Mental Health Care during Periodic Health Exams

How Do They Occur and How Long Do They Last
Research Team

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Acknowledgement

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Introduction

• The majority of patients with mental health (MH) concerns turn to their primary care physicians (PCPs) for guidance and help.
  – Unutzer et al 2006

• Annual physicals are intended to provide comprehensive preventive care, diagnostic, and treatment services.
Research Questions

Might annual physicals offer patients an opportunity to receive mental health services?
• How often? For how much time?
• How did physician communication styles and patient activation relate to length of MH discussion?
• How did the level of mental health needs affect the length of MH discussions?
• If MH discussion occurred, what did it look like?
Preventive Health Discussion - PHD Study

• Patients were drawn from a sample of 500 patients who participated in a study on physician-patient communication
• An integrated delivery system in Detroit
• February 2007 to June 2009
• Inclusion criteria:
  – 50 to 80 years of age
  – enrolled in a health plan
  – scheduled a routine annual preventative checkup with a participating PCP, and
  – due for a CRC screening at the time of the checkup (Shires et al 2012)
Data (PHD Study, Continued)

• A brief telephone survey at the time of recruitment into the study
  – PHQ2 screening,
  – socio-demographic characteristics.

• The physical was observed and audio-recorded by a research assistant.
Data for Mental Health Discussion (MHD) Study

• Subsample of 261 patients
• Patient inclusion criteria:
  – scored ≥2 on the PHQ2
  – filled or were prescribed a psychotropic medication in the 12 months before the observed visit, or
  – had a mental health Dx the EMR, or
  – visited a BH center in the 12 mos before the visit
• EMR 12 mos before and 12 mos after the observed visit
• Characteristics of participating PCPs
Methods

• Mixed Methods
  – Qualitative
    • Coding of audio recording and transcripts
      – Nature of discussion: Topics
  – Quantitative
    • Coding of the time spent on each topic, defined as the amount of time between the start and end of all instances of the topic. (Tai-Seale, McGuire, and Zhang 2007)
    • Descriptive
    • Zero-Inflated Negative Binomial Model
  – Triangulation
Figure 1: Flow of Conversation during a Visit

Tai-Seale, McGuire, and Zhang, HSR, 2007
# MHD Study Patients

<table>
<thead>
<tr>
<th></th>
<th>All patients</th>
<th>W/o MH</th>
<th>With MH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample</strong></td>
<td>261</td>
<td>62.8%</td>
<td>37.2%</td>
</tr>
<tr>
<td><strong>Mean pt age (SD)</strong></td>
<td>59.5 (8.2)</td>
<td>60.0*</td>
<td>58.6</td>
</tr>
<tr>
<td><strong>Pt Male</strong></td>
<td>37.2%</td>
<td>74.2%**</td>
<td>25.8%</td>
</tr>
<tr>
<td><strong>Pt non-white</strong></td>
<td>34.9%</td>
<td>73.6%*</td>
<td>26.4%</td>
</tr>
<tr>
<td><strong>Pt not high sch/GED or higher</strong></td>
<td>4.6%</td>
<td>91.7%**</td>
<td>8.3%</td>
</tr>
<tr>
<td><strong>An anxiety attack in past 4 wks</strong></td>
<td>8.8%</td>
<td>39.1%</td>
<td>60.9%***</td>
</tr>
<tr>
<td><strong>Mean PHQ2 (SD)</strong></td>
<td>1.1 (1.5)</td>
<td>0.9</td>
<td>1.5***</td>
</tr>
<tr>
<td><strong>Mean Charlson score (SD)</strong></td>
<td>0.8 (1.4)</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Mean MD verbal dominance (SD)</strong></td>
<td>3.2 (2.2)</td>
<td>3.5***</td>
<td>2.7</td>
</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, ***p<0.01
## MHD Study Patients – con’t

<table>
<thead>
<tr>
<th></th>
<th>All patients</th>
<th>W/o MH</th>
<th>With MH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt activation</td>
<td>10.3%</td>
<td>51.9%</td>
<td>48.2%</td>
</tr>
<tr>
<td>Pt Ongoing MH Episode of Care</td>
<td>36.8%</td>
<td>55.2%</td>
<td>44.8%*</td>
</tr>
<tr>
<td>Mean N of evidence-based services Delivered (SD)</td>
<td>2.9 (1.5)</td>
<td>2.8</td>
<td>3.2*</td>
</tr>
<tr>
<td>Mean N of pt visits on the day (SD)</td>
<td>14.6 (4.7)</td>
<td>13.9</td>
<td>15.7***</td>
</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, ***p<0.01
### Topics Distribution & Time on Topic

