

What you Say Matters: Communication and Adherence

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Financial Disclosures:

- UIWRSO Clinical Associate Professor
 - Opinions expressed do not represent the University
 - Alcon, consultant for student events
 - Kala Pharmaceuticals, optometric advisory board
- All relevant financial relationships have been mitigated**

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First, some definitions...

- From Cramer, et al in 2008:
 - Adherence (compliance) =
 - "the extent to which a patient acts in accordance with the prescribed interval and dose of a dosing regimen"
- "Fidelity has too many connotations; and Maintenance suggests a repair crew. Although Adherence has its adherents, Compliance continues to be the most popular term"
- Alvan Feinstein in *Archives of Internal Medicine* 1990

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Non-Adherence in Healthcare

- US adults with chronic illness, 30-50% meds incorrectly taken
- Medication adherence (or lack thereof) accounts for
 - 10% of annual hospitalizations
 - 125,000 deaths annually
 - \$100 BILLION annually in health care services

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How Do We Assess Adherence?

- Patient self-reporting tools
- Electronic dose trackers
- Pharmacy refill rates

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How Do We Assess Adherence?

- **Patient self-reporting tools**
 - Morisky Medication Adherence Scale (MMAS-4/MMAS-8)**
 - Adherence to Refills and Medications Scale (ARMS) -12 items
 - Voils' Medication Adherence Scale (VMAS) – 3 items
 - Others...
- PROS: easy!
- CONS: relies on truthful responses (more on this later)

**MMAS-4 and MMAS-8 property of www.moriskyscale.com—protected under US copyright

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Patient Self-Reporting Tools

- Questionnaires:
 - Electronic or paper, True/False, Yes/No, numerical scales
 - “Does taking medication as prescribed fit very easily into my daily routine?”
 - “Do people often have to remind me to take my medications?”
 - “Is it easy to remember to take medications at the right time?”
 - “If my daily routine changes, do I have difficulty remembering to take my medications?”

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Q1 – I will ask you few questions about your medication that you were using after Heart Failure

SNO	MMAS-8 Adherence Questions	Patients Response
Q1_1	Do you sometimes forget to take your prescribed medicines?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_2	Over the past 2 weeks, were there any days when you did not take your prescribed medicines?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_3	Have you stopped taking medications because you feel worse when you took it?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_4	When you travel or leave home, do you sometimes forget to bring along your meds?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_5	Did you take your prescribed medicine yesterday?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_6	When you feel like your health is under control, do you sometime stop taking your meds?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_7	Do you feel hassled about sticking to your prescribed treatment plan?	<input type="checkbox"/> Yes[0] <input type="checkbox"/> No[1]
Q1_8	How often do you have difficulty remembering to take all your prescribed medicine?	<input type="checkbox"/> Never/rarely[1] <input type="checkbox"/> Once in a while[0] <input type="checkbox"/> Sometimes[0] <input type="checkbox"/> Usually[0] <input type="checkbox"/> All the time[0]
Total Score		

**MMAS-4 and MMAS-8 property of www.morskyscale.com – protected under US copyright

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ARMS

Question*

1. How often do you forget to take your medicine?
2. How often do you decide not to take your medicine?
3. How often do you forget to get prescriptions for your medicine?
4. How often do you run out of medicine?
5. How often do you skip a dose of your medicine before you go to the doctor?
6. How often do you miss taking your medicine when you feel better?
7. How often do you miss taking your medicine when you feel worse?
8. How often do you miss taking your medicine when you are careless?
9. How often do you change the dose of your medicine to suit your needs?
10. How often do you forget to take your medicine when you are supposed to take it more than once a day?
11. How often do you put off refilling your medicines because they cost too much money?
12. How often do you plan ahead and refill your medicines before they run out?***

Scored:
 1 = always
 2 = most of the time
 3 = sometimes
 4 = never

Kripalani, S et al. In Value Health 2009

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How Do We Assess Adherence?

