

Improving Communication–Improving Outcomes in Diabetes

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The following program is a recorded presentation by Carolyn Robertson.

Ms. Robertson is a certified diabetes educator (CDE) and board certified in Advanced Diabetes Management (BC-ADM). She has more than 30 years of experience in diabetes education in intensive/flexible diabetes management, with an active patient caseload for more than 25 years. Ms. Robertson was a pioneer in the intensive management of diabetic pregnancies with over 400 successful pregnancies, as well as an early pioneer in insulin pump therapy. She also has expertise in both type 1 and type 2 diabetes management, glucose sensors, and in the management of patients with kidney and pancreas transplantation.

At the present time, Ms. Robertson has a private practice (*Customized Diabetes Education*) located in New York, serves as the Associate Director of a nonprofit program, and has a contract with the Gonda Diabetes Center at UCLA in California as director of special projects. She is also on the editorial board of *Diabetes Self-Management*, a patient-oriented magazine. Ms. Robertson remains actively involved in clinical research, consultation, and mentoring. Ms. Robertson has been a local board member of both the Juvenile Diabetes Research Foundation International and the American Diabetes Association (ADA). She has published widely in peer-reviewed journals, trade journals, newsletters, as well as on the Internet. Ms. Robertson lectures frequently to local, national, and international audiences of health care professionals, patients, and the general public.

We'll now join Ms. Robertson.

Objectives

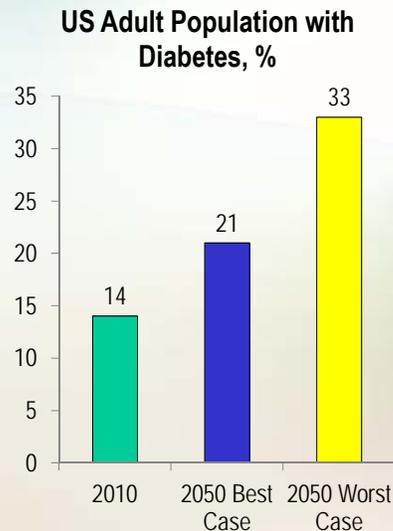
- Describe communication problems that often exist between adults with diabetes and their health care providers and among the health care providers who care for these patients
- Discuss effective approaches for improving communication between patients with diabetes and their health care providers, thereby improving patient outcomes
- Explain promising strategies for improving communication among health care providers who treat adults with diabetes, resulting in improved patient outcomes

At the conclusion of this program, participants should be able to:

- Describe communication problems that often exist between adults with diabetes and their health care providers and among the health care providers who care for these patients
- Discuss effective approaches for improving communication between patients with diabetes and their health care providers, thereby improving patient outcomes
- Explain promising strategies for improving communication among health care providers who treat adults with diabetes, resulting in improved patient outcomes

Projected Diabetes Burden—US Adults

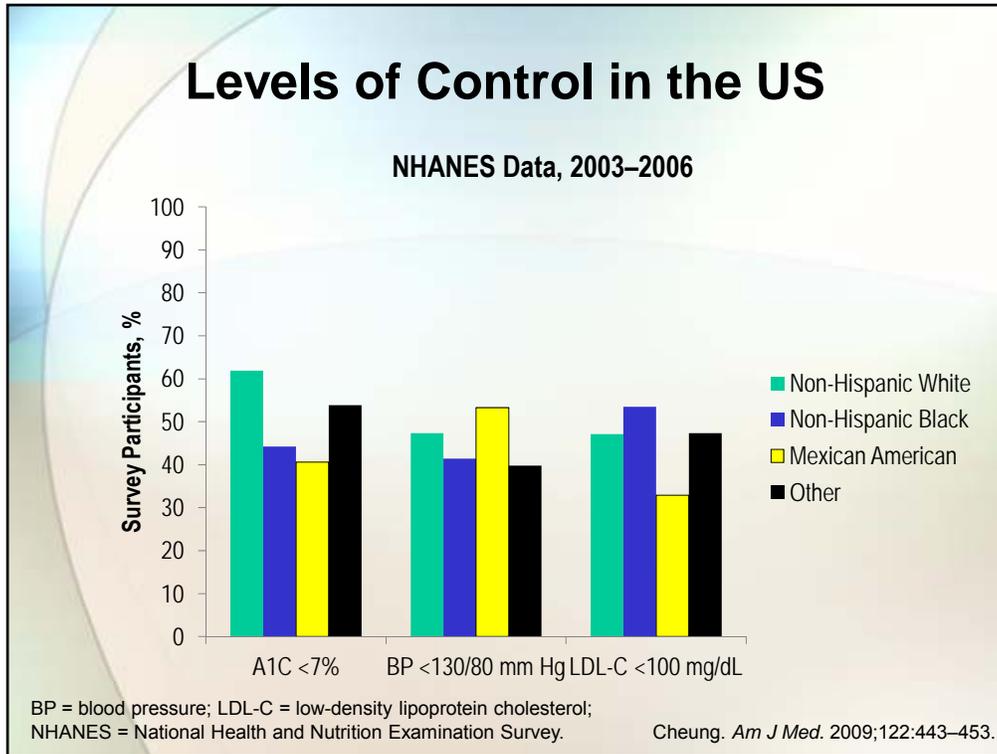
- Urgent need for effective preventive interventions focused on high-risk subgroups
- Tight control of blood glucose, blood pressure, and serum lipids is essential to limit development of microvascular and macrovascular complications in people with existing diabetes



Boyle. *Popul Health Metr.* 2010.

The projected proportion of US adults with diagnosed and undiagnosed diabetes is expected to rise from about 14% in 2010 to as much as 33% by 2050. Several factors are expected to contribute to this alarming increase. The US population is aging, and older adults are more likely than younger adults to develop diabetes. The size of the minority population of the US is also growing, and some minorities, such as Hispanics, African Americans, Pacific Islanders, and South Asians, are at greater risk of developing diabetes than non-Hispanic whites. Furthermore, the lifespan of persons with diabetes is increasing.

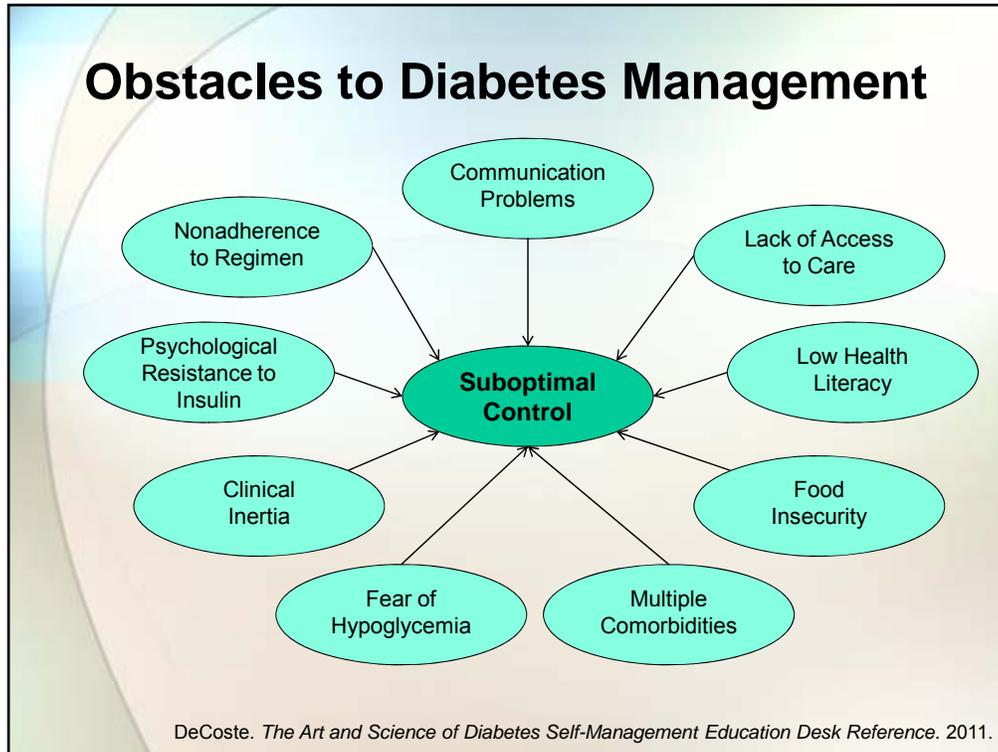
Given the massive personal and economic costs of diabetes, there is an urgent need to implement effective preventive interventions focused on high-risk subgroups within the population. It is also essential to optimize control of blood glucose, blood pressure, and serum lipids in people with existing diabetes to limit the development of microvascular and macrovascular complications.



