Addressing Barriers to Patient Adherence in Diabetes Care

Sue Brown MS LPC

Think Back for a Minute

WHAT HELPED?

With This Model

- Cooperation and respect are inherent in this adult-to-adult relationship
- Does not mean that provider advice should not be provided
- But advice is given in the context of a collaborative care model.
- Journeying side by side

<table>
<thead>
<tr>
<th>Non-compliant</th>
<th>Adherent</th>
<th>Self Care/Self Management Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implies the patient is disobeying advice</td>
<td>Choice and mutual goal setting, treatment planning, and implementation</td>
<td>This simply describes the behaviors patients are engaging in to manage their health</td>
</tr>
<tr>
<td>“Do as I say” Assumes patient is passive and not equal to their care providers</td>
<td>Active, voluntary, collaborative involvement of patient</td>
<td>Encourages more objectivity—less judgement</td>
</tr>
<tr>
<td>Implies personal deficiency—forgetfulness, lack of will power or discipline, insufficient</td>
<td>Multidimensional nature of diabetes regimen—patients may adhere well to one aspect but not to others</td>
<td>Set goals with the patient Provide ongoing support, information, evaluation, and self-care advice</td>
</tr>
</tbody>
</table>

Adherence to Medication Regimen

- Adherence to prescribed DM therapy is not ideal:
  - Retrospective studies: 31-87% adherence
  - Prospective studies: 53-98% adherence
  - General literature: 36-85% with better adherence to insulin
- 80% adherence would mean missing a refill by 6 or more days for a 30 day supply
- Missed refills may flag an adherence difficulty

* Diabetes Educator 2007, 33(4)
Improving Adherence in the Treatment of Type 2 Diabetes

John R. White, Jr, PA, PharmD
Professor, Department of Pharmacotherapy
College of Pharmacy
Washington State University Spokane
Spokane, Washington
US Pharm. 2010;36(4)(Compliance & Adherence suppl):11-15

Factors associated with adherence in patients treated for diabetes with non-insulin medication (n=200,000)

- Older age
- Male
- Higher education
- Higher income
- Use of mail order versus retail pharmacies
- Higher daily total pill count
- Lower out-of-pocket cost

What are the challenges our patients face?

Our Expectations of Patients are Complex

- Prevention (eating, eye exams, exercise, sunscreen, dental, carb counting)
- Immunization
- Self Assessment of Health Status
  - Glucose testing
  - Foot care
- Self-treatment
  - Insulin adjustments
- Health Care Use
  - When to go to clinic/ER
  - Referrals and follow-up
  - Insurance/Medicare

National Assessment of Adult Literacy U.S.

- Assessed both reading and math skills
- Focused on health-related materials and tasks
- Results: 36% of adults were identified as having serious limitations in health literacy skills

Hospitalization rates

- Patients with low literacy skills had fewer doctor visits but used significantly more hospital resources
- Those with low health literacy remain in hospital nearly 2 days longer
Diabetes and Health Literacy

- Lower parents’ scores on the National Adult Reading Test (NART) were correlated with poorer glycemic control among their children.

- Lower health literacy scores were related to poorer HbA1c levels, retinopathy and cerebrovascular disease.

Look Beneath the Surface

- When identifying patients at risk for low health literacy--"you can't tell by looking."

- May appear, on the surface, to be in control of their health care and treatment regimens

- Often have figured out coping skills that allow them to maneuver in the health care system with the least amount of personal shame and/or embarrassment

- May even bring decoy reading material

- Many have never told their family members

Red Flags for Low Literacy

- Frequently missed appointments
- Incomplete registration forms
- Non-adherent with medication
- Unable to name medications, explain purpose or dosing
- Identifies pills by looking at them, not reading label
- Unable to give coherent, sequential history
- Ask fewer questions
- Lack of follow-through on tests or referrals
- Written materials handed to other person accompanying the patient.

"I will read this at home." "I can’t read this now; I forgot my glasses.”

Highly literate, well educated individuals also report difficulty understanding information provided to them by clinicians

Useful to remember anyone can have health literacy challenges

Story of a prominent obstetrician

Patient Safety: Medication Errors

"How would you take this medicine?"