Images are examples only. Speaker does not promote, nor have financial interest in, any particular product

- CONS: Bulky and expensive, No great options for eye drop bottles



Aguilar-Rivera, et al UC San Diego 2020

MyTherapy (iOS/Android)

Hero Health®

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How Do We Assess Adherence?

- Pharmacy refill rates
 - May be gathered by pharmaceutical companies for prescriber patterns as well?
 - PROS: Doesn't rely on patient reporting
 - CONS: pts with multiple providers, multiple pharmacy options

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Non-Adherence in Corneal Disease

- Based on patient response questionnaires (ARMS/VMAS)
- Non-adherence rate 72% (ARMS)/33% (VMAS)
- “Older” patients generally more adherent
- No correlation with other factors (race, gender, education, #of doses, primary dx)
- Limited data

Khan, M., Michelson, S., Newman-Casey, P. & Woodward, M. (2021). Medication Adherence Among Patients With Corneal Diseases. *Cornea*, 40 (12), 1554-1560.

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Non-Adherence in Dry Eye Disease

- Small study in Singapore *
- Survey of pt choice based on 5 attributes of therapy
 - (duration of stinging/burning, time until effective, cost, duration of blur, dose frequency)
- Duration of stinging/burning and cost were most important
- Duration of time until medication effectiveness least important

* Ozdemir, S, Yeo, SWJ, et al. June 2022

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Non-Adherence in Glaucoma

- #1 reason for poor IOP response
- One study reported 40% adherence
- Another study reported adherence dropped to 35% once the patient found out their doctor would not find out
- 1/3 of all glaucoma medications are refilled at one year
- Patients don't always tell the truth (more on that soon)

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My Glaucoma Treatment Isn't Working?

- Underachieved response with given medication
- Overaggressive target range
- Inadequate evaluation of diurnal curve or target was based on the low end of the curve
- Poor aqueous outflow – gonioscopy?
- Environmental factors/Poor instillation

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My Treatment Isn't Working

First and foremost, always consider the reason a medication is not working is non-adherence

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Do We Make it Worse?

"...if they told me that they weren't taking their medicine, I would chastise them. I would say, "What do you mean you're not taking your medicine?" and they would feel admonished. They would feel that I was yelling at them, which I was, and what they were learning is that the next time I asked, they would give me the answer that I insisted they give me. So, I was part of the problem. Because of their social desirability, **patients want to say yes** when the doctor that they've known for a long time, or even a new doctor, asks them if they're taking their medicine.

-Marie T. Brown, MD
geriatric and internal medicine
Rush University Medical Center, Chicago
AMA Moving Medicine Podcast

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Dir ice

- Socio-economic-relate
- Therapy-related (ex: I)
- Condition-related (e
- Patient-related (ex: I
- Health system-relate



Source: American Journal of Managed Care, 2018

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Socio-Economic-Related Factors



Image: <https://www.vox.com/2015/12/18/10581682/drug-cost-prices-af-us>

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Socio-Economic Related Factors

- Cost of medications/3rd party coverage
- Poor social support or family instability
- Living situation
- Cultural beliefs & attitudes

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Socio-Economic Related Factors

- **Cost of medications/3rd party coverage**
 - Mail order pharmacy options
 - Manufacturer's patient assistance programs
 - Consider generic alternatives (only when appropriate)
 - Benefits check up: <http://adultmedication.com/>

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Socio-Economic Related Factors

- **Poor social support or family instability**
 - Involve family members when applicable
 - Local support groups
- **Living situation**
 - Are fundamental needs met (shelter/food)?