Analysis of recent National Health and Nutrition Examination Survey (NHANES) data reveals some encouraging progress in the proportions of US residents with diagnosed diabetes who have attained A1C, blood pressure, and low-density lipoprotein cholesterol (LDL-C) values within the ranges recommended by the American Diabetes Association (ADA).

Despite this impressive progress, however, only 1 in 8 participants attained all 3 targets. Furthermore, the chart shows that large proportions of patients have not yet attained their therapeutic goals, and that there are major disparities among people from different ethnic groups. For A1C, for example, 38% of non-Hispanic whites, 56% of non-Hispanic blacks, 59% of Mexican Americans, and 46% of other ethnic groups have not attained an A1C of less than 7%.

The results of this analysis show that there is an ongoing need to pursue the optimal treatment of diabetes and to eliminate barriers to effective control.



Patients with diabetes have suboptimal control for many reasons, some of which are shown in this diagram. Obstacles to effective diabetes management include:

- Communication problems between patients and their health care providers and among the different health care providers who care for patients with diabetes
- Lack of access to medical care
- Low health literacy
- Food insecurity
- The presence of multiple comorbidities
- Fear of hypoglycemia
- Clinical inertia
- Psychological resistance to insulin
- Nonadherence to the prescribed treatment regimen

Although “communication problems” is shown as a separate entity, note that many of the barriers included in the diagram involve communication problems to a greater or lesser degree. Just as communication problems are a major cause of suboptimal control in patients with diabetes, so too, improved communications can result in improved control and improved outcomes.



**PATIENT-PROVIDER
COMMUNICATION**

Patient-Provider Communication Issues

- Language differences
- Cultural differences
- Problems with verbal communication
- Nonverbal communication barriers
- Not insuring that patient understands key messages
- Clinical inertia
- Making treatment decisions unilaterally (by the provider) rather than collaboratively
- Low health literacy
- Not providing information in multiple ways, using well-designed materials

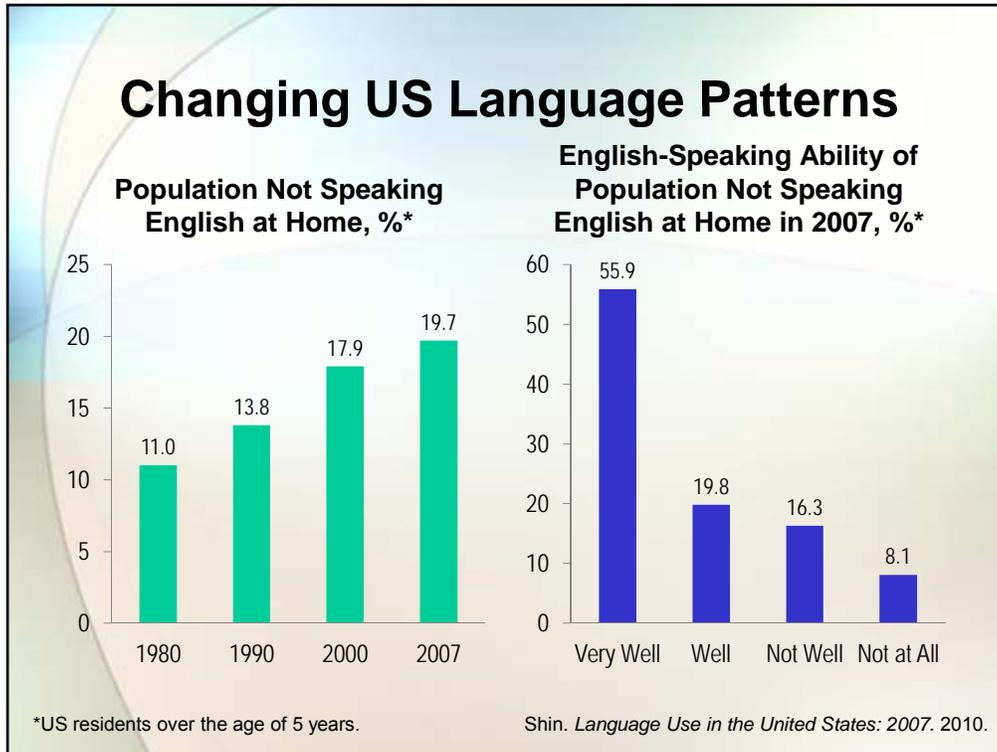
DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.
DeCoste. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.

Many types of communication problems between patients and health care providers can result in suboptimal outcomes for patients with diabetes. As the population of the US becomes more diverse, miscommunications related to language and cultural differences are becoming more common. Both verbal and nonverbal communication issues can serve as barriers between patients and providers. Failure to insure that the patient understands key messages conveyed during a medical visit is another source of communication problems.

Clinical inertia, the failure of a health care provider to change the treatment plan and advance therapy when it would clearly benefit the patient, is a complex problem with many causes. One of its root causes, however, is the provider's failure to explain to the patient, beginning at the time of diagnosis, that diabetes is a progressive disease and that new treatments, including insulin, will probably be necessary in the future.

Another communication issue that often results in suboptimal outcomes is unilateral decision-making by the provider rather than collaborative decision making by the patient and provider.

Low health literacy is a pervasive problem in the US, and failure to assess the health literacy of patients and to make accommodations for limited health literacy often results in nonadherence to the treatment regimen, inability to reach glycemic and other target values, and medication errors. Regardless of a patient's health literacy level, learning about diabetes management is most likely to be successful when information is presented in multiple ways, using well-designed teaching tools.



American Community Survey data for 2007 show that the percentage of US residents over the age of 5 years who speak a language other than English at home rose steadily between 1980 and 2007, from 11.0% to 19.7%. Among US residents speaking a language other than English at home in 2007, 55.9% spoke English “very well,” whereas 44.1 spoke it “well,” “not well,” or “not at all,” thus meeting the criterion for limited English proficiency (LEP).

These language patterns have important implications for health care providers, including those who treat patients with diabetes. Research has shown that lack of a shared language between the patient and the health care provider can jeopardize the effectiveness of a clinical encounter, regardless of the provider’s medical knowledge, clinical competence, or access to state-of-the-art technology. It has also been reported that patient outcomes may be compromised when providers lack cultural competence—that is, understanding of the cultural values and customs of their patients.

During this current era of linguistic and cultural diversity, it is very important for health care providers to have access to skilled medical interpreters and to become knowledgeable about the cultures of the patients for whom they will be caring.

Using an Interpreter Effectively

- Whenever possible, use a professional medical interpreter who is physically present in room
- Ask interpreter to interpret literally, without omission, editing, polishing, or extra conversation
- Ask interpreter to clarify in her/his own words when a misunderstanding due to cultural differences might occur
- Always face and speak directly to patient in normal tone
- Make eye contact with patient and use first person
- Ask patient to repeat explanations and instructions
- If family member must be used, be aware of potential confidentiality issues or conflicts of interest
- For written instructions, always use translator, if available
- Document use of interpreter or translator in patient chart

Association of American Medical Colleges. *Guidelines for use of medical interpreter services*. 2012.
Fung. *Med Educ Online*. 2010.

Using a professional interpreter during interactions with patients who have limited English proficiency has been shown to improve health outcomes and reduce overall patient costs. Whenever possible, the health care provider should use a professional interpreter who is present in the room rather than a professional interpreter who is available by telephone, a staff member who speaks the patient's language, or a member of the patient's family. The interpreter should be asked to interpret literally, without omission, editing, polishing, or extra conversation. However, the interpreter should also be encouraged to clarify in his or her own words when a misunderstanding due to cultural differences might occur.

The provider should always face and speak directly to the patient in a normal tone of voice, use the first person, and maintain eye contact with the patient. When the room configuration permits, the interpreter should be positioned to the side of and slightly behind the patient. To ensure comprehension, the patient should be asked to repeat explanations and instructions.