395 primary care patients in 3 States

- 46% did not understand instructions ≥ 1 labels
- 38% with adequate literacy missed at least 1 label
"Show Me How Many Pills You Would Take in 1 Day"

John Smith        Dr. Red
Take two tablets by mouth twice daily.
Humibid LA       600MG (refill)

“Take Two Tablets by Mouth Twice Daily”

Lessons Learned

Break it down for me:
1. What it is for
2. How to take (concretely)
3. Why (benefit)
4. What to expect

Remember: what’s clear to you may not be clear to your patient!

Strategies to Improve Patient Understanding

➤ Focus on “need-to-know” & “need-to-do”
➤ Ask: “What is the best way for you to learn new things?”
➤ Use Teach-Back Method
➤ Demonstrate/draw pictures
➤ Use clearly written education materials

Did you know

Most patients forget up to 80% of what their doctor tells them as soon as they leave the office, and nearly 50% of what they do remember is recalled incorrectly?

Teach-Back Improves Outcomes
Diabetic Patients with Low Literacy

➤ Patients recalled < 50% of new concepts
➤ Physicians assessed understanding using teach-back 12% of time
➤ Use of teach-back was associated with good glycemic control
➤ Visits that assessed recall were not longer

Schillinger, D. Archives of Internal Med, 2003

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC539473/
Tips
Suggested Approaches When Using Teach-back.

- “I want to be sure that I explained your medication correctly. Can you tell me how you are going to take this medicine?”
- “We covered a lot today about your diabetes, and I want to make sure that I explained things clearly. So let’s review what we discussed. What are three strategies that will help you control your diabetes?”
- “What are you going to do when you get home?”

Visuals Improve Understanding/Recall

- Pictures/demonstrations most helpful to patient with low literacy & visual learners

- Most health drawings too complicated

- Physician/healthcare professional drawings often very good (not too complex)

Written Material

- Large font
- Lot’s of white space
- Simple graphics/pictures

Examples of Plain Language

<table>
<thead>
<tr>
<th>Plain Language</th>
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</tr>
</thead>
<tbody>
<tr>
<td>- Annually</td>
<td>- Yearly or every year</td>
</tr>
<tr>
<td>- Arthritis</td>
<td>- Pain in joints</td>
</tr>
<tr>
<td>- Cardiovascular</td>
<td>- Having to do with the heart</td>
</tr>
<tr>
<td>- Dermatologist</td>
<td>- Skin doctor</td>
</tr>
<tr>
<td>- Diabetes</td>
<td>- Extra sugar in the blood</td>
</tr>
<tr>
<td>- Hypertension</td>
<td>- High blood pressure</td>
</tr>
</tbody>
</table>

Improve the Physical Environment

Settings with lots of signs and postings have a high literacy demand:
- Include universal symbols and clear signage in multiple languages.
- Promote easy flow through healthcare facilities.
- Create a respectful and shame-free environment.

Establish a Patient Navigator Program

- Patient navigators are health professionals or community health workers who help patients:
  - Evaluate their treatment options.
  - Obtain referrals.
  - Find clinical trials.
  - Apply for financial assistance.
7 Tips for Clinicians

- Use plain language (‘Living Room talk’, ‘Language of the Family’)
- Limit information (1-2 key points)
- Be specific and concrete, not general
- Demonstrate, draw pictures, use models
- Repeat/summarize
- Teach-Back (confirm understanding)
- Be positive, hopeful, empowering

What strategies could all of us adopt to minimize barriers and misunderstanding for low literacy patients?

Diabetes Overwhelmus

- Eat more veggies
- Fewer carbs
- Monitor BG
- Increase Physical Activity
- Decrease stress
- Manage Depression
- Check Feet
- Monitor BP
- Eye Exams
- Stop Smoking
- Cut back on alcohol
- Take meds or insulin
- Visit physician regularly
- Etc. etc. etc. etc.

