Helping Your Patients with Diabetes

Medication Adherence / Non-adherence

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Main Sources for this Presentation:

- AMA Steps Forward https://edhub.ama-assn.org/steps-forward/module/2702595#resource
 - Health Literacy videos short: https://www.youtube.com/watch?v=ubPkdpGHWAQ
 - Full version: https://www.youtube.com/watch?v=cGtTZ_vxjyA
- Kaiser Permanente work & writings of Fred Kleinsinger M.D.
 - https://www.thepermanentejournal.org/doi/pdf/10.7812/TPP/03.914
 - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6045499/
 - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6045499/#b15-18-033
- Behavioral Diabetes Institute https://www.youtube.com/watch?v=FcvsVLBTRIg
- Beyond Belief –How People Feel about Taking Medications for Heart Disease Lisa Rosenbaum, M.D.
 - Beyond Belief How People Feel about Taking Medications for Heart Disease | NEJM
- And my practice/patient experience

Pre-Question - which two options are correct?

- Medication non-adherence
 - A. Is often overlooked as a cause of treatment failures
 - B. Is most often due to forgetting to take meds
 - C. Indicates the patient is in denial or unreliable at following instructions
 - D. Is often intentional and due to complex factors
 - A & B
 - A & C
 - A & D
 - B & C
 - B & D
 - C & D

Noncompliance - Part of the stigma associated with diabetes

- "Many of those who have diabetes are noncompliant and don't take care of themselves."
- "That patient is so undisciplined."
- "People with diabetes cause themselves to become ill, lose limbs, and disregard their medication/diet regimen."
- "Diabetes is a disease of gluttony and sloth they bring it on themselves."
- "If she wasn't so lazy...."
- "Well, it is kind of his fault, right?"
- "They don't do what they are supposed to they are not even trying to get better."
- "They just don't care...their noncompliance, nonadherence, whatever it is, is so frustrating, why don't they just do what I tell them to do?"

Definitions

- **Compliance:** the act of conforming to a rule, such as a specification, policy, standard or law. It is the state of meeting regulatory requirements, standards or laws.
 - It can also refer to the act of adhering to an agreement or a request made by another person.
- Noncompliance: the failure or refusal to comply, as with a law, regulation, or term of a contract.
 - It can also be referred to as disobedience, unruliness, waywardness, indiscipline or misbehavior
- Adherence: attachment or commitment to a person, cause, or belief; the obeying
 of a rule or law
 - the fact of someone behaving exactly according to rules, beliefs, etc.; steady or faithful attachment; fidelity
- Non-adherence: a lack of adherence

Patient Adherence

- Patient adherence is a key driver of patient outcomes. It includes:
 - medication use
 - keeping medical appointments
 - implementing dietary or other lifestyle changes (activity, tobacco use, etc.)
 - following other types of treatment regimens (SBGM, PT, use of CPAP, etc.)
 - implementing recommended preventative health care practices
- Non-Compliant/Non-Adherent Behavior is likely one of the most common causes of treatment failure for chronic conditions, though this is not widely or consistently recognized....
 - Medication nonadherence alone can account for
 - up to 50% of treatment failures
 - up to 25% of hospitalizations
 - ~125,000 deaths each year in the United States (2005 data)
 - ~ \$100 billion annually in *preventable* health care costs

Medication Non-adherence is Common

- Even clinical trials report average adherence rates of only 43 to 78 percent
- Poor medication adherence accounts for 33 to 69 percent of all medicationrelated hospital admissions in the United States
- Even in the case of serious and symptomatic disorders, such as acute myocardial infarction, as many as one in eight patients discontinue all three medications of the commonly prescribed combination of \(\mathcal{B}\)-blocker plus aspirin plus statin within one month of hospital discharge.
 - These patients have an 80% higher chance of dying within the first year after discharge compared with patients taking all three classes of medication.