If a family member must be used as the interpreter, providers should be aware of potential confidentiality issues or conflicts of interest. Using an individual under the age of 18 as an interpreter is acceptable only in emergency situations.

For written instructions, a translator should be used if available. Otherwise the medical interpreter should be asked to write down basic instructions for the patient.

Use of a medical interpreter or translator should be documented in the patient's chart.

Example: Overcoming Cultural Barriers

Cultural Values in the Latino/Hispanic American Community

Cultural Value, Possible Effect	Solution
<i>Familismo</i> : collective loyalty to extended family may result in patient-provider conflicts and treatment delays	Encourage patients to invite family members to medical visits; allow family to participate in decision-making process; provide ample time for patient to discuss treatment plan with family
<i>Personalismo</i> : expectation of developing personal relationship with provider may result in reluctance to share important details about health status	Convey a friendly attitude, decrease physical distance during patient interactions, increase socially appropriate physical contact
<i>Respeto</i> : patients may become distant and resentful if they feel they are not being treated with respect	Use appropriate titles and formal greetings, devote special attention to eliciting patient concerns about treatment regimen
<i>Fatalismo</i> : belief that individuals cannot alter their fate may lead to avoidance of effective treatment plans	Emphasize the efficacy of the recommended treatment regimen

Caballero AE. *Ethn Dis.* 2006;16:559–568.

Cultural competence is the ability of health care providers and institutions to deliver effective services to racially, ethnically, and culturally diverse patient populations. This table, which summarizes cultural values in the Latino/Hispanic American community, gives an example of the importance of respecting cultural values when interacting with patients and initiating or changing a treatment regimen for diabetes. *Familismo* is the collective loyalty to the extended family that supersedes individual needs. Because of this value, patients often wish to consult with their extended family about medical care before making a decision. Lack of recognition of the importance of *familismo* by providers may result in patient-provider conflicts and treatment delays. Providers can overcome this barrier by encouraging patients to invite family members to patient visits, allowing the family to participate in treatment decisions, and providing ample time for the patient to discuss the treatment plan with his or her family.

Because of *personalismo*, or “formal friendliness,” patients expect to develop a warm, personal relationship with their physicians. Providers can acknowledge this value by conveying a friendly attitude, decreasing physical distance during patient interactions, and increasing socially appropriate physical contact.

Respeto, the high value placed on respect, may cause patients to become distant and resentful if they feel that they are not being treated respectfully. Accordingly, health care providers should use appropriate titles and formal greetings and pay special attention to eliciting patient concerns about the treatment regimen.

Fatalismo, the belief that individuals cannot alter their fate, may lead to the avoidance of effective treatment plans. To overcome *fatalismo*, providers should emphasize the efficacy of the recommended diabetes treatment regimen.

Verbal Barriers to Communication

- Patronizing titles (eg, “honey”)
- Language and/or a tone of voice that is threatening or conveys indifference or lack of respect
- Jargon, unfamiliar terms (eg, talking about A1C to newly diagnosed patient)
- Interrupting patient
- Giving patient insufficient time to respond to question
- Lengthy monologues that do not provide opportunity for questions
- Dismissing questions or concerns (eg, “This booklet will tell you everything you need to know”)

DeCoste. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.
Matthews. *Patient Educ Couns*. 2009. Caballero. *Ethn Dis*. 2006.

In addition to language differences, there are many other verbal barriers to effective patient–provider communication. Clinicians may use a patronizing title, such as “honey,” rather than addressing the patient as “Mrs. Brown.” Providers may use language or a tone of voice that is threatening or that conveys indifference or a lack of respect. They often use jargon or unfamiliar terminology without realizing that their patients are unlikely to understand them. For example, one study found that 91% of patients with recently diagnosed diabetes and an above-average educational level were unfamiliar with the term “A1C” when it was used during a medical visit.

Given the time constraints under which health care providers work today, it is not surprising that many verbal barriers to communication involve the desire to bring the visit to an end. For example, clinicians may interrupt a patient or not give the patient enough time to respond to a question before beginning to speak again. It is important to remember that people have different response times and information processing rates. They also have social interaction styles that vary widely from one culture to another. Providers may also launch into lengthy monologues that do not allow the patient to ask questions. They may also dismiss patients’ questions or concerns with responses such as, “This booklet will tell you everything you need to know.”

Enhancing Verbal Communication

- Decrease background noise, especially for patients who may have hearing or attention deficits
- Express empathy, build trust, and encourage openness and honesty
- Use active listening skills
 - Clarifying
 - Paraphrasing
 - Reflecting feelings
 - Using minimal encouragers (eg, “okay,” “uh-huh”)
- Decide what information is needed and formulate a question that will provide the information directly
- Encourage patients to give specific examples

DeCoste. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.

Health care providers can enhance their verbal communication with patients in several different ways. They should try to decrease background noise, especially when they are interacting with a patient who may have a hearing or attention deficit. They should use language and a tone of voice that expresses empathy, builds trust, and encourages openness and honesty.

Employing active listening skills by clarifying, paraphrasing, reflecting feelings, and using minimal encouragers also enhances patient-provider communication. Asking for clarification allows the provider to check the meaning of a particular word or phrase used by the patient. When paraphrasing, the clinician restates what the patient has said in slightly different words that have the same meaning. Paraphrasing confirms that the patient has been understood. Reflecting feelings involves giving the patient feedback on the affective tone of what they are saying. For example, the provider might say, “You seem very annoyed that your A1C has stayed the same even though you’ve been getting more exercise.” Reflecting feelings helps the patient to become more aware of how they appear to be reacting to a particular situation. This practice also enables the clinician to check on whether they have an accurate understanding of the patient’s feelings. Minimal encouragers are verbal and nonverbal signs that people use to indicate that they are listening and the speaker should continue. Verbal minimal encouragers include words like “okay” and “uh-huh,” while nonverbal encouragers include nodding the head and maintaining eye contact.

Providers can also enhance communication with patients by asking carefully phrased direct questions that are likely to elicit the necessary information and by inviting patients to provide specific examples of problems that they are experiencing.

Nonverbal Communication Barriers

How Do These Behaviors Discourage Communication?



As shown on this slide, many nonverbal behaviors serve as barriers to effective patient-provider communication. The photo of the provider whose eyes are glued to her computer screen deserves special mention. Although, as we will discuss later in this activity, our increasing use of electronic health records (EHRs) has many benefits for patients with diabetes, it can also detract from patient-provider interaction during a medical visit.

Research suggests that provider behaviors that communicate impatience and a desire to end the patient visit are especially common in today's high-pressure medical environment. These behaviors include looking at a watch or clock, pushing the chair away from the patient, and standing up or putting a hand on the doorknob of the consultation room while the patient is speaking.

