Opening and Understanding the Black Box: Technology-assisted, Goal-directed Care Conversations During Annual Wellness Visits

Ami Dave

Mentor: Dr. Zsolt Nagykaládi
Outline

• Background
• OUFMC Annual Wellness Visits Project
• Protocol
• IQR Data Analysis
• Conceptual Model
• Future Work
Background

• Healthcare today is focused on:
  – Biomedical determinants
  – Health “problems”
  – Targeted interventions
• Disease-driven, problem-oriented care approach
• Healthcare providers have limited access to tools that measure behavioral risks and how these risks impact long-term health outcomes
“Ready, Set, Go” Model of the Impact of Wellness Portal [1]

* Patient actively prepares for an annual wellness visit ("homework" assignment).
** Includes primary, secondary and tertiary prevention.

Slide created by Dr. Nagykaldi
Feeding the HRA Risk Engine: Patient Contributions (Portal)

215 health-related risk factors & preferences in 13 domains
Parametric estimates:  
(for clinicians)  
- ELE, EHE/DFLE, [RRI/RRR]

Visual-analog derivatives:  
(for patients)  
- RealAge, Wellness Score

Qualitative assessment:  
- Health strengths and challenges

Total health benefit:  
- Total life-years gained

Individual health benefit:  
- Estimated impacts of attaining individual patient goals

HRA Report

Personalization

Prioritization

Maximum health benefit that can be gained when all services are completed or maintained:
4.85 additional years of life

Preventive services ranked in a decreasing order of health benefit:
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources
- Link to Resources

Preventive Services
- Physical activity improvement
- Weight control
- Blood sugar control
- Stress reduction
- Adjusting sleeping time
- Blood pressure control (~130/85)
- Healthier diet
- Annual flu shot
- PAP smear
- Folac acid supplementation
- Pneumonia vaccination
- Sun exposure protection

Share of Benefit

Slide created by Dr. Nagykaldi
Medicare Annual Wellness Visits (AWVs)

• New payment structure in 2010 incorporated personalized preventive care services\(^3\)
• Opportunity for focus to shift away from disease-based care
• Primary care physicians can better align health measures with sustainability
• New practices for implementing AWVs in primary care settings
OUFMC Medicare AWV Project

- Physician faculty from Blue, Rose, and Purple clinics
- Patient inclusion criteria:
  - Established – 2 visits in past 12 months
  - Limited number of health conditions
  - 85 years old or younger
  - Patient’s primary care physician agrees
OUFMC Medicare AWV Project

• Patients complete HRA via online Wellness Portal
• Personalized HRA report printed and given to patient before PCP enters exam room
• Patient and PCP will discuss HRA report during visit and agree on wellness plan
• Physicians will participate in a pre-post study:
  – Baseline: March - mid July, 2015 (no intervention)
  – Intervention: from mid July, 2015 (30 minute web-based tutorial on motivational interviewing – MI)
  – MI tutorial and their AWV patients also receive a pre-visit orientation about health priorities and effectively participating in shared decision-making
Hypothesis

Combined clinician and patient education and preparation will result in more effective “change talk” conversations and SMART goal-setting in the context of AWVs.
Methods

• Sessions are audio/video recorded
  – Cameras only show consultation area of exam room
  – Patients are free to terminate the recording at any time

• Analyzed using iterative content analytic technique based on the Conversation Analysis approach\(^4\)
  1. Select a sequence of interest
  2. Characterize the actions in the sequence
  3. Consider how the speakers have packaged their actions
  4. Consider speakers’ timing and taking of turns
  5. Consider the implications of the actions accomplished for the clinician and patient
**Conversation Analysis Example**

