increase availability of PC-MHI services, expanding prompt access to mental health care for primary care patients

- Substitute shorter term mental health care within primary care for less severely affected patients
- Preserve access to traditional VA mental health services required by those with severe, chronic mental illness
Future research

1. How does PC-MHI vary from primary care clinic to clinic?
   - PC-MHI organizational survey targeting primary care lead clinicians in collaboration with VISN 22 primary care and mental health leadership

2. How should PC-MHI be tailored for women Vets?

3. Do these findings generalize to...
   - All VA primary care clinics across the country (serving ~6 million Veterans)?
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Questions/Comments? Thank you!
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References


