Medication Adherence Project

Training residents to use motivational interviewing skills and health literacy tools to improve patient medication adherence: a quality improvement research study

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Disclosures

The presenter has no relevant financial relationships with any commercial interests to disclose
Agenda

1. Intro to Medication Adherence
2. Overview of the “Medication Adherence Project”
3. Resident Skills Training
4. Accomplishments to date
5. Moving forward using lessons learned
Medication Adherence - Why should we care?

For every 100 prescriptions written:
- 50-70 are filled at the pharmacy
- 48-66 are picked up from the pharmacy
- 25-30 are taken properly
- 15-20 are refilled as prescribed


AMERICAN COLLEGE OF CARDIOLOGY

MED ADHERENCE

This problem causes...

Nearly 1/3 of medicine-related hospitalizations

Nearly 125,000 deaths in the U.S. each year

Number of Americans affected by a chronic condition requiring medication therapy is expected to grow from 133 million to 157 million by 2020

Nearly 3 out of 4 Americans admit that they do not always take their medication as directed

Almost $300 billion in avoidable costs to the healthcare system annually
RIP P4P, Hello Outcomes

Financial incentives shift to quality, not quantity

Triple Aim Initiative:
• Improve patient satisfaction
• Increase health of populations
• Lower per-capita costs
Motivational Interviewing Works...
Motivational Interviewing Defined

**Definition:** a patient-centered, collaborative technique for eliciting patient’s own motivation for change; using good rapport to help the patient explore and resolve ambivalence about change.

**Purpose:** To connect behavior change to the patient’s own values and concerns.
Change is hard!
See Handout
"Do not consume alcohol while taking this medication" seems like a challenge to me.
Perceptions of Med-Peds Residents Regarding Medication Adherence

4) In your experience, what are the most significant patient barriers to medication adherence?

- Comprehension: lack of understanding (e.g. of their medical conditions, the need for taking their medications, or verbal or written information) - 9 (75%)
- Proficiency: Lack skills to organize and keep track of complicated medication regimens - 8 (66.7%)
- Motivation: Do not like or want to take medicine - 3 (25%)
- Disempowerment: feel incapable of managing their health and navigating the health system - 3 (25%)
- Access: cannot afford medications - 8 (66.7%)
- Distrust: do not believe they need/misinformed about medicine - 0 (0%)
- Cognitive: Forgetfulness/carelessness in taking their medications - 3 (25%)
- Psychiatric/substance abuse comorbidities - 1 (8.3%)
- Other - 0 (0%)
Major Concepts in Health Literacy

• Patients recall ⅓ of what they are told in a visit
• A patient safety priority & human rights issue
• Poor health literacy is the greatest predictor of poor health outcomes
Our Community

- Florida 3rd lowest adult literacy level
- 20% lack basic literacy in FL state
- In Miami-Dade, **52%** fall into lowest literacy category
- Poor health literacy affects
  - Lower socioeconomic classes
  - Non-native English speakers
  - Ethnic minorities
  - Those with less education

Source: U.S. Department of Education
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Medication Adherence Project (MAP)

What?

A clinic QI project aimed at improving medication adherence in clinic patients using dedicated resident run counseling sessions.

What it’s NOT
MAP Goals and objectives

- Improve medication adherence with a dedicated counseling session
- Improve provider’s behavior change communication strategies and approach to adherence
- Improve overall health outcomes using specific disease indicators
Medication Adherence Project (MAP) - How?

Step 1: Identify high-risk non-adherent patients

Step 2: Resident Education

- Data collection (pre- and post-resident survey)

Step 3: Counseling Session

- Data collection (pre-intervention)

Step 4: Follow-up (with primary care provider)

- Data Collection (post-intervention) and Analysis
Medication Adherence Project (MAP)

Step 1: identify at-risk patients!
- Established clinic patients who struggle with taking medications as prescribed, referred by residents who believe they would benefit from dedicated counseling sessions.
- English speakers (for now)
Step 2: Resident Education

What are the most significant barriers physicians face in addressing non-adherence?

- **Lack of time during clinic visit**: 91.7%
- **Assumes patient lacks responsibility**: 33.3%
- **Limitation of resources and staff**: 25%
- **Complexity of insurance systems and community resources**: 25%
- **Difficulty in communicating complicated medical terminology**: 25%
- **Inadequate training in addressing non-adherent patients**: 58.3%

Source: Med/Peds Resident Survey
Step 3: Counseling Sessions

- Dedicated one-on-one sessions
- More time assigned

Patient Materials:
- Health Folder with Booklet
- Choice of Pill Box
- Travel Pill Holder
- Medication bag
- Health literacy materials (i.e. medication lists)
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Educational Setting

- Academic noon conference (12 - 1pm*)
- Increase awareness of major concepts with interactive case-based lecture
  - NIH National Institute on Drug Abuse
  - AHRQ Health Literacy Toolkit
- Skills building through role play
- Show how to use materials
  - Resident module
1. MAP Resident Module