Beyond Belief - How People Feel about Taking Medications for Heart Disease

Lisa Rosenbaum, M.D. N Engl J Med 2015; 372:183-187

- Several years ago, the term "medication compliance" was forced from our lexicon its implication of passivity was deemed demeaning to patients. We were to use "adherence," implying a partnership, instead. But I believe we've made a *superficial semantic adjustment* without shifting either our approach to prescribing or our reaction to patients who don't take their medicine.
- Although we tend to view nonadherence as patients' failure to know what's good for them, learning about people's feelings about medications has made me recognize that my ideas of good and bad were defined solely in my terms.
- It's our job to help patients live as long as possible free of complications of cardiovascular disease. Although most patients share that goal, we don't always see the same pathways to get there. I want to believe that if patients knew what I know, they would take their medicine. What I've learned is that if I felt what they feel, I'd understand why they don't.

Medication Adherence/ Nonadherence

- Taking medications appropriately (proper doses at the proper times) is called medication adherence
 - A patient is considered adherent if they take 80 percent of their prescribed medicine(s).
 - Typically, adherence rates of 80% or more are needed for optimal therapeutic efficacy.
 - It's estimated that just *half* of the people who are on regular medication take the proper doses at the proper times.
 - If patients take less than 80 percent of their prescribed medication(s), they are considered *nonadherent* (40-50% of people who are on regular medication).
 - Medication nonadherence can lead to
 - unnecessary hospitalization and emergency room (ER) visits
 - increased costs to the patient and health care system
 - potential harm to the patient (In 2014, non-adherence was the 6th most common cause of premature death in US including 89,000 Hypertensive deaths.)
 - unnecessary work on the part of the practice during the visit

Medications don't work very well when you don't take them

Potential Causes of *Unintentional* Medication Adherence

Forgetting –

- Very busy people
- Chaotic environment
- Complex regimens
- Cognitive impairments
- Often an easy excuse to cover for intentional non-adherence

Poor Health Literacy –

- Not understanding
 - dosing instructions
 - reason for medication and/or underlying condition(s)
 - expected benefits / possible side effects
 - need for ongoing continuation of medication

https://www.youtube.com/watch?v=ubPkdpGHWAQ

Social Factors -

Safety, transportation, priorities (food vs meds), refrigeration, language, etc.

Factors Related to *Intentional* Nonadherence AMA StepForward

- Fear of side effects, fear of harm
- Cost unaffordable
- Misunderstanding not understanding the need for the medication; "nothing is happening"; time needed for effect to take place
- Too many medications The greater the number of different medicines prescribed and the higher the dosing frequency, the more likely a patient is to be nonadherent
- Lack of Symptoms don't feel any different
- Worry Concerns about becoming dependent on a medicine
- Depression less likely to take their medications as prescribed
- Mistrust suspicious of their doctor's motives for prescribing certain medications (pharmaceutical companies influencing physician prescribing patterns)

Factors Related to Problematic Medication Taking

Behavioral Diabetes Institute https://www.youtube.com/watch?v=FcvsVLBTRlg

- Fear/ Suspicious of the medication fear of being hurt, meds not being good for them
 - Fear of side effects
 - Taking meds means I am sick, not healthy
 - Halo effect for vitamins & supplements ("healthy" or for health not illness)
- Out-of-Pocket Costs unaffordable
- Perceived Treatment Inefficacy lack of tangible benefits, discouraged
 - Not understanding what the medication is for or is supposed to do
 - Not understanding the condition
 - Lack of Symptoms don't feel any different
 - Futility/hopelessness "why bother, bad things are going to happen regardless"
- Lack of Physician Trust (patient feels like they have not been heard or understood, physician & patient not on opposing sides)
 - Especially important for diabetes meds more negotiation around these meds
 - Patients report feeling "I have failed" "Something bad about me" if need meds or more meds

Potential Barriers to Medication Adherence Kaiser Permanente

- Patient-related barriers:
 - Lack of motivation
 - Depression
 - Denial
 - Cognitive impairment
 - Drug or alcohol use
 - Cultural issues
 - Low educational level
 - Alternate belief systems
- Treatment-related barriers:
 - Complexity of treatment
 - Side effects (or fear of side effects)
 - Inconvenience
 - Cost
 - Time
- Other barriers:
 - Poor practitioner-patient relationship
 - Asymptomatic disease being treated

Understanding Noncompliant Behavior: Definitions and Causes

Fred Kleinsinger, MD The Permanente Journal/ Fall 2003/ Volume 7 No. 4

Failure of Communication and Lack of Comprehension

- Many patients are too polite—or too embarrassed—to speak out when their physician unintentionally confuses or mystifies them. These patients suffer in silent bewilderment.
- Sometimes NCB in a patient who previously had been compliant is the first clue to what may be a significant degree of dementia.
 - [Suggest using] the Mini-Mental State Examination for a newly noncompliant elderly patient.