Diabetes Overwhelmus

- Emotional Distress/Diabetes (Psychological Reactions in Patients)
- Competing Demands
- Ambivalence
- Confusion
- Discouragement
- Fear
- Step Breaking
- Cut back on alcohol
- Take meds or insulin
- High blood sugar variability
- Healthcare providers
- Behavioral/mood disorders
- Acculturation stress
- Financial difficulties
- Social/relational isolation
- Cultural barriers
- Language barriers
- Cultural differences in care delivery
- Institutional barriers
- Physical barriers
- Psychological barriers
- Pharmacological barriers
- Non-pharmacological barriers
- Other barriers

Psychological factors and reactions with negative outcomes in patients with diabetes

Assess and prioritize health behaviors

- Physical activity
- Diet
- Stress management
- Neighborhoods
- Social support
- Culture
- Language
- Education
- Cognitive ability
- Financial resources
- Transportation
- Insurance
- System navigation
- Self-efficacy
- Acceptance
- Control
- Coping
- Social support
- Emotional support
- Informational support
- instrumental support
- Etc. etc. etc. etc.
Diabetes ‘Overwhelmus’ Distress

- Diabetes distress is very common and is distinct from a psychological disorder.
- The constant behavioral demands of diabetes self-management and the potential of disease progression are directly associated with reports of diabetes distress.
- Prevalence 18-45%
- High levels of diabetes distress significantly impact medication adherence and is linked to higher A1C, lower self-efficacy, and poorer dietary and exercise behaviors.

If Diabetes Distress is identified

- Referrals to address areas of diabetes self-care that are most relevant—CDE, Classes, RD, Support groups.
- Opportunity to engage in motivational interviewing.
- If self-care remains impacted after tailored diabetes education recommend referral to a behavioral health provider for evaluation and treatment.

Depression

- Elevated depressive symptoms and depressive disorders affect one in four patients with type 1 or type 2 diabetes.
- Routine screening for depressive symptoms is indicated in this high-risk population.
- Regardless of diabetes type, women have significantly higher rates of depression than men.

Generalized Anxiety Disorder

- Screen for anxiety in people exhibiting anxiety or worries regarding complications, injections, medications, and in those who express fear, dread, or irrational thoughts and/or show anxiety symptoms such as avoidance behaviors or social withdrawal. Refer for treatment if anxiety is present.
- People with hypoglycemia unawareness, which can co-occur with fear of hypoglycemia, should be treated using Blood Glucose Awareness Training (or other evidence-based similar intervention) to help re-establish awareness of hypoglycemia and reduce fear of hypoglycemia.

Cognition Issues

A meta-analysis of prospective and observational studies showed a 73% increased risk of all types of dementia, a 56% increased risk of Alzheimer dementia, and a 127% increased risk of vascular dementia compared with individuals without diabetes.

- Memory loss
- Trouble with recent or remote memory
- Trouble with complex searching
- Trouble with making decisions
- Trouble with complex reasoning
- Trouble with new learning
- Trouble with new skills
- Trouble with concentration
- Trouble with reasoning
- Trouble with working memory
- Trouble with sustained attention
- Trouble with problem solving
- Trouble with decision making

<table>
<thead>
<tr>
<th>Affected Behavior</th>
<th>Impact on Diabetes Self-Care</th>
<th>Strategies for Improvement</th>
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<td>Memory loss</td>
<td>Decreased frequency of self-monitoring, check other caregivers are available</td>
<td>Improve interaction with others, use technology</td>
</tr>
<tr>
<td>Trouble with recent or remote memory</td>
<td>Delayed reaction, check other caregivers are available, use technology</td>
<td>Improve interaction with others, use technology</td>
</tr>
<tr>
<td>Trouble with complex searching</td>
<td>Difficulty with new learning, check other caregivers are available, use technology</td>
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Eating disorders
- Girls and young women with Type I have twice the risk of developing
- 30-40% of late teenager girls and young adult women will skip or alter insulin dosage to control wt.
- Dissatisfaction with body wt. Or shape and desire to be thinner
- Manipulation of insulin to control wt.
- Binge eating

Warning signs
- High HbA1C
- Frequent bouts of poor blood sugar control
- Hospitalization
- Anxiety about being weighed
- Frequent requests to switch meal-planning approaches
- Frequent low blood sugars
- Widely fluctuating blood sugars
- Delay in puberty, irregular or no menses
- Exercise more than is necessary
- Severe family stress

Treatment Eating Disorders
- Important to be non-judgmental and supportive
- Team approach—physician, nurse, dietician, diabetes educator, and mental health counselor.