MAP Module Contents:

I. Screening and Referral Instructions

II. Counseling Session: Moderator Guide
   - Pre-Session (Preparation & Checklist)
   - Part 1: Motivational Interviewing
     - Table 1
     - Appendix 1
   - Part 2: Health Literacy Activities
     - 1. Ask me 3 (15-20 minutes)
       - Appendix 2
     - 2. Tips to Remember (10-20 minutes)
       - Appendix 3
     - 3. Reading Medication Labels (10-20 minutes)
     - 4. Pill Box Activity (10-20 minutes)
     - 5. Medication Diary (15 minutes)
       - Appendix 4
     - 6. Medication List (15 minutes)
       - Appendix 5
   - Part 3: Teach Back & Summary, Documentation
     - Appendix 6

III. Post-Counseling Follow-up

IV. Appendix (patient & moderator handouts)
   - Table 1: Moderator’s reference: Useful Non-adherence Activities
   - Appendix 1: Counseling Session Goal
   - Appendix 2: Ask Me 3
   - Appendix 3: Tips to remember
   - Appendix 4: Medication Diary
   - Appendix 5: Medication List
   - Appendix 6: Teach Back and Summary - My Goals and Action Plan

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Training Residents
TWO MAJOR THEMES

Motivational Interviewing

Health Literacy
Major Skills in MI

**Asking/Eliciting**
Ask permission
Ask open-ended, evocative questions

**Reflective Listening & Summarization**
Is *active* listening
Summarizing patient’s statements demonstrates understanding as well as develops discrepancies

**Affirmation**
Demonstrate support of the patient through supportive and affirming statements.

**Informing**
Always with permission, i.e. “would you like me to tell you more about...?”
Pleasant and clear, small bits of information
Eliciting Change Talk: DARN-C

See Handout

Goal
- **Desire, Ability, Reason(s),** and **Need** to make a change (i.e. start taking a medication as prescribed).
- **C** is for a stated **Commitment** to change behavior
- This signifies the transition from the **precontemplation** to the **contemplation** stage, especially if the patient wants to make a change within the next two weeks

How?
- Use MI strategies to initiate change talk.
- Remember OARS
- Create an environment conducive for change
- Elicit - Provide - Elicit
Counseling Session Goal

To increase my ability and readiness to start taking my medications regularly and properly.

<table>
<thead>
<tr>
<th>Why?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting when?</td>
<td></td>
</tr>
<tr>
<td>Importance Scale</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Confidence Scale</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Readiness Scale</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
</table>

My Action Plan

What are ways you can increase your confidence and ability to achieve your overall goal in terms of taking your medications?

<table>
<thead>
<tr>
<th>What will increase your confidence and/or ability to achieve your medication goals?</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning more about my medical problems and understanding why I need to take each of my medications.</td>
<td>“Ask me 3”</td>
</tr>
<tr>
<td>Coming up with ways to help me remember when to take my medications.</td>
<td>Tips to remember</td>
</tr>
</tbody>
</table>
Major Skills in MI

**Asking/Eliciting**

**Reflective Listening & Summarization**

**Affirmation**

**Informing**

**Action Planning**

  Collaborative

Evoke patient strategies

Make suggestions, with permission, “Would you like to hear what has worked for other patients?”

Negotiate future steps (including follow-up)
Summary: Major Principles in MI

**Understand Change Process**
- Precontemplation → Contemplation → Preparation → Action →
  Maintenance → Relapse/Set-Back

**Resist** in yourself the ‘righting’ reflex
- Physicians have natural urge to “correct” and overload with information

**Listen**
- At least as much as you inform
- Understand the patient’s reasons, not your reasons

**Empower**
- Help the patient explore how they can make the needed changes
TWO MAJOR THEMES

Motivational Interviewing

Health Literacy
Key Communication Strategies

• Warm Greeting
• Eye Contact
• Slow Down
• Limit Content (3-5 Points)
• **Teach-Back**
• Repeat Key Points
• Patient Participation
• Plain, Non-medical Language
• Use Graphics When Explaining
## Medication Adherence Module:
Part 2: Health Literacy Activities

Table 2.
See Patient Booklet “Counseling Session Goal”

<table>
<thead>
<tr>
<th>What will increase your <strong>confidence</strong> and/or <strong>ability</strong> to achieve your medication goals?</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Learning more about my medical problems and understanding why I need to take each of my medications.</td>
<td>“Ask me 3”</td>
</tr>
<tr>
<td>□ Coming up with ways to help me remember when to take my medications every day, so I don’t forget.</td>
<td>Tips to remember</td>
</tr>
<tr>
<td>□ Learning how to understand the instructions printed on the medication labels.</td>
<td>Reading Medication Labels</td>
</tr>
<tr>
<td>□ Keeping a medication diary in order to track each medication I take every day.</td>
<td>Medication Diary</td>
</tr>
<tr>
<td>□ Using a pill box to organize the medications I have to take every day for the entire week.</td>
<td>Pill Box Activity</td>
</tr>
<tr>
<td>□ Having a clear and simple medication list.</td>
<td>Medication List</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>
Teach-back Method

- Ask pt to repeat info in their own words
- Not asking “do you understand?”
- Quick, effective, & non-judgmental
- Checks for understanding
- Opportunity to clarify key points
Action Plan Summary Form

My Health Goal:


Things we talked about that can help me achieve my goal:

1.