Cultural Issues

• When faced with a patient's apparent NCB as well as with cultural difference between patient and physician, the physician's responsibility is to explore possible cultural factors that may obstruct effective health care.

Psychosocial Stress

- Many of our patients face complex and stressful living situations. Realities such as poverty, long hours working in multiple jobs, difficult parenting problems, or troubled relationships can leave people exhausted, feeling besieged, and simply unable to cope with the added time and energy required to fully manage a chronic illness
- Feeling trapped and **hopeless** destroys that sense of optimism for the future that usually helps motivate good self-care for chronic illness ["why bother"]
- For many chronic illnesses, such as hypertension ["silent"], noncompliant patients may **feel perfectly healthy** until complications such as congestive heart failure or stroke occur.

Understanding Noncompliant Behavior: Definitions and Causes

Fred Kleinsinger, MD The Permanente Journal/ Fall 2003/ Volume 7 No. 4

- "Psychological" Issues (Biological, environmental, cultural, and patient specific factors include denial and depression and, less commonly, severe psychiatric illness such as psychosis.)
 - Denial is the process by which painful or upsetting thoughts and issues recede from consciousness—a very common response to bad news
 - Denial in mild forms is of considerable value ... Denial in more severe form can be crippling and maladaptive (he describes overwhelm & fear regarding diabetes resulting in denial with NCB)
 - Patients whose depressed mood and defeatist attitude sabotage their ability to deal with their medical condition.
 - Patients who have more severe depression may engage in NCB that appears suicidal and that may lead to an abrupt and early death (e.g., a patient with insulin-dependent diabetes who will not self-monitor blood glucose levels and who is frequently hypoglycemic)
 - Patients with bipolar disorders degree of compliance varies, depending on their mood state.
 - Patients who are clinically psychotic or who have thought disorders with psychotic features present one of the greatest challenges to addressing NCB (E.g., a patient who is delusional and paranoid may refuse psychiatric care and ...could refuse treatment for a serious disease)

Understanding Noncompliant Behavior: Definitions and Causes

Fred Kleinsinger, MD The Permanente Journal/ Fall 2003/ Volume 7 No. 4

Secondary Gain

- Some patients feel rewarded for remaining sick [often not a conscious process, such as deliberate malingering or premeditated self-sabotage, but instead a subconscious positive reinforcement occurs.]
 - [A]common reward is being classified as *medically disabled*: the patient is considered unable to work or requires long-term modification of duties (financial reward; removed from onerous or stressful situation)
 - Patients who receive and enjoy *special attention* from family members while in poor health may engage in NCB.

Drug and Alcohol Dependence

- People who are addicted to alcohol or drugs often fail to take care of business in many of life's arenas and are often erratic or noncompliant with regard to their health care.
- Stress and disorganization in the lives of many addicted patients—as well as health problems—create a formula for massive NCB and poor health outcome

What to do about it....

- Do make it easier (less burden) to remember & to take medications
 - simplify medication regimens
 - use once-a-day dosing whenever possible
 - provide pillboxes for patients or blister packs
 - use combination tablets when possible and appropriate
 - ensure necessary skills (e.g., how to give an injection)
 - align prescriptions for chronic care meds to be refilled at same time
 - provide 90-day supply x 4 for medications for chronic conditions when possible
 - Use computerized tracking systems for prescription refills
- When forgetting is an issue
 - Reminders
 - Suggest putting meds by toothbrush or coffee pot, etc.
 - Enlist support from family or friends
- Health literacy universal precautions AHRQ Health Literacy Universal Precautions Toolkit | Agency for Healthcare Research and Quality
 - Use everyday words, use pictures or models
 - Use teach back and show me (how would you explain this to your partner or friends?)