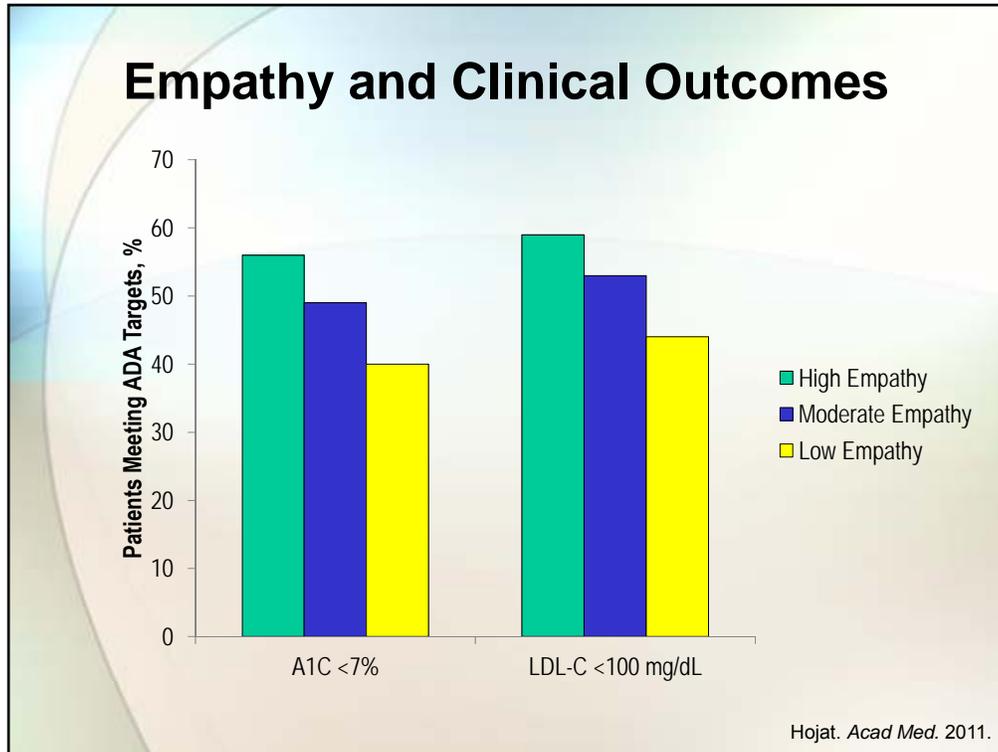
Improving Nonverbal Communication

- Provider behaviors that foster positive, involved relationship with patient
 - Close proximity
 - Facing patient directly
 - Maintaining eye contact (unless culturally inappropriate)
 - Leaning forward
 - Keeping arms and legs in open positions
 - Maintaining relaxed posture
- Difference between too much and too little involvement based on gender, culture, socioeconomic status, and subject matter
- Reviewing videotapes with experienced colleague is often beneficial

Hall. *Appl Prev Psychol*. 1995. Caballero. *Ethn Dis*. 2006.
DeCoste K. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.

Studies have found that patient-provider communication improves when the provider adopts nonverbal behaviors that foster a positive, involved relationship with the patient. Such behaviors include close proximity, facing the patient directly, making eye contact, leaning forward, keeping the arms and legs in open positions, and maintaining a relaxed posture. (Note, however, that maintaining eye contact is inappropriate when interacting with patients from some cultures, such as Muslim immigrants from Africa and Asia, particularly if they are of the opposite sex.) The difference between too much and too little involvement with the patient is subtle and subjective and is based on variables such as gender, culture, socioeconomic status, and the subject matter being discussed. As mentioned earlier, it is important for providers to learn as much as possible about the cultural norms of the people the provider will be treating and to respect these norms. Many Internet links to educational materials related to nonverbal behavior and culture are listed in the *Health Literacy Universal Precautions Toolkit*.

Most clinicians are unaware that their nonverbal behaviors are inhibiting the patient-provider communication process. When facilities are available and patients give their written consent, it is very valuable for providers to have some of their patient visits videotaped. Ideally, the videotapes should then be reviewed with a colleague or mentor with expertise in nonverbal communication.



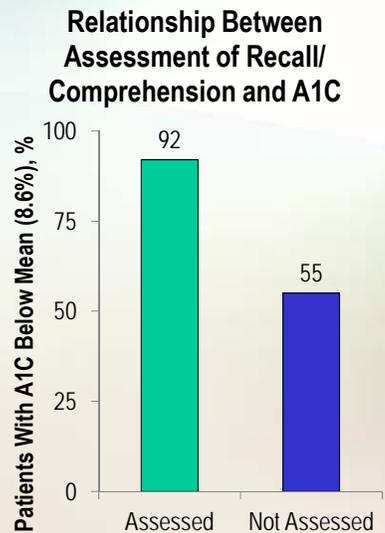
Providers' expression of empathy with their patients through verbal and nonverbal behaviors improves patient-provider communication. The results of a recently reported study also show that empathetic behavior is associated with improved clinical outcomes for patients with diabetes.

This study examined the EHRs of 891 outpatient adults with diabetes who were treated by 29 attending physicians in the Department of Family and Community Medicine at Thomas Jefferson University. Based on their scores on the Jefferson Scale of Empathy (JSE), a validated instrument, physicians were divided into high-, moderate-, and low-empathy groups. (The JSE is a 20-item test that is answered on a 7-point Likert scale, with 1 indicating strong agreement and 7 indicating strong disagreement. An example of one of the test items is: "My patients feel better when I understand their feelings.")

The study showed that the likelihood of having an A1C value below 7% was significantly greater in the patients of physicians with high empathy scores than in the patients of physicians with low empathy scores. Similarly, patients were significantly more likely to have an LDL-C level of less than 100 mg/dL if they had a physician with a high empathy score rather than a low empathy score. In commenting on their findings, the investigators observed that greater empathy in the patient-provider relationship enhances mutual understanding and trust between physician and patient, which in turn promotes sharing without concealment. The result is better alignment between patients' needs and treatment plans and thus, greater adherence to the treatment plan.

Assessing Recall and Comprehension

- Patients recall about 50% of facts communicated by health care provider
- Providers assessed recall and comprehension of new concepts in 20% of visits and for 12% of new concepts
- “Teach-back” method is effective assessment tool



Roter. *Annu Rev Public Health*. 1989. DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.

Studies have consistently shown that patients recall and understand only about 50% of the facts communicated to them by a health care provider. Therefore, it is recommended that providers assess patients' recall and comprehension of new concepts before the end of each medical visit. However, research indicates that this assessment rarely takes place.

One study used audiotape to document the behavior of 38 primary care physicians who treated an ethnically diverse population of adults with diabetes in 2 primary care clinics of a large metropolitan public hospital. The study showed that providers assessed their patients' recall and comprehension of new concepts in 20% of visits. Recall and comprehension of only 12% of new concepts was assessed.

The study also demonstrated the clinical consequences of assessing recall and comprehension. At the end of the study, the mean A1C of participants was 8.6%. As shown in the graph, the cohort of patients whose final A1C was below this mean value included 92% of patients who were assessed and 55% of patients who were not assessed.

In commenting on their findings, the investigators noted that assessment of recall and comprehension can improve patient-provider communication by giving the patient an opportunity to acknowledge gaps in understanding, eliciting questions and feedback, and encouraging education tailored to the patient's unique needs. This assessment method is often referred to as “teach-back” or “closing the loop.”

Using “Teach-Back”

- Ask patient to repeat in own words what he/she needs to know or do, in non-shaming way
 - Example: “I want to be sure that I gave you clear information about taking metformin. Please tell me how you are going to take it.”
- Rephrase material if patient cannot repeat information accurately
- Ask patient to teach back the information again, using his/her own words, until you are comfortable that it is understood
- If patient still does not understand, consider other strategies, such as asking patient to come for follow-up visit with family member

DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.

“Teach-back” is a way of confirming that the provider has explained to the patient what he or she needs to know in a way the patient understands. It is important to remember that teach-back is not a test of the patient’s knowledge but of how well the provider has explained the concept.

When using teach-back, the provider asks the patient what he or she needs to know or do in a non-shaming way. For example, the provider might say, “I want to be sure that I gave you clear information about taking metformin. Please tell me how you are going to take it.”

The provider should rephrase the material if the patient cannot repeat the information accurately. Then the provider should ask the patient to teach back the information again, using his or her own words, until the provider is comfortable that the patient really understands it.

If the patient still does not understand, the provider should consider other strategies, such as asking the patient to come for a follow-up visit with a family member.

The *Health Literacy Universal Precautions Toolkit* lists several valuable resources for learning more about teach-back.

Clinical Inertia

- Many providers delay or avoid discussions about changing treatment plan when doing so would clearly benefit patient
- Clinical inertia can involve any aspect of diabetes care
 - Changing oral glucose-lowering medications
 - Transitioning to insulin or intensifying insulin therapy
 - Switching to new insulin delivery system
 - Initiating new treatments to reduce weight, decrease BP, or improve dyslipidemia
- Major causes
 - Reluctance to alienate patient
 - Concern about managing new regimen safely
 - Lack of familiarity with clinical practice guidelines

Davidson. *Diabetes Care*. 2005. Polonsky. *Diabetes Care*. 2005.
Rubin. *Diabetes Care*. 2008. Beaser. *Endocr Pract*. 2011.

Clinical inertia is present when a health care provider delays or avoids discussions about changing a patient's treatment plan when doing so would clearly benefit the patient.

Clinical inertia can involve any aspect of diabetes care. It often serves as a barrier to changing oral glucose-lowering medications, transitioning to insulin or intensifying insulin therapy, switching to a new insulin delivery system such as an insulin pen or insulin pump, or initiating new treatments to reduce weight, decrease BP, or improve dyslipidemia.

