Which and Whose Values Matter?

RISK Prediction

Prospective Information
Quality of Life
Strata
Service

Part One
John.H.Wasson@Dartmouth.edu

Retrospective Data
Control Regulate
Strata
R^2
Stratify On Cost Risk

Figure Out ?

How to Engage

Provide More of ?

The Few Based On ?

What Matters Index (WMI)

1. Insufficient Health Confidence
2. Bothersome Pain
3. Bothersome Emotional Problems
4. Polypharmacy
5. Adverse Effects from Medications

Standardized “What Matters”; Places On "Same Page"

Immediate Service

Stratification and Tailored Intensification

Outcome Monitoring

Quality of Life

“With similar accuracy to expensive computer-generated risk models the WMI guides the delivery of services to patient categories based on their risk for subsequent costly health care.”

<table>
<thead>
<tr>
<th>WMI ≥ 3</th>
<th>(2.6–3.3)</th>
<th>(2.9–4.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMI = 2</td>
<td>(1.6–2.1)</td>
<td>(1.5–2.4)</td>
</tr>
<tr>
<td>WMI = 1</td>
<td>(1.1–1.4)</td>
<td>(1.1–1.6)</td>
</tr>
</tbody>
</table>

Odds Ratio Compared to a WMI of 0 (and 95% Confidence Interval)

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0192475
Retrospective, Long Latency Computerized “Risk” Models Identify Proportionally More (37% vs 18%) ... But Miss Many (n =1349)

<table>
<thead>
<tr>
<th>Cutoff for a Computerized “Risk” Model</th>
<th>Any Hospital Use During Next Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest (10%) “Risk” Decile</td>
<td>358 (37%)</td>
</tr>
<tr>
<td>Lower (90%) “Risk” Deciles</td>
<td>1349 (18%)</td>
</tr>
</tbody>
</table>

Of 8619 Medicaid Patients With Chronic Conditions
Retrospective, Long Latency Computerized “Risk” Models Are Agnostic to Current Patient-Reported Risks*

<table>
<thead>
<tr>
<th>Cutoff for a Computerized “Risk” Model</th>
<th>Number With WMI ≥ 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest (10%) “Risk” Decile</td>
<td>659 (68%)</td>
</tr>
<tr>
<td>Lower (90%) “Risk” Deciles</td>
<td>3939 (52%)</td>
</tr>
</tbody>
</table>

* Patient Reported Risk exemplified here by a WMI ≥ 2.

The false negative rate of patient-reported risk is six times greater (3939) than those (659) who fell into the highest decile by the computerized risk model.
A Common Reaction: Why not hybridize retrospective computerized risk models with the WMI?

• Combining two data sets is a costly challenge
• It doesn’t increase accuracy very much
• Large numbers of false negatives remain
• Unless a screening WMI takes precedence, hybridization will be agnostic to the many false negative patient who have a WMI ≥ 2
Thus the central question of this session:

Why listen to the outdated noise from a computerized risk model (and its touted predictive analytic output) when a timely signal from the What Matters Index is so easy to hear?
The WMI: Simplifies, Interprets and Directs To a free, standard process from HowsYourHealth.org

- Address WMI Issues and Monitor
- Assist with HYH; Community Linkages
- If Bothersome Pain and Emotional Problems, facilitate use of the Problem Solving Module

What is How’s Your Health?
- Supports partnership, engagement, confidence building

<table>
<thead>
<tr>
<th>Patients</th>
<th>Clinicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback on experience</td>
<td>Make improvements</td>
</tr>
<tr>
<td>Health Status and Issues</td>
<td>Learn Patient Population Health</td>
</tr>
<tr>
<td>Build Confidence</td>
<td>Enhance Support</td>
</tr>
</tbody>
</table>

WMI Sum ≥ 2

WMI Sum = 0

WMI Sum = 1

Address WMI Issue

Usual Care

YES!