BDI – Suggestions for addressing problematic medication taking

- Ask correctly (normalize) don't forget to follow-up on medications!!
 - NOT: "You're not having any trouble taking those medications I prescribed, are you?"
 - Better: "How is it going with the new medication we had you start?"
 - "Many people have trouble taking their medications, how often do you ..."
 - Ask patient to bring medications in "brown bag review"
- Forgetfulness if an issue (often another issue underlying... can come out during discussion)
 - Reminders + make managing prescriptions easier align refill times for all meds
- Patient-Provider trust
 - Be a better listener listen for the patient's "good reasons" for not taking ensure patient heard/seen both on same side ("what has been driving you nuts about diabetes?")
- Ask about beliefs about diabetes /meds help clarify
 - What do you see as the positives of the medication?
 - What do you see as the negatives of the medication?
- Offer new information
 - Addressing perceived necessity (PROs) the why for taking the medication
 - Addressing perceived concerns (CONs) patient tells you about their suspicions etc. worthy of being discussed — clarify — provide new perspectives

AMA Steps Forward – Steps to Improve Medication Adherence

- STEP 1 Consider medication nonadherence first as a reason a patient's condition is not under control.
- STEP 2 Develop a process for routinely asking about medication adherence
 - Simply asking "Are these your meds?" only addresses whether the current list of prescribed medications is correct and does not address the patient's medication-taking behavior.
 - Medication review does not need to occur while the patient is on-site. Staff may reach out before their upcoming appointment to conduct an in-depth medication review and discuss medication-taking behavior during a **pre-visit phone call**.
 - This can save time during rooming and allows patients to look at their medication bottles at home.
 - A call to a family member or their pharmacist may be needed if the patient is unsure of their medications.
- STEP 3 Create a shame- and blame-free environment to discuss medications with the patient.
 - The patient may have good reasons for not taking their medications and should be reassured that they can share their true medication-taking behavior without judgment.
 - Asking patients, "Why aren't you taking the medications I prescribed?" is confrontational and suggests that you think the patient's nonadherence is their fault.
 - Instead, try saying, "Many people have trouble taking their medications on a regular basis. Do you find that this is the case for any of your medications?"
- STEP 4 Identify why the patient is not taking their medicine.

AMA Steps Forward – Steps to Improve Medication Adherence

- STEP 5 Respond positively and thank the patient for sharing their behavior.
 - For example, the physician may consider saying, "Thank you for letting us know that you are not taking your medications as prescribed. Can we talk through this together?"
 - A positive and thankful response will make patients more comfortable with sharing their reasons for not taking the medicine.
 - On the other hand, scolding patients may encourage them to withhold their true medicationtaking behavior.
- STEP 6 Tailor the adherence solution to the individual patient.
 - E.g., Fear of Side Effects/ Fear of Harm is a common factor in medication non-adherence
 - Some physicians are worried that if they inform patients of potential side effects of a medicine, that scare them and add additional reasons for nonadherence.
 - Patients are entitled to know what might happen when they take a medicine.
 - Informing patients of potential side effects develops trust, engages the patient, and gives the patient the opportunity to develop the best treatment plan together with the physician.
 - Include the treatment plan and any potential side effects in the after-visit summary.

AMA Steps Forward – Steps to Improve Medication Adherence

- STEP 7 Involve the patient in developing their treatment plan.
 - Patients who are included in decisions about the medications are more likely to adhere to their treatment plan.
 - Enlist the patient in helping to monitor response (home BP checks, SBGM, etc.) ("discovery learning" link the medication and monitoring "see if it is doing the job for you")
- STEP 8 Set the patient up for success
 - Make it easy for patients to adhere to their medication regimen.
 - Encourage your patients to contact you if they decide not to fill the medicine.
 - Let them know that they can tell you this without fear of judgment, and that you are committed to understanding any concerns they may have or obstacles they may encounter.
 - Patients are often unaware that medicines should be taken for an extended duration.
 - Physicians are often reluctant to inform a patient of long-term therapy because they fear it will increase patient's resistance to treatment or may make the patient depressed it is always best to be clear with your patients about the importance of their medication and the role it plays in improving their health.