Situations That Warrant Referral to Mental Health Provider
- If self-care remains impaired after tailored diabetes education
- If a person has a positive screen for depressive symptoms
- The presence of symptoms or suspicions of disordered eating behavior, an eating disorder or disruptive patterns of eating
- If intentional omission of insulin or oral medication to cause weight loss is identified
- If a person has a positive screen for anxiety

Situations That Warrant Referral to Mental Health Provider (cont.)
- If a serious mental illness is suspected
- Repeated hospitalizations for diabetic ketoacidosis in youth with behavioral self-care difficulties
- If a person screens positive for cognitive difficulties (neuropsychology)
- Declining or impaired ability to perform self-care behaviors

Social support
Numerous correlational studies have shown a positive and significant relationship between social support and adherence to diabetes treatment
On an annual basis 20% of Missourians use Food Banks

- Silver Sneakers Program
- Community Centers/Senior Centers walk on track/walking incentives/open gym times
- Arthritis exercise program
- Greenways trails, Nature Center, Parks
- Walk where you are—driveways
- Fit for Life

Medications
- 4 dollar list
- CMAT
- Grants from drug companies
- NPH 70/30
- Mail order increases adherence rates

Labs
- Health Dept.
- Private owned labs

Motivational Interviewing

When is an opportunity to introduce motivational interviewing?

When patients present with chronic diseases directly associated with lifestyle and choices and you feel concerned about or frustrated about your ability to improve their condition.
How Committed are You?
How Confident are You?

There is evidence that even very brief, (five-minute sessions) have positive results

- Particularly when patients are highly resistant to change
- It’s a strategy with great potential for even for time pressed physicians

What is motivational interviewing?

Simply put, a method for changing the direction of the conversation in order to stimulate the patient’s desire to change and give him or her the confidence to do so.

In contrast to many other change strategies such as education, persuasion and scare tactics.

It Starts With...

- Collaborative, friendly relationship between healthcare professional and the patient
- Requires empathy toward the patient
- And, a recognition of the patient’s resistance to change is typically evoked by environmental conditions rather than a character flaw
In other words,

- Don't take it personally when the patient struggles to change.
- Instead, let go of the outcome, support self-efficacy, allow the patient to be responsible for his or her own progress, and let the patient identify and articulate his or her values and goals.
- And, roll with resistance.

For example

If a sedentary patient sets a goal of simply "walking to the mailbox twice each day", show support for the goal even though it may seem small.

The Objective of MI

- **Not to solve or 'fix'** the patient's problem.
- **The goal**
  - To help the patient resolve his or her ambivalence.
  - Develop some momentum.
  - And, believe that the behavior change is possible.

Because of the time constraints in this busy healthcare environment

- **Enters the helper—a time pressured, knowledgeable, healthcare professional with the desire to help make things right for the patient and pressure to improve patient outcomes**—as a result quick to propose solutions.
  - "Righting Reflex" (Directing)
  - Instead of allowing the patient to explore and identify their own goal, increasing the odds that the patient will find an acceptable resolution to their problems.

The problem is...

Lectures
Providing information
Warnings
"Finger wagging"
Telling a patient all the reasons why they should do a thing

**Too often don't have the desired effect.**

The ‘Best Fit’ for Behavior Change

<table>
<thead>
<tr>
<th>Directing</th>
<th>Guiding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following</td>
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</tbody>
</table>

**The Continuum**

Motivational interviewing is a form of ‘Guiding’
Spirit of M.I.—“Mindset and Heart Set”

Four Cornerstones

Partnership—“We need to put our heads together”. Not an expert talking down to person but a guide helping sort out together how best to move ahead

Acceptance—Attitude of accepting people as they are, a mindful openness to what the person is experiencing. “To accept people as they are is to free them to change”

Compassion—the desire to alleviate suffering. As William Mayo said in 1910, “the best interest of the patient is the only interest to be considered”

Evocation—not “I have what you need, and I’m going to give it for you.” But rather, “You have which you need and together we will find it.”

OARS: A structure for putting motivational interviewing into practice

- **Open-ended questions**—“what’s been going on with you since we last met?” or “If you had one habit that you wanted to change in order to improve her health, what would that be?”