Also Suggest
Self-Reported Adverse Events In Past Year
(Unnecessary Emergency Department or Hospital, Harms or Medication Side Effects)
For 46 Clinical or Regional Settings

- **Lower Tertile of Health Confidence** (range 11-48)
  - 95% C.I. ± 9
  - Of Which Unnecessary Emergency Department or Hospital Use

- **Middle Tertile of Health Confidence** (range 50-57)
  - 95% C.I. ± 7

- **Higher Tertile of Health Confidence** (range 59-71)
  - 95% C.I. ± 4

Unpublished, Practice-Based Findings Supporting Patient-Based Results Published In:
Bottom Line:
The What Matters Index
Points To Where Management Matters
(And Efficient “Next Steps” As Well)
In summary, a hypothesis that health services should engage every patient in the management of common, self-reported, essential needs seems a stronger and more ethical foundation for high-value health care than the current, widely accepted one that more care should be offered to an inaccurately designated few.

This truly patient-centered method also overcomes the inadequacies of the current paradigm that health care executives most frequently cite, namely, high direct costs, the need for sophisticated technology or specialized employee training, potential regulatory challenges, and the burdens of either insufficient or excessive data.

We Have The Need
(Retrospective Data Gathering and Crunching Is Very Costly In So Many Ways)

Decreeing Measures That Don’t Matter
(Definition of Quantophrenia)

Sorry to bother you, Doctors, but might you have time to see any patients today?

Does anyone have a better way to improve value?

Why not use a What Matters Index?
Needed: Total Cost-Effectiveness Comparison

RISK
Prediction and Management

Handout
# Ask Yourself These Five Questions to Improve Your Health and Health Care

**During the past 4 weeks, how much have you been bothered by emotional problems such as feeling anxious, depressed, irritable, or sad?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>QUITE A BIT</th>
<th>EXTREMELY</th>
</tr>
</thead>
</table>

**During the past 4 weeks, how much bodily pain have you generally had?**

<table>
<thead>
<tr>
<th>No pain.</th>
<th>Very mild pain.</th>
<th>Mild Pain</th>
<th>MODERATE PAIN</th>
<th>SEVERE PAIN</th>
</tr>
</thead>
</table>

**How many different prescription medications are you currently taking more than three days a week?**

<table>
<thead>
<tr>
<th>None</th>
<th>1-2</th>
<th>3-5</th>
<th>MORE THAN 5</th>
</tr>
</thead>
</table>

**Do you think that any of your pills are making you sick?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>MAYBE, I AM NOT SURE</th>
<th>I am not taking any pills</th>
</tr>
</thead>
</table>

**How confident are you that you can control and manage most of your health problems?**

<table>
<thead>
<tr>
<th>Very confident</th>
<th>SOMEWHAT CONFIDENT</th>
<th>NOT VERY CONFIDENT</th>
<th>I do not have any health problems</th>
</tr>
</thead>
</table>

**Instructions:**

- Pick the one answer that describes you best for each of the five questions.
- Whenever your answer is in **BIG PRINT**, give yourself one point. You can have at most 5 points and at least, no points.
- Add up your points. People with a sum of two or higher have an increased risk of using the hospital or emergency room during the next year. Therefore, they need to make sure that doctors or nurses are aware of the needs and that they have good communication with all health professionals. They also benefit when they complete full check-up using [www.HowsYourHealth.org](http://www.HowsYourHealth.org) and bring the results (the Action Form) to their clinical appointments. HowsYourHealth also automatically creates a personal health record that can be used to keep track of their progress.
- A person with a sum of one should consider taking similar action as a person with a sum or two or more.
- If you are **SOMEWHAT OR NOT VERY CONFIDENT**, ask yourself “what would it take for you to be able to say that you are very confident that you can control most of your health problems during the next two months?” Write that plan here and share it with someone who can help you.
Patient Assessment Tools
- What Matters/Function
- Prevention
- Conditions and Symptoms

Health Action Package
- Summary for Clinicians
- Problem Solving Tools
- Online Motivational Guidance

Tailored Patient Resources
- Informational
- Community Links
- Personal Portable Health Record

Improvement and Care Management
- Interactive Patient Registry
- Population Summary Data
- Benchmark Attainment
- Additions for Regulation/Certification
  - Customization Options
  - Added Queries
  - On-line Consent for Longitudinal Data
  - Community Links

Since 1994, researchers, patients and hundreds of health professionals in the US and Canada have tested and improved the freely available www.HowsYourHealth.org and its family of tools including the customizable What Matters Index. Contact John.H.Wasson@Dartmouth.edu with questions.