K.P. Checklist: tools for working with noncompliant patients

- 1. Establish that noncompliance is present
 - Ask patient about compliance
 - Use prescription refill data
 - Review visit frequency, missed appointments, monitoring parameters
- 2. Review the patient's understanding and agreement with diagnoses and treatment goals and recommendations
 - Ask the patient to describe how s/he understands his or her medical disorder in his or her own words
 - Ask if the patient understands the purpose of treatment and the consequences of ineffective treatment
 - Have the patient explain the specific treatment recommendations you are agreeing on in detail
 - Using open-ended questions, ask if the patient feels confident in following the treatment recommendations and if the patient sees any problems
 - Work to mutually find solutions to any problems with compliance that are identified

K.P. Checklist: tools for working with noncompliant patients

3. When discordance or disagreement is evident, use physician—patient conflict-resolution tools to clarify and resolve the disparities

- Work to make noncompliance a **mutual problem, not a power struggle** -Use mirroring (verbal)
 - patient: "I think this is all a waste of time. I'll never lose weight, I hate sticking my finger all the time, and I'm too busy and stressed to eat the way I know I should be."
 - physician: "I see that you're very frustrated with how hard it's been to live with your diabetes and that you feel that it's been hard to do the finger sticks and to follow your diabetic diet. Did I get this right?"
- and "I" statements to identify and defuse conflicts.
 - "I'm worried that if your blood sugars remain this high, you could develop some serious complications." vs "You're doing a very poor job controlling your diabetes. Don't you know this could lead to serious complications?"
- Build patient self-esteem and self-efficacy by using an incremental approach, with interim goals

4. When causes of noncompliance are not apparent:

- Screen for the four D's:- Denial- Depression- Dependence (alcohol and drug)- Dementia
- Look for cultural issues that may affect care
- Ask if cost of treatment is a problem

5. Enlist support from:

- The patient's family and friends
- Colleagues
- Case managers
- Behaviorists
- Outside agencies

Approaches to Specific Causes of Noncompliant Behavior

Denial

- Fear often underlies more pronounced forms of denial.
 - Gently inquiring how the patient understands his or her illness, its likely course, its possible complications, or the effects of treatment can lead to a beneficial discussion in which the concept of denial can be introduced if it seems relevant.
 - Talking about denial in a non-judgmental way often leads to a useful and clarifying discussion.
- Enlist patients' support in working with their denial.
 - Most patients have heard of the term denial and can be asked if they think this is playing
 a role in how they are dealing with their disorder. Frontal assaults on denial, however
 ("You'll die if you don't take better care of yourself"), feed and strengthen the denial.
- Feeling overwhelmed also breeds denial.
 - Identifying these feelings and simplifying medical regimens whenever possible can lessen the impetus to denial as well.

Developing and Reinforcing Self-Efficacy

- Many noncompliant patients have tried the best they can and feel like failures.
 - Failure begets failure (just as success begets success) and stimulates feelings of despondency, depression, and denial.
 - Breaking complex problems down into simpler components and then working on them one at a time and slowly can help combat this cycle of failure and defeat and encourages selfesteem and self-efficacy
 - "Between now and our next visit, why don't we focus on just one of the problem areas."
- AMA Steps Forward: "Studies show a direct relationship between
 - a patient's perception of the need for a given treatment and his/her adherence to this treatment
 - a patient's sense of empowerment and self-efficacy and his/her medication adherence."
- Dr Thomas Bodenheimer:
 - "The more actively the patient is involved, the higher the level of adherence and the greater the chance that the patient engages in healthy diet and exercise behaviors."

Provide Details on the Medication at time of Prescribing study on *Persistence* with GLP1 receptor agonist therapy

Continuers

- Perceived treatment efficacy
 - Glycemia
 - Weight loss
 - "The knowledge of the cardiovascular benefit helped me stay on the GLP-1 [receptor agonist]."
- Perceived treatment burden
 - Cost/insurance coverage
 - Ease of use
- Relevant information from healthcare team
 - explained that GLP-1 receptor agonist therapy would improve my blood glucose control [and other benefits]
 - explained the importance of gradual dosage titration
 - explained how to manage food volume and fats
 - [stop eating when feel full/ satiety also bland foods, avoid carbonation & fatty or greasy foods]
 - my questions were answered by my health care team when I started on GLP-1 receptor agonist therapy.
 - I was provided information about GLP-1 receptor agonist medications.
 - my physician's office called to check on my progress and ask if I had any additional questions.