<table>
<thead>
<tr>
<th>Topic Domains</th>
<th>N (%)</th>
<th>Mean</th>
<th>Median</th>
<th>S.D.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical</td>
<td>2,995 (62%)</td>
<td>67.1</td>
<td>43</td>
<td>80.4</td>
<td>5</td>
<td>856</td>
</tr>
<tr>
<td>Health behavior</td>
<td>525 (11%)</td>
<td>56.0</td>
<td>30</td>
<td>67.5</td>
<td>5</td>
<td>543</td>
</tr>
<tr>
<td>Mental health</td>
<td>102 (2%)</td>
<td>146.3</td>
<td>63</td>
<td>211.7</td>
<td>2</td>
<td>1401</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>561 (12%)</td>
<td>44.6</td>
<td>28</td>
<td>51.9</td>
<td>5</td>
<td>464</td>
</tr>
<tr>
<td>Pt-MD rltanship</td>
<td>67 (1%)</td>
<td>50.3</td>
<td>26</td>
<td>52.6</td>
<td>6</td>
<td>293</td>
</tr>
<tr>
<td>Visit flow mgmt</td>
<td>448 (9%)</td>
<td>52.9</td>
<td>23</td>
<td>99.2</td>
<td>5</td>
<td>814</td>
</tr>
<tr>
<td>Other</td>
<td>104 (2%)</td>
<td>54.5</td>
<td>32</td>
<td>62.4</td>
<td>5</td>
<td>480</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,802</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research Questions

• For how much time?

• Relationships with
  – physician communication styles
  – patient activation
  – level of mental health needs?

• If MH discussion occurred, what did it look like?
Empirical Model

Zero-inflated negative binomial model
where ... =
- MD verbal dominance in other visits
- Patient activation (brought a list)
- MH needs (PHQ2 score, anxiety attack)
- Episode of MH care (ongoing vs. not)
- N of evidence-based services delivered in visit
- N of patient scheduled on the day of the visit
- Covariates (age, gender, edu, race, Charlson)
# Results from Zero-Inflated Negative Binominal Model: Main covariates

<table>
<thead>
<tr>
<th></th>
<th>Prob (No MHD)</th>
<th>Count (Time on MHD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD Verbal Dominance</td>
<td>0.151</td>
<td>** -0.084</td>
</tr>
<tr>
<td>Pt activation</td>
<td>-0.695</td>
<td>-0.078</td>
</tr>
<tr>
<td>PHQ2</td>
<td>-0.284</td>
<td>*** 0.215</td>
</tr>
<tr>
<td>Had an anxiety attack in last 4 weeks</td>
<td>-0.805</td>
<td>1.014 **</td>
</tr>
<tr>
<td>N</td>
<td>242</td>
<td></td>
</tr>
</tbody>
</table>

* p<0.10, ** p<0.05, ***p<0.01
## Results: Remaining Covariates

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Prob (No MHD)</th>
<th>Count (Time on MHD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt Ongoing Episode of Care for MH</td>
<td>-0.549</td>
<td>* 0.534</td>
</tr>
<tr>
<td>N of evidence-based services delivered</td>
<td>-0.143</td>
<td>-0.030</td>
</tr>
<tr>
<td>N of pt visits on the day</td>
<td>-0.090</td>
<td>*** -0.069</td>
</tr>
<tr>
<td>Charlson score</td>
<td>-0.171</td>
<td>-0.025</td>
</tr>
<tr>
<td>Pt Age</td>
<td>0.036</td>
<td>* -0.034</td>
</tr>
<tr>
<td>Pt Male</td>
<td>0.837</td>
<td>*** -0.754</td>
</tr>
<tr>
<td>Pt non-white</td>
<td>1.060</td>
<td>*** -0.793</td>
</tr>
<tr>
<td>Pt not HS grad or higher</td>
<td>2.087</td>
<td>* -1.130</td>
</tr>
</tbody>
</table>

*N* 242

* * p<0.10, ** p<0.05, *** p<0.01
What’s behind the numbers?

STATISTICS ARE PEOPLE WITH THEIR TEARS WIPED AWAY
Research Questions

• For how much time?
• Relationships with
  – physician communication styles
  – patient activation
  – level of mental health needs?
• If MH discussion occurred, what did it look like?
Emergent Qualitative Insight

• Mental health concerns may be the true reason for some patients to schedule an annual “physical”
  – 1st topic
  – Asking for antidepressants at the get go
  – Crying at the beginning of the visit
  – “And I knew as soon as I saw you I would start to cry.”
Verbal Dominance - High

• With MHD
  – PHQ2=4
  – In a litany - “...and the ADHD”
  – Dictates in front of patient

• Without MHD
  – PHQ2=3
  “I think we covered everything. Is there anything you wanted to talk about?
I did a lot of talking.”
Verbal Dominance - Median

• With MHD
  – PHQ2=6,
  – Pt cries because her son is dead
  – MD shows repeated empathy, and investigates her current mental health. Already had an anxiety diagnosis, and encouraged her to seek more counseling.