- **Affirmations**—never underestimate the power of expressing empathy or celebrating patient’s accomplishments

- **Reflective Listening**—patient’s often have their own answers, our role is to help guide him. Example...

- **Summaries**—recapping what the patient said, allowing the patient to clarify and bringing the visit to a close. Then, “I’m wondering what you think you’re next step should be?”

Capturing the Spirit of motivational interviewing

- Motivation to change is elicited from the patient, not impose from outside

- It is the patient’s task, not the provider/healthcare professional to resolve his or her ambivalence

- Direct persuasion is not an effective method for resolving ambivalence

- The style is a quiet one, with a focus on eliciting the patient’s thoughts

Capturing the Spirit of motivational interviewing (cont.)

- Chance to guide the patient to examine and resolve his/her ambivalence

- To understand that readiness to change is not a patient trait, but of fluctuating state

- The therapeutic relationship is more like a partnership, expert/recipient roles can impede the process

Real life experiences
Getting started

- Start small with just one question, such as "If you had one habit that he wanted a change in order to improve your health, what would that be?"
- Or, "What goal would you like to set that you’re willing to work to accomplish?"
- When given the opportunity, patients come up with their own ideas.

Would you rather dance or wrestle?

Recent study (2016) that looked at approaches used by primary care clinicians whose patients had an increase in activation levels.

What MI Is Not

- Tricking the patient to do what you want
- Persuading the patient
- A specific technique
- Arguing for change

What MI Is

A way of harnessing the patient’s own natural motivation for health and change

Why Take Time to Learn it or to Use it?

- More than 200 randomized evidence-based studies lend support to its efficacy over a range of behavior changes—alcohol/drug use, smoking cessation, weight reduction, managing cholesterol and blood pressure, lowering A1C’s.
- MI appears to work across cultures as well. Practitioners are being trained in at least 47 languages at present.
- Clinicians across healthcare arenas who learn MI consistently report it makes their practice more enjoyable.

WWW.Guilford.com/add/miller2/biblio.pdf
A Final Thought

Make Time For Yourself

Resources Health Literacy

- AHRQ Health Literacy Universal Precautions Toolkit

Resources Mental Health


Resources for Motivational Interviewing

- Motivational Interviewing in Diabetes Care. Steinberg, Marc, Miller, William. Guilford Press 2015
- http://www.americaninmotion.org

Table 1. Top Clinically Rated Apps for Wellness and Prevention

<table>
<thead>
<tr>
<th>Category</th>
<th>App</th>
<th>Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise</td>
<td>Fitbit</td>
<td>Fitbit</td>
</tr>
<tr>
<td>Healthy eating and weight</td>
<td>Noon Coach: Health and Weight</td>
<td>Noon</td>
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<tr>
<td>Stress management</td>
<td>Headspace</td>
<td>Headspace</td>
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<tr>
<td>Smoking cessation</td>
<td>Clickotine</td>
<td>Click</td>
</tr>
<tr>
<td>Alcohol moderation</td>
<td>Drinkaware</td>
<td>Drinkaware Trust</td>
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</tbody>
</table>

Table 2. Top Clinically Rated Apps for Condition Management

<table>
<thead>
<tr>
<th>Condition</th>
<th>App</th>
<th>Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol and substance abuse</td>
<td>Peer therapy</td>
<td>Peer Therapeutics</td>
</tr>
<tr>
<td>Diabetes prevention</td>
<td>Omada</td>
<td>Omada Health</td>
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<tr>
<td>Diabetes mellitus</td>
<td>BlueStar Diabetes</td>
<td>WestClus</td>
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<tr>
<td>Atrial fibrillation screening and</td>
<td>Kardia</td>
<td>AliveCor</td>
</tr>
<tr>
<td>dysrhythmias</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>Twelve Collaborative</td>
<td>Twelve Health</td>
</tr>
<tr>
<td>Cardiac rehabilitation</td>
<td>Medtronic (MyCare)</td>
<td>Intermesh</td>
</tr>
<tr>
<td>Cancer</td>
<td>MedCare</td>
<td>Sirona Innovations</td>
</tr>
<tr>
<td>Asthma</td>
<td>ProHealth</td>
<td>Reciprocal Labs</td>
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<tr>
<td>Proper Health</td>
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