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Socio-Economic Related Factors

- **Cultural beliefs & attitudes**
 - Mistrust of the healthcare system
 - Understanding of illness causes
 - Traditional therapies
 - Receiving information

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Therapy-Related Factors



Image: <http://adultmedication.com/SocioandEconomicFactors.html>

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Therapy-Related Factors

- Side effects
- Dosage frequency/complexity
- Perceived benefit of therapy
- Chronicity

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Therapy-Related Factors

- Side effects
 - May be real or perceived
 - Expectations from treatment and risks vs. benefits
 - (eg: well-documented PGA side effects)
 - Provider may suggest ways to manage minor side effects

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Therapy-Related Factors

- Dosage frequency/complexity
 - Increased frequency of use correlates with decreased adherence
 - Combination meds when appropriate

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Therapy-Related Factors

- Perceived benefit of therapy
 - Duration of time until perceived benefit (eg: topical cyclosporine)
- Chronicity
 - Does the pt understand if the drug will be long term or short term?
 - Long term directions vs how the label reads

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Condition-Related Factors



Image: "How Health Care is Changing to Emphasize Quality of Life" Wall Street Journal Feb 2013

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Quality of Life (QoL)

- Patients with glaucoma rank lower on QoL questionnaires than those without visual disability
- More significant with more advanced disease and when vision loss affects both eyes
- OSD is a significant factor with QoL and is correlated to use of BAK preserved medications

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Quality of Life

- Anxiety and depression are found more commonly in glaucoma patients
 - Correlates more to patient perception of their vision than objective measurements
- Situational/environmental complications with therapy negatively affected QoL and compliance
 - Also affected by inability to self administer medications

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Quality of Life: Not Always About the \$\$

- Jampel et. al surveys found willingness to pay more...
 - to avoid blurred vision -85%
 - to avoid drowsiness -83%
 - to avoid stinging/tearing -72%
 - to avoid sexual inhibition - 59%
 - for once-daily dosing -58%
 - for branded medications -26%

Jampel, H. D., Schwartz, G. F., Robin, A. L., Abrams, D. A., Johnson, E. & Miller, R. B. (2003). Patient Preferences for Eye Drop Characteristics. *Archives of Ophthalmology*, 121 (4), 540-546.

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Patient-Related Factors

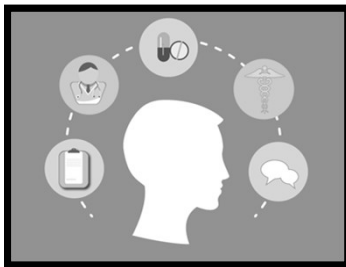


Image: Virginia Community Healthcare Association

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Health Literacy

- **Personal health literacy** is the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.
- **Organizational health literacy** is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.

Source: What Is Health Literacy? | Health Literacy | CDC

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Health Literacy Resources

- [Training plan - TRAIN Learning Network - powered by the Public Health Foundation](#) (has some MCE)
- [National Action Plan to Improve Health Literacy](#) (2010)
- CDC's [Clear Communication Index](#)
- CDC's [Everyday Words for Public Health Communication](#)

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AHRQ Health Literacy Universal Precautions Toolkit, 2nd Edition

- Agency for Healthcare Research and Quality, part of DHHS
- Toolkit includes:
 - 21 Tools (3-5 pages each) that address improving:
 - Spoken communication.
 - Written communication.
 - Self-management and empowerment.
 - Supportive systems.
 - Appendices (over 25 resources such as sample forms, PowerPoint presentations, and worksheets).
 - Quick Start Guide.

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How Much Do Patients Retain?

- Only about 12% of US adults with "proficient" health literacy*
- 40-80% of information presented is forgotten immediately**
- The more info == the less remembered
- More serious info == fewer logistics details retained

*https://nces.ed.gov/ipeds/data/ipedsdatatools/2018/ipeds_datacenter/data/ipeds_publications/20180917_Health_Literacy_in_America.pdf

**Kessels RP. Patients' memory for medical information. *J R Soc Med*. 2003;96(5):219-222. doi:10.1258/jrsm.96.5.219

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And How Can I Predict Their Memory?