• Without MHD:
  – PHQ2=3
  – pt very assertive/active
  – MD asks pt has any concerns, middle of visit
Verbal Dominance - Low

• No MHD:
  – PHQ2=3
  – MD missed many opportunities to explore
  – Pt repeatedly: “going through a hard time”

• With MHD:
  – PHQ2=6
  – explored empathic opportunities
  – asked several PHQ9 questions
  – Diagnosed depression and prescribed Effexor
Short Shrifts

• The shortest mental health discussions: 0.6 minutes
  – Patient’s PHQ2=6
  – was under the care of behavioral health specialists.
  – PCP: “Are you still seeing Dr. xyz (name of the psychiatrist)?”
  – No formal assessment of MH.
Topic length: Mental health – 7:17

Biomedical - 20:48
Misplaced Priorities

When we're spending time doing things that don't potentially benefit people and skipping things that may be of benefit, that's a sign not only of waste but of misplaced priorities.

Russell Harris, MD
University of North Carolina
Discussion

• Annual Physical - A Time Honored Tradition
• Some patients’ potentially urgent mental health needs are unmet
• Verbal dominance negatively associated with mental health care in PHE
• Disparities due to age, gender, education, and race
Let’s (Not) Get Physicals

By ELISABETH ROSENTHAL
Published: June 2, 2012
272 Comments

Got Mental?
Thank You!

Work-in-Progress
Question & Comments Are Appreciated
Tai-sealem@pamfri.org
The Patient Health Questionnaire-2 (PHQ-2)

Patient Name __________________________________________ Date of Visit ____________________

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

<table>
<thead>
<tr>
<th></th>
<th>Not At all</th>
<th>Several Days</th>
<th>More Than Half the Days</th>
<th>Nearly Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Feeling down, depressed or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

A PHQ-2 score ranges from 0-6. The authors\(^1\) identified a PHQ-2 cutoff score of 3 as the optimal cut point for screening purposes and stated that a cut point of 2 would enhance sensitivity, whereas a cut point of 4 would improve specificity.

Kroenke et al. 2003, Medical Care
## High PHQ2 Short MHD

<table>
<thead>
<tr>
<th>VisitID</th>
<th>Visit Length</th>
<th>Time MH Start</th>
<th>Part of Litany</th>
<th>PHQ2</th>
<th>MH topic length</th>
<th>Physical exam length</th>
</tr>
</thead>
<tbody>
<tr>
<td>78006</td>
<td>36</td>
<td>14:36</td>
<td>Yes</td>
<td>4</td>
<td>6 s</td>
<td>407 s</td>
</tr>
<tr>
<td>97211</td>
<td>30</td>
<td>8:33</td>
<td>No</td>
<td>6</td>
<td>34 s</td>
<td>619 s</td>
</tr>
<tr>
<td>25767</td>
<td>31</td>
<td>3:07</td>
<td>No</td>
<td>6</td>
<td>74 s</td>
<td>511 s</td>
</tr>
<tr>
<td>40336</td>
<td>28</td>
<td>9:22</td>
<td>Yes</td>
<td>3</td>
<td>19 s</td>
<td>739 s</td>
</tr>
<tr>
<td>59755</td>
<td>15</td>
<td>11:28</td>
<td>No</td>
<td>4</td>
<td>24 s</td>
<td>186 s</td>
</tr>
<tr>
<td>77854</td>
<td>24</td>
<td>1:57</td>
<td>No</td>
<td>4</td>
<td>120 s</td>
<td>438 s</td>
</tr>
<tr>
<td>36367</td>
<td>35</td>
<td>11:45</td>
<td>No</td>
<td>3</td>
<td>88 s</td>
<td>756 s</td>
</tr>
<tr>
<td>63267</td>
<td>26</td>
<td>0:18</td>
<td>No</td>
<td>4</td>
<td>58 s</td>
<td>330 s</td>
</tr>
</tbody>
</table>
Views from A Psychiatrist

• She would love all her primary care colleagues to inquire more deeply about the mental well-being of their patients with more than just, “are you still seeing your psychiatrist?”

• Because:

  – The majority of those who commit suicide saw a PCP within 6 months of their death.
  – When she gets phone calls from PCPs who do screen more extensively, they are better able to collaborate on the care of the patients they co-manage,
    • including instruction about medication titration and
    • support from the PCP for the patient to be more engaged with their mental health treatment.

• She wasn’t necessarily surprised by the finding on co-location
  – “Our building has Behavioral Health, people know where to go.”

• Do they go?
It’s not like you’re going through depression”

Patient 8: = but I wake up . . . maybe three hours into it and then I’m up for two hours and I go back to sleep. And a lot of it is when things are on your mind =

Doctor D: Yep. Yep. Mm-hmm ....

Patient 8: = it, yeah. And it’s, it’s depressing . . . .

Doctor D: Because at this time, it’s not like you’re going through depression.

Patient 8: Yeah.

Doctor D: Okay? Medical depression is where it interferes with your day to day stuff, you’re withdrawn, you don’t socialize, you’re snappy and stuff like that. You don’t have all that. It’s mainly because of the stress and just adjustment ... And uh, maybe, I can give you a few sleeping pills to take for the time being that would help.

Patient 8: [cries] . . . she doesn’t start her first treatment until Monday. And I think if I notice a big difference, down difference with her, then I don’t know, it won’t be so easy to handle . . . So maybe I’ll call

• Post-visit EMR data showed that patient received prescriptions for an antidepressant, a few months later.