Other things I will do to achieve my goal:


How confident am I that I can achieve my health goal?

1 2 3 4 5 6 7 8 9 10

Not sure

Very sure

Follow up appointment:

Bring this form to discuss with your doctor at your next appointment.
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Outcomes

Uncontrolled before-after QI study
Before-after med-rec with compliance modification
Complete at referral and follow-up appointment

**Main Patient Outcome:** percent medication adherence before and after intervention

**Main Resident Outcome:** increased awareness, confidence, and utilization of communication approaches to med adherence
Achievements to Date

- Received QI research grant by CIR (Committee for Interns and Residents)
- Developed curriculum in collaboration with Dr. Broome, Medical Director of Communication Education
- Developed website with all resident and patient materials
- Collaborated with key stakeholders to incorporate the program into resident academic noon conference and the med/peds clinic flow
- **Trained 16 out of 19 residents** (as well as 2 attending and 5 medical students)
- Identified and **referred 18 at-risk patients**
- Completed **5 counseling sessions**
- **2 out of 5 patients** followed up after counseling session
## Resident Education Outcomes

On a scale from 1 to 10, how confident are you in your ability to . . .

**Use motivational interviewing techniques to improve medication adherence in your patients?**

<table>
<thead>
<tr>
<th></th>
<th>PRE (n = 16)</th>
<th>POST (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>2 - 7</td>
<td>5 - 9</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>5</td>
<td>7.1</td>
</tr>
</tbody>
</table>

**Provide health literacy skills or tools in order to improve patient self-efficacy in taking medications correctly?**

<table>
<thead>
<tr>
<th></th>
<th>PRE (n = 16)</th>
<th>POST (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>1 - 8</td>
<td>6 - 8</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>5.75</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Resident Comments

What about the training session went well?
- “Resident engagement, examples of MI concepts”
- “Video examples”
- “The physical handouts and materials were a great reference tool. The website is phenomenal”
- “Role playing”

What, if anything, would better prepare residents for the counseling session?
- “I just need to practice a lot”
- “I would have liked one session solely devoted to MI and one session devoted to exactly what we are supposed to do in a meeting with patients”
- “Practice each task right after learning them”
- “Full training would require practice in MI techniques, possibly with standardized patients… given limited time of residents, this is probably not feasible”
- “More time allotted?? or if not, more efficient use of time”
Resident Comments - Post-Counseling Session

What about the training session went well?
- “I was able to watch patient show me how he plans to take medications by having him fill his pill box.”
- “With the full hour, I was able to find out what things he wants to use to take medicines and have him repeat the strategies multiple times.”
- “We were able to go over all the medication in detail, answer questions he had about them (like why exactly he was taking each medicine), and created a list he can make to take to future appointments”
- “We came up with a way for him to take medications at the same time so he won’t forget to take a dose that he usually took apart from the others.”

How can the Counseling Session be improved?
- “Follow up would be probably more useful if it was 1-2 weeks after the session instead of later with the PCP. That way we can see if strategies were working and consider switching if not.”
Preliminary Patient Outcomes

- Measuring medication adherence is a challenge
  - Medication reconciliation
  - Moriskey Medication Adherence Scale
- No show rates (5/18), low n of 5
- Positive post-counseling satisfaction and confidence
- **Patients comments:**
  - “I liked the one on one session”
  - “I didn’t have any of the tools provided, they give me a visual reminder, without it I will certainly forget”
  - “I learned a lot today. I got a better understanding of my medications and my health problems”
Lessons Learned

Resident Training:
- Time is of essence!
- Enjoyed sessions
- Still want more training

Moving forward:
- Block schedule
- Create self-study module
- Before and after skills based simulation

Counseling Sessions:
Fundamental flaw
Lack of infrastructure for appropriate follow-up

Moving forward:
- Self-referral system
- Consider collaborating with other disciplines
Acknowledgments

Dr. Abiona Redwood – Clinic Attending & MAP Champion!
Committee for Residents QI Research Fund
NIH Module: Talking to patients about health behavior risks
Dr. Broome - Motivational Interviewing Expert
Hopkins Pediatric Module
AHRQ Health Literacy Universal Precautions Tool Kit

and last but not least...
… the entire MAP Team

Medical students: Corey Gregg, Nimesh Rajakumar (not in photo), Nate Soper (not in photo), Brian Sanders, Naureen Farook
Resident: Teddy Brandon
Questions or comments?