- Education level of pt (38% recall for ≤HS level vs 65% recall for uni degree+)
- "Shared" decision making leads to better adherence
- NO significant difference based on age, race/ethnicity, gender

Laws MB, Lee Y, Taubin T, Rogers WH, Wilson JB (2018) Factors associated with patient recall of key information in ambulatory specialty care visits: Results of an innovative methodology. *PLoS ONE* 13(2): e0191940.

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Health System/Provider-Related Factors

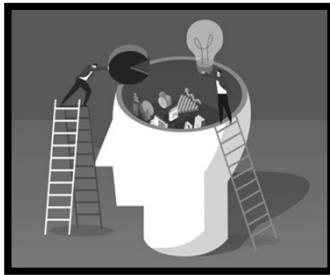


Image: My CMS Patient Education

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Within Provider's Control

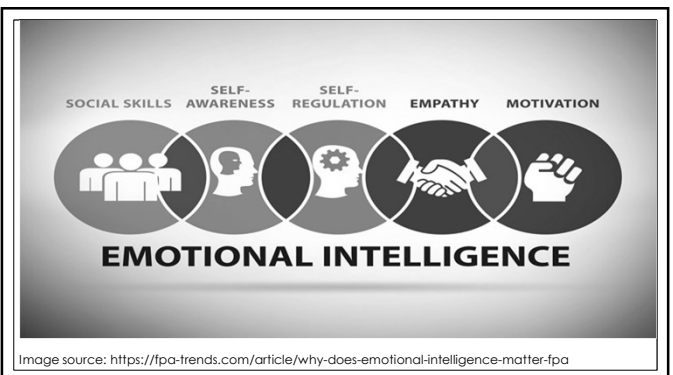
- Emotional Quotient (EQ)/Emotional Intelligence (EI)
- Be mindful of non-verbal communication (theirs AND yours)
- 3 C's: clear, concise, compassionate language
- Give "permission" to report the truth about adherence
- Respond positively
- "Teach Back" Method
- Handouts on an appropriate reading level
- Cultural competency

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Emotional Quotient

- Emotional Quotient (EQ) = Emotional Intelligence (EI)
- "an array of soft skills non-cognitive (emotional and social) capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures"

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EQ: Self-Awareness

- Know your own emotions
- Strategies for building self-awareness:
 - Be mindful of your strengths, weaknesses, thoughts, and emotions
 - Identify your triggers to help manage your own emotions
 - Keep a journal so you can reflect and learn from your experiences
 - Consider how your actions affect those around you
 - Use positive self-talk
 - Develop a growth mindset



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EQ: Self-Regulation

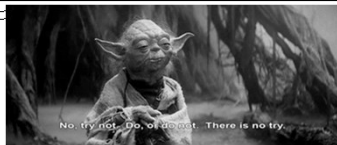
- Managing your own responses
- Strategies for building self-regulation:
 - Be attentive to your thoughts and feelings
 - Learn to accept your emotions and become more emotionally resilient
 - Develop distress tolerance skills to handle negative emotions
 - Learn to view every new challenge as an opportunity
 - Know that there is always a choice on how you respond
 - Prepare to take responsibility for your actions



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EQ: Motivation

- Drive to improve and achieve
- Strategies for building motivation:
 - Set small, measurable, and realistic goals
 - Introduce interesting challenges to keep up momentum
 - Find intelligent ways to turn obstacles into opportunities
 - Be mindful of your role as a leader and its direct effect on your team
 - Reflect on your progress and look for ways to do better
 - Be open to change



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EQ: Empathy

- Recognizing the emotions of others
- Strategies for building empathy:
 - Listening without interrupting
 - Recognize and show your appreciation for others
 - Be open to sharing your feelings where appropriate
 - Work on your body language and reading that of others



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EQ: Social Skills

- Handling relationships
- Strategies for building social skills:
 - Show interest in other people
 - Enhance verbal and non-verbal (body language) communication skills
 - Observe and learn from the social skills of others
 - Practice confident eye contact
 - Ask open-ended questions (cannot be answered with a yes/no)
 - Listen more and practice active listening



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“Fundamentally, emotions are adaptive; they will help us determine what an appropriate behavior is for a specific situation—but *only* if we pay attention to our emotions and interpret them correctly.”