A major reason for clinical inertia is reluctance to alienate the patient who is unwilling to change his/her treatment plan because of misconceptions about the progressive nature of diabetes, concerns about the demands of intensified therapy, and fears about possible adverse effects of insulin or other therapies. The reluctance of patients to transition to insulin therapy is often referred to as "psychological insulin resistance."

Other causes of clinical inertia are concern about safely managing the patient's new regimen within a busy medical practice and lack of familiarity with current clinical practice guidelines and insulin delivery systems.

Overcoming Clinical Inertia

- Provider education
 - Safety and efficacy profiles of drugs used to treat hyperglycemia, hypertension, and dyslipidemia
 - Weight reduction strategies
 - Effective approaches for avoiding adverse effects
 - Features of newer insulin delivery devices
 - Current evidence-based clinical practice guidelines
- Patient education
 - Diabetes as progressive disease
 - Importance of managing BG, BP, and lipid levels
 - Strategies for minimizing adverse effects
 - New systems that facilitate insulin delivery

BG = blood glucose.

Triplitt. *Am J Manag Care*. 2010. Karter. *Diabetes Care*. 2010.
Beaser. *Endocr Pract*. 2011.

Overcoming clinical inertia requires both provider education and patient education. Providers need to be thoroughly familiar with the safety and efficacy profiles of drugs used to treat hyperglycemia, hypertension, and dyslipidemia, including newly approved agents. Knowledge of clinical data supporting various weight reduction approaches is also important. Clinicians need to be familiar with effective approaches for avoiding or minimizing adverse effects, including strategies for preventing hypoglycemia and weight gain in insulin-treated patients. Providers also need to be knowledgeable about the features of newer insulin delivery devices and the content of current evidence-based clinical practice guidelines.

Overcoming clinical inertia also requires effective patient education. As soon as a patient receives a diagnosis of type 2 diabetes, it is important for the provider to begin to teach the patient that diabetes is a progressive disease, and that transitioning to more or different glucose-lowering agents, including insulin, is expected. These messages need to be communicated throughout the course of the disease. Emphasizing the importance of managing blood glucose, blood pressure, and lipid levels should also begin at the time of diagnosis and then continue. It is important for the provider to stress that effective strategies are available for managing the adverse effects of drugs used to treat hyperglycemia, hypertension, and dyslipidemia. Providers should explain to patients that newer systems facilitate insulin delivery and reduce discomfort associated with insulin administration.

Collaborative Decision Making

- Patient and provider jointly arrive at decisions about patient management
- Results in improved health outcomes, closer adherence to treatment regimen, and greater patient satisfaction

Statistically Significant Differences After 6 Years in 1316 Patients Managed in Primary Care Setting

Parameter	Collaborative Decision Making	Standard Care
A1C, %	8.5	9.0
FPG, mg/dL	142	157
SBP, mm Hg	145	150

FPG = fasting plasma glucose;
SBP = systolic blood pressure.

Heisler. *J Gen Intern Med.* 2002.
Olivarius. *BMJ.* 2001.

Collaborative, or shared, decision making is a powerful tool for improving patient outcomes. In contrast to the traditional model, in which the health care provider makes treatment decisions for the patient, collaborative decision making involves joint decisions about patient management. For example, after reviewing a patient's laboratory values, the patient and practitioner might jointly decide that it is time for the patient to transition from an oral glucose-lowering regimen to a regimen of basal insulin plus metformin.

Studies in patients with diabetes or other serious diseases have consistently shown that collaborative decision making results in improved health outcomes, closer adherence to the treatment regimen, and greater patient satisfaction.

The benefits of collaborative decision making are demonstrated by the results of a study that included 1316 Danish patients with type 2 diabetes who were managed in primary care practices. Patients were randomly assigned to a health care model based on collaborative decision making or to standard care. As shown in the graph, after 6 years, patients in the collaborative decision making group had significantly lower A1C, fasting plasma glucose, and systolic blood pressure values than patients who received standard care.

Checkpoint 1

The correct statement is: _____.

- a. a professional interpreter should be used when a patient's family member does not feel comfortable interpreting
- b. using active listening skills is one way to enhance verbal communication between a patient and a provider
- c. "teach-back" is an ineffective communication technique because it is embarrassing to patients
- d. when a patient cannot maintain glycemic control with oral agents, it is time to initiate discussions about the progressive nature of diabetes

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Answer to Checkpoint 1

The correct answer is **b**.

Using active listening skills is one way to enhance verbal communication between a patient and a provider.

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Health Literacy

- The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions
- Components
 - **Prose literacy:** ability to search, comprehend, and use information from texts organized in sentences and paragraphs
 - **Document literacy:** ability to search, comprehend, and use information from noncontinuous text in various formats
 - **Quantitative literacy (numeracy):** ability to perform computations using numbers embedded in printed materials; ability to understand and use numbers in daily life

Kutner. *The Health Literacy of America's Adults*. 2006.
Rothman. *Am J Prev Med*. 2006.

Health literacy, which plays a major role in maintaining health and dealing with disease, is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.

The definitive study of health literacy in the US was the 2003 National Assessment of Adult Literacy (NAAL), which investigated the English literacy of adults. The assessment was administered to more than 19,000 people 16 years of age and older in households and prisons. Full results were reported in 2006.

The NAAL assessed 3 aspects of health literacy: prose literacy, document literacy, and quantitative literacy, which is often called numeracy. Prose literacy is the knowledge and skills needed to search, comprehend, and use information from texts that are organized in sentences or paragraphs. Document literacy is the knowledge and skills needed to search, comprehend, and use information from noncontinuous texts in various formats. The NAAL also assessed numeracy, which was defined as the knowledge and skills needed to identify and perform computations using numbers embedded in printed materials. However, numeracy is often defined more broadly, as the ability to understand and use numbers in daily life.

Health Literacy Levels in the US

NAAL Level	Typical Task	Adults at This Level
Proficient	Calculate an employee's share of health insurance costs for a year, using a table that shows how the employee's monthly cost varies depending on income and family size.	12%
Intermediate	Determine a healthy weight range for a person of a specified height, based on a graph that relates height and weight to BMI.	53%
Basic	Give 2 reasons why a person with no symptoms of a specific disease should be tested for the disease, based on information in a clearly written pamphlet.	22%
Below Basic	Identify how often a person should have a specified medical test, based on information in a clearly written pamphlet. Circle the date of a medical appointment on a hospital appointment slip.	14%

Kutner. *The Health Literacy of America's Adults*. 2006.

NAAL recognized 4 health literacy levels: proficient, intermediate, basic, and below basic. Using this ranking, most adults (53%) had intermediate health literacy. An additional 12% had proficient health literacy, 22% had basic health literacy, and 14% had below basic health literacy.

A typical task that could be successfully completed by a person with proficient health literacy is to calculate an employee's share of health insurance costs for a year, using a table that shows how the employee's monthly cost varies depending on income and family size.

An individual with intermediate health literacy could complete a task such as this: determine a healthy weight range for a person of a specified height, based on a graph that relates height and weight to BMI.

A person with basic health literacy would be able to give 2 reasons why an individual with no symptoms of a specific disease should be tested for the disease, based on information in a clearly written pamphlet.

An individual with below basic health literacy could identify how often a person should have a specified medical test, based on information in a clearly written pamphlet. Another below basic health literacy task is to circle the date of a medical appointment on a hospital appointment slip.

Characteristics Associated With Low Health Literacy

- Age ≥ 65 years
- Belonging to ethnic or racial minority (except Asian/Pacific Islanders)
- Speaking a language other than English before starting school
- Low educational attainment
- Living below poverty level
- Poor overall health
- Insured by Medicare or Medicaid or no health insurance coverage

Kutner. *The Health Literacy of America's Adults*. 2006.

The NAAL has identified several characteristics as being associated with low health literacy. Other studies have also identified these characteristics. The NAAL found that adults aged 65 and older had lower average health literacy than younger adults. Adults aged 25 to 39 had the highest average health literacy. Whites and Asian/Pacific Islanders had higher average health literacy than Black, Hispanic, American Indian/Alaska Native, and multiracial adults. Hispanic adults had lower average health literacy than members of other racial and ethnic groups. Below basic health literacy was reported for 9% of whites and adults with a multiracial background, 13% of Asians and Pacific Islanders, 24% of blacks, 25% of American Indians and Alaska Natives, and 41% of Hispanics. Adults who spoke only English before starting school had higher average health literacy than adults who spoke only a language other than English.