Discontinuers

- Side Effects (GI, injection site)
- Cost
- Lack of benefit
 - therapeutic heterogeneity: "lack of glycemic improvement, lack of weight loss, and/or intolerability of side effects may simply be an unmodifiable class effect in some participants, which could explain why 25% of discontinuers reported 'numbers did not improve' as their primary reason for discontinuation"
- Less likely to receive relevant information from healthcare team



Continuers were more likely than discontinuers to receive clinically relevant information from their health care team, including facts about GLP-1 receptor agonist medications, likely treatment benefits, the importance of gradual dose titration, and the need to adjust diet after initiation.

Shared Decision Making preferable Allows ownership

Therapeutic Heterogeneity (not everyone responds the same)

• Based on our individual make-up, some things work better or not as well for some of us- this includes:

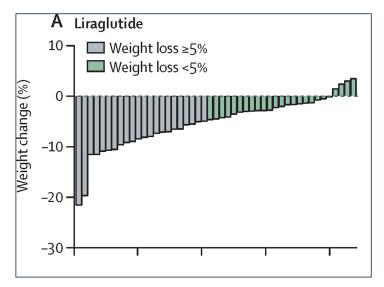
• Type of foods/meal plan (low fat, low carb, low glycemic

index, intermittent fasting, etc.)

Glucose lowering

Weight loss

- Exercise (aerobic, strength training)
 - Glucose lowering
 - Weight loss
 - Fitness
- Medications
 - for example, the research reports the average A1c lowering or weight loss with a medication but in the test group of patients, some had a greater than average response and some had less than average or worsening



The Effect of Early Response to GLP-1 RA Therapy on Long-Term Adherence and Persistence Among Type 2 Diabetes Patients in the United States J Manag Care Spec Pharm. 2019 Jun;25(6):669-680. Emily Durden, Michael Liang, et al.

- ...Patients were more likely to be adherent over 18 months if they had
 - reductions in A1c > 1% (OR = 1.59, 95% CI = 1.36-1.85) or
 - body weight reduction > 3% (OR = 1.18, 95% CI = 1.02-1.36) at 3-6 months compared with those without an early response.
- Similarly, the early responders had significantly lower likelihood of discontinuation compared with those without early response
 - Reductions in A1c > 1% (OR = 0.62, 95% CI = 0.53-0.72)
 - Reductions in body weight > 3% (OR = 0.81, 95% CI = 0.70-0.94)
- Conclusions: Early response to GLP-1 RA therapy was associated with significantly increased adherence and reduced likelihood of discontinuation.

Establishing Treatment Efficacy

- Discovery learning
 - E.g.: Utilize SBGM/ CGM to "discover" blood glucose effects of
 - Exercise / activity
 - Meal choices (type or quantity of foods)
 - Stress / stress reduction
 - Medication changes (increased dose, added medication, change from one med to another, change in timing or injection site)
 - Need before & after data
 - This is not a test!! (not "testing" patient) having them help discover what works for them (treatment efficacy) and what doesn't
 - Win-win benefits
 - Helps reduce futility
 - Helps care team identify efficacy of treatment for that individual (heterogeneity issues)

Summary – Key Points on Medication Nonadherence

- Medication nonadherence is a major cause of treatment failure & poor outcomes but is often overlooked
- Forgetfulness (unintentional nonadherence) can be a factor, but intentional factors are more common and complex – and require more complex solutions
- Fear of side effects/harm, lack of physician trust and lack of understanding the condition and/or the intended benefit of the medication are major factors contributing to medication non-adherence.
- Routinely ask about problems with medications or adherence normalize it
 - Care team members can assist with this
 - Follow up on any medication changes
 - Listen to the patient's "good reasons" for not taking medications (blame & shame free approach)
- Patient self-efficacy and patient understanding of the need for the medication help improve medication adherence
 - Discussion & clarification of adverse effects is important
 - Involve the patient in developing the treatment plan especially important for diabetes meds (shared decision making)

Post-Question - which two options are correct?