David Tipton
Self-Awareness for Healthcare Professionals
 (2021)

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Non-Verbal Communication: From Patients

- Closed or avoidant body language
- Eye contact
- Self-comforting body language
- Emotive body language
- Facial expression

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Non-Verbal Communication

- And, when body language doesn't 'match' their words?

'When you said _____ just then, I noticed that you looked uncomfortable. Could you tell me what you are thinking or feeling?'

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Non-Verbal Communication: From Providers

- Body language
 - Sit when you can
 - Lean forward to show engagement
 - Maintain open and relaxed posture
 - Non-confrontational positioning
- Smile and maintain eye contact, but don't stare
- Spatial awareness

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3 C's: Clear, Concise, Compassionate

- Simple words
- Try not to get too complicated
- Shift to the positive whenever possible
- Look away from those keyboards for a moment!
- Choose 1-3 KEY points and emphasize those!!

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"When there's no place for the scalpel, **words** are the surgeon's only tool."

-Paul Kalanithi
When Breath Becomes Air

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"Permission" to Tell the Truth

- Patients want to 'comply' and want provider 'approval'
- Inhaler study example - (Hawthorne Effect)
- "Until we develop a...blame-free environment, we're never going to provide a safe space for the patient to tell us that they're not taking their medicine."
 - Marie T. Brown, MD

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“Permission” to tell the truth

- Training for provider, all staff avoids mixed messages to pt:
 - “Many people forget to take their medicines at times. Does that ever happen to you?”
 - “It can be tough to use daily medications. Would you say you miss doses sometimes?”
 - “Over the past month, what percentage of your drops do you think you took correctly?”*

*Cho, J, Hiziol, LW, et al March 2021

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And YOU Tell the Truth...

- DO NOT assume that patients understand:
 - Extended duration for meds
 - Pharmacy label often says 1gtt qhs OU “for 1 month” (depending on quantity dispensed)
 - Providers often reluctant to describe long-term therapy
- STATE these types of things directly and kindly

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Respond Positively

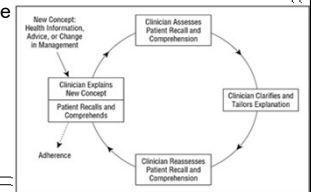
- Don’t belittle or scold:
- “Thank you for letting me know that you are not taking your medications as prescribed. Can we talk through this together?”

YOU CAN
DO IT!

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“Teach Back” Method

- Check patient understanding of concepts
- Esp NEW ideas!
- Studies show providers over-estimate how well/often they do this



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Reading Level of Printed Materials

- NIH recommends materials at 6-7th grade reading level
- Use a free online reading level tool
 - [Readability Calculator \(wordcalc.com\)](http://wordcalc.com)
 - [Reading Grade Level Checker Tool \(inkforall.com\)](http://inkforall.com)
- Simplify! Not too busy whenever possible
- Info-graphics work well!

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Cultural Competency

- Culturally and Linguistically Appropriate Services in Health Care
- Establish a positive, supportive, trusting relationship with the person
- Seek an understanding of the causes of illness from the person’s cultural point of view
- Elicit information about use of nontraditional therapies in non-judgmental way
- 14 CLAS Standards:
 - <https://thinkculturalhealth.hhs.gov/clas>

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So...Why Should We Care?

- Not just "do no harm"
- CMS implemented outcome measures in ~2007 for hospitals
- Remember PQRS panic mode?
- Online reviews/ratings based on utilization for some medical plans (esp MC, MCaid)?
- In the FUTURE: Outcomes-based reimbursement rates?

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Summary

- Adherence to treatment plans affects the patient's condition, quality of life and, potentially, the provider's bottom line.
- Awareness of these issues and effective communication are ways to promote adherence.

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Thank You!

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