Low educational attainment was also associated with low health literacy. Starting with adults who had graduated from high school or obtained a GED, average health literacy increased with each higher level of educational achievement. Forty-nine percent of adults who had not attended or completed high school had below basic health literacy, compared to 14% of adults who had completed high school or obtained a GED.

Adults living below the poverty threshold had lower average health literacy than other adults, and adults whose income was more than 175% above the poverty threshold had the highest average health literacy. Low health literacy is also associated with poor overall health. Forty-two percent of adults with below basic health literacy and only 3% of those with proficient health literacy rated their overall health as poor. Adults insured by Medicare or Medicaid and those with no health insurance have lower health literacy than those covered by other types of health insurance.

Low Health Literacy “Red Flags”

- Making excuses when asked to fill out form or read
- Incomplete registration, health histories, consent forms
- Frequently missed appointments
- Not following through on recommended tests or referrals
- Not adhering to treatment regimen
- Inability to name medications, explain purpose or dosing
- Identifying pills by looking at them, not by reading label
- Inability to explain symptoms or adverse effects in sequential way
- Asking no or few questions

Kutner. *The Health Literacy of America's Adults*. 2006.
Cornett. *Online J Issues Nurs*. 2009.

There are a number of “red flags” suggesting that patients may have low health literacy. They may make excuses when asked to fill out a form or read, saying “I don’t have my glasses” or “I’ll read it at home.” Patients may not fill out registration forms, or health history questionnaires, or consent forms completely. They may miss scheduled appointments frequently and not follow through on recommended tests or referrals.

Additionally, patients with low health literacy may not adhere to the treatment regimen. They are often unable to name their medications, explain the purpose of each medication, or describe when and how each medication should be taken. Patients with low health literacy often identify their oral medications by looking at the pills or capsules rather than by reading the medication labels.

Another sign of low health literacy is the inability to describe the onset of symptoms or adverse effects in a sequential fashion.

Patients with low health literacy typically ask no or few questions about their prescribed treatment regimen. If asked whether they understand a modification to their treatment plan, they may say only “yes.”

Screening for Low Health Literacy

Example of Rapid Health Literacy Screening in Clinical Setting

Question	"Red Flag"
How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacist?	Response other than "never"
How confident are in filling out medical forms by yourself?	Response other than "very"
How often do you have problems learning about your medical condition because of difficulty understanding written information?	Response other than "never"

Some Validated Health Literacy Screening Instruments

- Test of Functional Health Literacy in Adults-Short Form (S-TOFHLA)
- Rapid Estimate of Adult Literacy in Medicine-Short Form (REALM-SF)
- Short Assessment of Health Literacy for Spanish-Speaking Adults (SAHLSA-50)
- Newest Vital Sign (NVS)

DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.
DeCoste. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.
Cornett. *Online J Issues Nurs*. 2009. Powers. *JAMA*. 2010

All patients should be screened for low health literacy, since it is not possible to identify individuals with low health literacy on the basis of demographic characteristics or first impressions. In the clinical setting, 1- to 3-item screening tools are usually effective for identifying patients with low health literacy. The table gives an example of a 3-item screening tool. Although they are not always validated, screening tools of this type may be more acceptable to patients than a more formal assessment instrument.

A number of longer, validated, health literacy screening instruments are available. These tools are generally used in clinical research, but can also be used in practice settings. The slide lists 4 of the most widely used validated screening instruments. The Test of Functional Health Literacy in Adults-Short Form (S-TOFHLA) is a 36-item assessment of reading comprehension at the fourth- and tenth-grade reading levels that takes 12 minutes to administer. It is an abridged version of the original, 67-item, TOFHLA.

The Rapid Estimate of Adult Literacy in Medicine-Short Form (REALM-SF) is a 7-item word-recognition test that can be administered in less than 2 minutes. The REALM-SF is derived from the original 66-item REALM. An 8-item version (REALM-R) is also available. The Short Assessment of Health Literacy for Spanish-Speaking Adults (SAHLSA-50) is a 50-item tool based on the 66-item REALM. It takes 3 to 5 minutes to administer. The Newest Vital Sign (NVS) is intended for use in primary care settings. It consists of a nutrition label for a hypothetical ice cream product and 6 questions about the label. The NVS, which takes 3 minutes to administer, is available in English and Spanish.

Consequences of Low Health Literacy

- Estimates of annual cost of low health literacy to US economy: \$106–238 billion
- Low health literacy is common in persons with chronic diseases, including diabetes
- Among people with diabetes, compared to those with higher health literacy, those with low health literacy have:
 - Less knowledge about diabetes
 - More concerns about harmfulness of glucose-lowering medications, resulting in nonadherence
 - Difficulty performing many diabetes-related tasks (eg, estimating portion sizes, calculating insulin doses)
 - Greater likelihood of having BG values outside target ranges
 - Higher rates of complications

Vernon. *Low Health Literacy: Implications for National Health Policy*. 2007.
Aikens. *Diabetes Care*. 2009. Cavanaugh. *Diabetes Care*. 2009.
Schillinger. *JAMA*. 2002. Williams. *Arch Intern Med*. 1998.

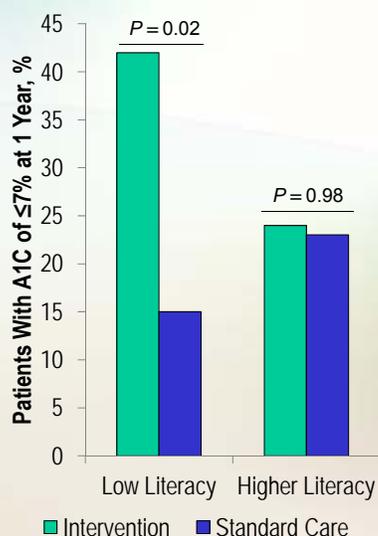
Estimates of the annual cost of low health literacy to the US economy range from \$106 billion to \$238 billion. Low health literacy is common in persons with chronic diseases, including diabetes.

Among people with diabetes, compared to those with higher health literacy, those with low health literacy have less knowledge about diabetes and more concerns about the harmfulness of glucose-lowering medications, resulting in nonadherence to the treatment regimen. Individuals with low health literacy often have difficulty performing a variety of diabetes-related tasks, such as estimating portion sizes, carbohydrate counting, and calculating a bolus dose of insulin.

In most studies, patients with low health literacy were more likely to have blood glucose outside target ranges than those with higher health literacy. Persons with low health literacy also have higher rates of diabetes complications, such as retinopathy, nephropathy, lower extremity amputation, cerebrovascular disease, and cardiovascular disease.

Interventions for Low Health Literacy

Patients with diabetes and low health literacy who participate in programs emphasizing verbal education with concrete simplified explanations of critical behaviors and goals, “teach-back,” and picture-based materials may have outcomes that are better than those of patients with higher health literacy



Rothman. *JAMA*. 2004.

Several studies have shown that patients with diabetes and low health literacy who participate in specially tailored programs may have outcomes that are at least as good, if not better, than those of patients with higher health literacy.

One study focused on patients with type 2 diabetes and an A1C of at least 8% who were treated at a university general internal medicine practice. Participants included patients with low and higher health literacy. Patients were randomized to receive standard care or an intervention that included techniques to enhance comprehension in participants with low health literacy. Patients in the intervention group received predominantly verbal education with concrete, simplified, explanations of critical behaviors and goals; “teach-back” to assess comprehension, and picture-based materials. The primary outcome measure was the percentage of patients with an A1C of 7% or less after 1 year.

As shown in the graph, treatment group had little effect on outcomes in patients with higher health literacy. Twenty-four percent of those assigned to the intervention group and 23% of those assigned to the standard care group attained the A1C target. Among patients with low health literacy, on the other hand, the percentage of patients attaining the A1C goal was 42% in the intervention group and 15% in the control group, a statistically significant difference.