- Medication non-adherence
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 - B. Is most often due to forgetting to take meds
 - C. Indicates the patient is unreliable or not good at following instructions
 - D. Is often intentional and due to complex factors
 - A & B
 - A & C
 - A & D
 - B & C
 - B & D
 - C & D

Questions, Comments & Idea Sharing



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Extra Slides

Research: Diabetes care and outcomes for American Indians and Alaska natives in commercial integrated delivery systems: a SUrveillance, PREvention, and Management of Diabetes Mellitus (SUPREME-DM) Study - PMC (nih.gov)

- AI/AN patients had similar rates of HbA1c, LDL-C, and SBP testing, as well as similar rates of *LDL-C* and *SBP* control, compared with non-Hispanic Caucasians.
- AI/AN patients were significantly more likely to have HbA1c >9% (RR=1.41, 95% CI 1.31 to 1.51) compared with non-Hispanic Caucasians.
- AI/AN patients were also significantly less likely to be adherent to their oral diabetes medications (RR=0.90, 95% CI 0.88 to 0.93).

Kaiser Permanente uses a multifaceted approach that includes the following:

- The electronic health record (EHR) to *identify patients at risk* (those with a given diagnosis who have poor control, few visits, or insufficient refills)
 - Often, it is the patients with a given diagnosis whom we do not see regularly who are most likely to be nonadherent.
 - The patient who does not make appointments is most likely to be forgotten.
 - Other health care workers [care team members] such as nurses, medical assistants, and case managers can help do the bulk of the work.
 - Ancillary staff such as medical assistants can reach out to patients who are nonadherent or who have poor control, and encourage them to make appointments
 - Clinical pharmacists can counsel patients and adjust medications if needed
 - Chronic-condition case managers can help, especially for patients with congestive heart failure and diabetes
- Outreach to ensure all patients with hypertension have documentation of blood pressure measurement at least yearly
- Integrated disease-specific health education classes
- Well-utilized clinical guidelines and algorithms for disease control, emphasizing use of effective generic medications (lowering the cost barrier) when applicable
- Physicians' classes and counseling in improving physician-patient communication and collaboration, which encourages shared decision making.

Different Patterns of Medication Nonadherence

- differences in adherence patterns
 - Some patients never initiate taking a prescribed medication;
 - Some patients delay, omit, miss, or even take extra doses;
 - Others discontinue taking a medication altogether.

Recognition and Common Understanding

- The physician must realize the possibility that NCB is occurring it should be looked for in most cases of failure to meet treatment goals.
 - How often do we add a third antihypertension medication when the patient in reality is not taking the first two regularly?
 - The physician should raise this question with the patient in a problem-solving and nonjudgmental manner—"I see you haven't refilled your antihypertension medication in six months. Are you having some problem with taking this medication?" Open-ended questions are best at first.
- Make sure that the physician and the patient have a common understanding of the importance of the medical problem in question, of the availability of effective treatments for this problem, and of the risks if the problem remains untreated or undertreated—This shared understanding is the foundation on which all treatment contracts are based.
 - Start by asking how the patient understands the medical condition and why it needs treatment.
 - Ask if the patient has any concerns or questions about the recommended treatments, lifestyle modifications, diagnostic tests, or follow-up and monitoring plans.
 - Ask if there is an alternative approach that the patient has been using or considering.

Shift from viewing NCB as "the patient's problem" ...

- Develop a shared understanding that the NCB itself is a mutual problem whose solution is vital to effective treatment—
 - "I see that what we've been trying hasn't worked that well. I'm concerned that this puts your health at risk. What do you think?"
 - Avoid the power struggle that can develop when one party attempts to impose a viewpoint on another party.
 - Reframing the noncompliance as a shared problem changes this dynamic.
- Build a more effective partnership (or therapeutic alliance) with the patient—Ask the patient for his or her analysis of the roots of the NCB.
 - Ask what strategies the patient might suggest for addressing the problem. Again, open-ended, nonjudgmental questions can be very effective:
 - "What could I do differently to help you with this?"
 - "How could we approach this problem more effectively?"
 - "What are the obstacles that have prevented our dealing with this more successfully?"
 - The very act of asking these questions can help **reframe** the situation **from a more combative one to a more collaborative one**.
 - Be aware that **guilt, shame, or a sense of failure** is common when NCB is seriously threatening the patient's health.