<table>
<thead>
<tr>
<th>Time Anchor</th>
<th>Characterization of Action* (what is accomplished via communication)</th>
<th>Packaging of Action* (how messages are communicated)</th>
<th>Potential Implications of Action* (impact on decision making or goal setting)</th>
<th>NOTES (Context, observations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Pt brings up her concerns about how the HRA asks about mental health</td>
<td>Dr makes sure that patient is not currently depressed or suicidal</td>
<td>Pt and dr spend time talking about mental health</td>
<td>Pt states she had suicidal thoughts in the past but her family and friends are her support system now</td>
</tr>
<tr>
<td>9:30</td>
<td>Dr addresses pt’s concerns about how her pain limits her physical activity</td>
<td>Dr listens to and empathizes w/pt concerns and offers possible solutions</td>
<td>Pt is reassured and more likely to set reasonable exercise goals</td>
<td>Dr recommends exercise for 10 min 3x day instead of 30 min all at once</td>
</tr>
<tr>
<td>10:00</td>
<td>Pt brings up her yoga practice</td>
<td>Dr encourages and inquires about any pain</td>
<td>Pt continues yoga practice</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Dr discusses benefits of long term yoga</td>
<td>Addressing pt concerns about mastering poses and benefits of practice</td>
<td>Alleviate pt frustrations and encourage continued yoga practice</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Dr and pt discuss similarities between yoga and physical therapy exercises</td>
<td>Exploring options of how to lessen pt's hip pain</td>
<td>Pt continues with yoga and therapy exercises</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Dr discusses benefits of “cat/cow” yoga pose in alleviating back pain</td>
<td>Dr demonstrates how to do pose correctly and speaks about her personal benefits from pose</td>
<td>Pt could incorporate pose into yoga practice to help with back pain</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Dr inquires if pt feels depressed</td>
<td>Shifting focus back to HRA report and expressing concern about pt's mental health</td>
<td>Dr shows her concerns about pt's mental health, pt evaluates stressors/trigger in her life</td>
<td></td>
</tr>
<tr>
<td>12:30</td>
<td>Pt discusses stressors at her previous job</td>
<td>Dr listens to concerns and reaffirms pt's decision to remove herself from that environment</td>
<td>Pt feels good about her decisions and continues to avoid stressors</td>
<td></td>
</tr>
</tbody>
</table>
Timing and Taking Turns
Analysis Example

<table>
<thead>
<tr>
<th>Conversation Unit (turn sequence number)</th>
<th>How turn was obtained (question, response, initiate)*</th>
<th>Who speaks (pat, clinician, other)</th>
<th>How Long They Speak (approximately in seconds)</th>
<th>Cutting Into Other (check if yes)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>i</td>
<td>p</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>r</td>
<td>c</td>
<td>2</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>r</td>
<td>p</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>i</td>
<td>p</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preliminary Results
Exit Interview Analyses
(Preliminary N=21)

• 77% of patients answered pre-visit calls
• 30% said they would complete HRA at home
  – 11% actually completed HRA at home
• Average time to complete HRA: 25 mins
  – Range: 10-60 mins
• Average clinician visit time: 28 mins
  – Range: 15-60 mins
Exit Interview Analyses (Preliminary N=21)

• 45% of patients thought the visit using HRA tool was different than wellness visits in the past
• 85% of patients rated the visit using HRA tool as better than their past wellness visits
• Average rating of visit (scale of 1-10): 8.125
  – Range: 5-10
Clinician: 51% of turns, Patient: 45% of turns, Other: 4% of turns
Timing Analyses (N = 2311 turns)

- Clinicians talked 51% of the time (total)
- Patients talked 45% of the time (total)
- Significant variation by clinician and visit
- Clinician and patient BOTH talked for an average of 9.5 seconds (measured over all turns)

- 1st clinician cut-in: 15th turn (~2.3 minutes)
- Clinician cut-in: 9% of turns
- Patient cut-in: 5% of turns
Qualitative Analyses – Emerging Categories

- Communication
- System/Process of Care
- Patient Focus/Priorities/Agenda
- Clinician Focus/Priorities/Agenda
- Technology Use/Usability
- Goal Setting Conversation
- Patient Readiness for Change
- Patient Barriers
- Clinician Barriers
- Clinician Skills/Experience/Approach
- Overall AWV Experience
- Purpose/Framing of AWV
- Research Artifacts
AWV Examples

• Communication
  – Clinician demonstrates yoga poses in the context of physical activity conversation

• Goals and Focus
  – Patient wanted to get medication refilled (clinician redirected the conversation)

• Care Delivery Process
  – Clinician put behind schedule because patient had to fill out HRA at the office (delay as barrier)
AWV Examples

• Wellness Plan Barriers
  – Three interview-style HRA completions due to personal limitations (eyesight, literacy)

• Patient Readiness for Change
  – Patient is not ready to quit smoking, but after conversation with clinician, agrees to try vaping
  – Two patients came back reporting that they had made changes to address unhealthy behaviors

• Patient Experience
  – Patient put the HRA report straight into her purse without looking at it
Future Work

• Continue collecting data on AWVs
• Analyze conversations in detail (LOTs of potential for more outcomes)
• Refine and validate conceptual model
• Possible patient intervention
  – Verbal introduction to frame the visit and orient the patient
  – Educational handout explaining AWV
  – Electronic portal
Future Work – Conversation Analyses

• Who introduces change talk and when
• How often change talk is used and which effective elements are present
• What conversation precedes change-talk and how it moves to identifying barriers to change
• What helps conversation move toward goal-setting
• What goals are set and how patients take ownership of their goals (follow-up)
Acknowledgements

• Dr. Nagykaldi
• Dr. Scheid
• Dr. Reilly
• Dr. Kelley
• Dr. Tietze
• Dr. Wickersham
• Connor Kristof
• Sravanthi Utpala
• Tanya Watts
References