Effective Written Communication

- Teach one person within medical practice to evaluate and create written materials
- Use available tools
 - Formatting resources (eg, ClearDoc Index)
 - Guides for using common words (eg, *Plain Language Thesaurus for Health Communications*)
 - Readability calculators (eg, ReadabilityFormulas.com)
- Ask various patients to evaluate written materials
 - Is material clear and easy to understand?
 - Is it confusing in any way?
 - Are any words/parts hard to read or understand?
 - Is anything offensive?
 - What is and what is not helpful?

DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.
Literacy Partners of Manitoba. *ClearDoc Index*. 2004.
National Center for Health Marketing. *Plain Language Thesaurus*. 2007.
ReadabilityFormulas.com. *Free Readability Formulas*. 2012.

Developing effective forms, educational handouts, and other written materials is another way to enhance patient-provider communication. One person within the medical practice should be taught to create written materials and evaluate materials written elsewhere. Many helpful resources for developing materials that are effectively formatted, use common words, and are written at an appropriate reading level are available on the Internet. For example, the ClearDoc Index is a 1-page guide to formatting documents. The *Plain Language Thesaurus for Health Communications* provides common-language equivalents for complex medical terminology. ReadabilityFormulas.com offers several free calculators that quickly determine the reading level of written text.

It is also helpful to ask a variety of patients to evaluate written materials developed in or considered for use in the medical practice. It is useful to ask patient evaluators the following questions: Is the material clear and easy to understand? Is it confusing in any way? Are any words or parts hard to read or understand? Is anything offensive? What is and what is not helpful?

Using Educational Materials Effectively

- Health materials are effective only when used as part of an overall patient education strategy
- Use written educational materials in conjunction with spoken instruction
- Review material with patient
 - Circle or highlight especially pertinent material
 - Personalize materials by adding patient's name, medications, and specific care instructions
 - Ask patients to restate main points of verbal instruction and written material
- Use well-produced videos to complement spoken instruction and written educational materials

DeWalt. *Health Literacy Universal Precautions Toolkit*. 2010.

However well written they are, health education materials are effective only when used as part of an overall patient education strategy. Simply handing a pamphlet to a patient is not enough to promote understanding or behavior change.

Written educational materials should be used in conjunction with spoken instruction. They should be used to facilitate discussion, not to replace it. Educational material should be used when a clinician is focusing on a specific point of care that needs further reinforcement, such as the need to maintain the blood pressure below 130/80 mm Hg.

The health care provider should review written materials with the patient. Important information should be emphasized by circling or highlighting it, followed by a discussion of how the information relates to that patient's care. It is often helpful to personalize written materials by adding the patient's name, medications, and specific care instructions. To ensure comprehension, the provider should ask the patient to use "teach-back," restating the main points of the verbal instruction and written material.

Well-produced educational videos can be used to complement spoken instruction and written materials. Videos that review the causes and treatment of diabetes can be especially helpful for newly diagnosed patients. As with written materials, effective videos should use plain language. The health care provider should keep in mind that videos are not a substitute for discussing and reviewing information with the patient, although they can be helpful for introducing or reinforcing the topics discussed.

Low Health Literacy Curricula: DLNET

- DLNET is an example of a DSME curriculum developed for patients with low health literacy
- Based on principles of clear health communication
 - Simple wording and short sentences with 4th–6th-grade reading level
 - Information limited to key points
 - Focus on essential actions and desired behaviors
 - Emphasis on *what* patient may experience and *what* patient should do
 - Picture-based information
 - Color-coded tables
- 25 modules (basic and specialized) currently available

DLNET = Diabetes Literacy and Numeracy Education Toolkit; DSME = diabetes self-management education.

Vanderbilt Diabetes Research and Training Center. 2012. Wolff. *Diabetes Educ.* 2009.

Both the ADA and the American Association of Diabetes Educators (AADE) recommend that all patients with diabetes participate in a diabetes self-management education (DSME) program at the time of diagnosis and as needed thereafter. A shortcoming of many DSME materials is that they are written on at least a ninth-grade level. Therefore, many patients with low health literacy lack basic diabetes-related skills, such as treating an episode of hypoglycemia, even though they have attended multiple DSME classes.

Many DSME curricula for patients with low health literacy have been developed in recent years. One such curriculum is the Diabetes Literacy and Numeracy Toolkit (DLNET), which was developed at Vanderbilt University. The informational content of the DLNET is consistent with that of traditional DSME materials, but its design is based on the principles of clear health communication. The DLNET features simple wording and short sentences targeted at patients with a fourth- to sixth-grade reading level. Information is limited to key points, with a focus on essential actions and desired behaviors. DLNET materials emphasize *what* the patient may experience and *what* the patient should do, not *why* he or she is experiencing something or should do something. The text is accompanied by many line drawings and color-coded tables. A total of 25 curriculum modules are currently available. Core modules are intended for all patients, whereas other modules are targeted at specific patients, such as those who use basal insulin or GLP-1 agonists.

Introduction to MI

- Person-centered method of guiding to elicit and strengthen personal motivation for change
- Developed for treatment of substance use disorders, now widely used in health promotion and management of chronic diseases, including diabetes
- Assists patients in working through their ambivalence or resistance about behavior change
- Encourages patients to make informed, deeply contemplated life choices, even if decision is not to change
- Tone is nonjudgmental, empathetic, and encouraging
- Employs multiple strategies: reflective listening, shared decision-making, eliciting change talk

MI = motivational interviewing.

Anderson. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.
Rollnick. *Motivational Interviewing in Health Care: Helping Patients Change Behavior*. 2007.

Motivational interviewing (MI) is a person-centered method of guiding in order to elicit and strengthen personal motivation for change. MI was developed for the treatment of people with substance use disorders, but it is now widely used in health promotion and the management of chronic diseases, including diabetes.

MI helps patients to work through their ambivalence or resistance about changing their behavior. It encourages them to make informed, deeply contemplated life changes, even if the ultimate decision is not to change.

The tone of MI is nonjudgmental, empathetic, and encouraging. The provider establishes a non-confrontational, supportive climate in which patients feel comfortable expressing both the positive and negative aspects of their current behavior, such as continuing to eat the same high-fat, high-carbohydrate diet they have enjoyed all their lives. Providers help patients to think about and verbally express how their current behavior or health status may impact their ability to achieve their life goals or fulfill their core values. For example, a provider might help a patient to think and talk about how her sedentary lifestyle might interfere with her ability to play an active role in the lives of her grandchildren and to remain independent as she grows older. Providers employ multiple strategies during the MI process, including reflective listening, shared decision-making, and eliciting change talk.

Benefits of MI in Diabetes

- A1C reduction (in many studies)
- Increased adherence to dietary guidelines and improved nutritional content of meals
- Decreased weight and waist circumference
- Increased self-care behaviors
 - SMBG
 - Completion of food diaries
- Increased sense of control over diabetes (eg, less fear of hypoglycemia)
- Increased willingness to discuss diabetes
- Greater participation in educational programs
- Sessions of <15 minutes can be effective, but longer sessions appear to improve outcomes

Martins. *Clin Psychol Rev.* 2009. Rubak. *Br J Clin Pract.* 2005.
Smith. *Diabetes Care.* 1997. VanWormer. *Diabetes Educ.* 2004.
Anderson. *The Art and Science of Diabetes Self-Management Education Desk Reference.* 2011.

MI is associated with a wide range of benefits for people with diabetes. In many studies, the addition of MI to standard care resulted in a significant reduction in A1C levels. MI also leads to increased adherence to dietary guidelines, improved nutritional content of meals, decreased weight, and reduced waist circumference.

Patients who receive MI may exhibit enhanced self-care behaviors, such as more frequent self-monitoring of blood glucose (SMBG) and more consistent completion of food diaries. Furthermore, many patients who participate in MI report an increased sense of control over their diabetes. For example, participants may experience less fear of hypoglycemia. MI is also associated with an increased willingness to discuss diabetes and greater participation in diabetes-related educational programs.

MI sessions of less than 15 minutes can be effective, but longer sessions appear to increase the likelihood of favorable outcomes.

Elements of MI

Element	Description
Expressing empathy	Active listening and creating safe, accepting environment in which patient can express personal thoughts, feelings, and experiences
Developing discrepancies	Identifying patient's core values, what patient considers most important in life, and determining whether patient's current behavior is consistent with or contrary to those values
Rolling with resistance	Provider works together with patient when patient shows reluctance to take action. Provider encourages new ways of thinking about situation, but avoids making specific recommendations or expressing bias
Supporting self-efficacy	Reinforcing patient's confidence in taking action and making behavior changes. Provider promotes atmosphere of optimism, encouraging patients' beliefs that they can perform specific tasks they set out to accomplish

Anderson. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.
Rollnick. *Motivational Interviewing in Health Care: Helping Patients Change Behavior*. 2007.

The 4 main elements of MI are expressing empathy, developing discrepancies, rolling with resistance, and supporting self-efficacy.

Expressing empathy involves active listening and creating a safe and accepting environment in which the patient can express personal thoughts, feelings, and experiences.

Developing discrepancies entails identifying the patient's core values, what the patient considers most important in life, and determining whether the patient's current behavior is consistent with or contrary to those values. The provider attempts to uncover and expose discrepancies between the patient's current behavior, values, and future aspirations. The provider assists the patient in exploring likely negative outcomes associated with current behavior, which ideally encourages an increased motivation for change.

By rolling with resistance, the provider works together with the patient when the patient shows reluctance to take action. The provider encourages new ways of thinking about the situation, but avoids making any specific recommendations or expressing any bias.

Supporting self-efficacy reinforces the patient's confidence in taking action and making behavior changes. The provider promotes an atmosphere of optimism, encouraging patients' beliefs that they can perform the specific tasks they set out to accomplish.

Becoming Proficient in MI

- Irrespective of profession, virtually any appropriately trained health care provider can use MI successfully
- Learning about MI through self-study or a single workshop is helpful, but generally not sufficient to master necessary skills and develop comfort with process
- Providers most likely to achieve proficiency when they are mentored by an expert and, on basis of taped interviews, receive:
 - Progressive individual feedback on performance and/or
 - Personal follow-up coaching

Anderson. *The Art and Science of Diabetes Self-Management Education Desk Reference*. 2011.
Miller. *Am Psychol*. 2009.

Irrespective of their profession, virtually any appropriately trained health care provider can use MI successfully.

Learning about MI through self-study or a single workshop is helpful, but generally not sufficient to enable the provider to master the necessary skills and develop comfort with the process.

Providers are most likely to become proficient in MI when they are mentored by an expert and, on the basis of taped interviews, receive progressive individual feedback on their performance and/or personal follow-up training.

Using Newer Electronic Media

- Using newer electronic communications media has potential to dramatically improve diabetes care
 - Facilitating storage and availability of health records
 - Providing customized DSME
 - Improving diabetes self-management
 - Enhancing patient-provider communication
 - Fostering information-sharing and support among patients
- In many studies, electronic interventions offered only modest benefits
- Privacy, safety, and quality issues remain
- Hopeful signs that use of electronic media will eventually reduce disparities in patient care and outcomes

Cebul. *N Engl J Med.* 2011. Glasgow. *J Med Internet Res.* 2011.
Institute of Medicine. *Health IT and Patient Safety.* 2012.

There is widespread agreement that using newer electronic communications media has the potential to dramatically improve the management of diabetes. Among the benefits of electronic media are facilitating the storage and availability of health records, providing customized DSME, improving the consistency and quality of diabetes self-management, offering additional opportunities for patient-provider interaction, and fostering information-sharing and mutual support among patients with diabetes.

The use of newer electronic media to improve diabetes management is still in its early stages. To date, many of the studies that have compared electronic-based interventions with standard approaches have found that the benefits of electronic interventions are modest or even nonexistent. Important privacy, safety, and quality issues remain. Nevertheless, there are many hopeful signs that the use of electronic media will eventually reduce disparities in patient care and health outcomes. For example, studies have shown that well-designed electronic applications can improve outcomes in vulnerable populations, such as adults with low health literacy.

A full discussion of the use of newer electronic communications media in improving outcomes for patients with diabetes is beyond the scope of this activity. However, we will present several examples of the ways in which the use of these media has the potential to improve diabetes management and outcomes.

Electronic Health Records (EHRs)

- HITECH Act mandates substantial federal financial incentives for “meaningful use” of EHR
- EHR benefits
 - Information available when and where needed
 - Information exists in one place and remains current
 - Follow-up instructions and information readily available to patient
 - Prescriptions can be ordered and filled before patient leaves health care facility
 - Insurance claims can be filed immediately from provider’s office
 - EHR software can check for drug interactions and alert provider to problems
 - Improve patient privacy and security with proper staff training and effective policies
 - Reduced costs due to less paperwork, improved safety, reduced duplication of testing, and improved patient outcomes

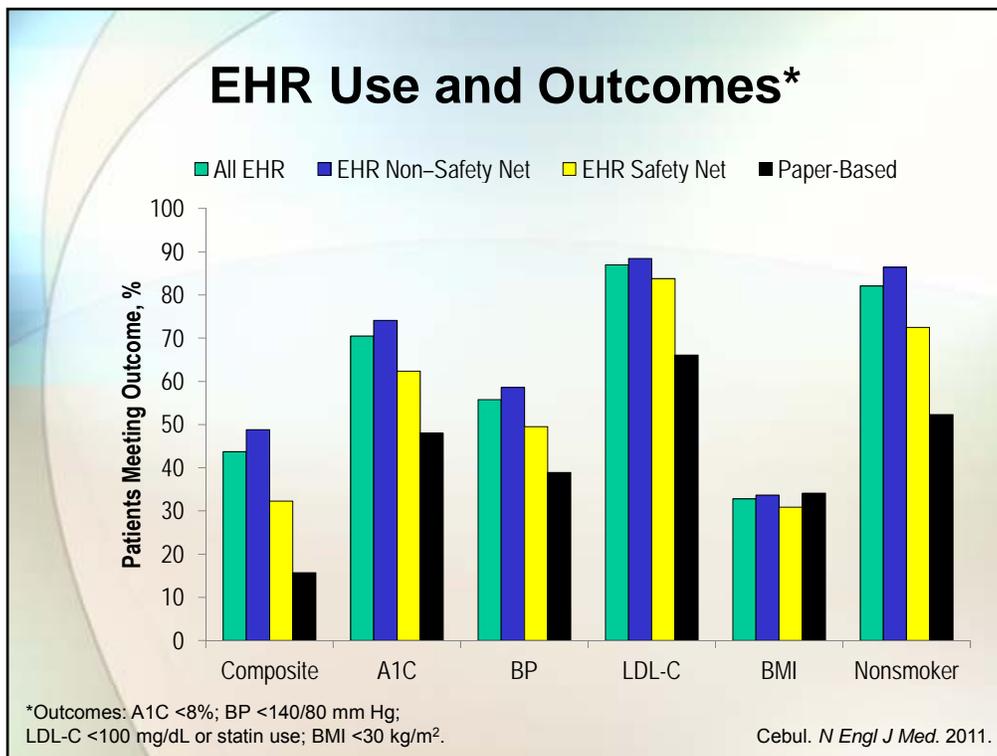
HITECH = Health Information Technology for Economic and Clinical Health.

CM&MS. *Overview: EHR incentive program.* 2011. CM&MS. *EHRs at a glance.* 2010

As mandated by the Health Information Technology for Economic and Clinical Health (HITECH) Act, the Medicare and Medicaid Incentive Programs are providing payments to eligible health care providers and hospitals as they adopt, implement, upgrade, or demonstrate “meaningful use” of certified EHR technology. By the end of 2011, total federal incentive payments exceeded \$2.5 billion.

Use of EHRs has numerous benefits. EHRs can make a patient’s health information available when and where it is needed. A patient’s health information resides in a single place and remains current. After a medical visit or hospital stay, follow-up instructions and other important information are readily available to the patient. Prescriptions can be ordered and filled before the patient leaves the health care facility. Insurance claims can be filed immediately from the provider’s office.

EHR software can check for drug interactions when a new medication is prescribed and alert the provider to potential problems. As long as proper staff training has been provided and effective policies have been implemented, use of EHR’s improves the privacy and security of patient data. Ultimately, implementation of EHR systems can result in reduced costs due to reduced paperwork, improved safety, reduced duplication of testing, and improved patient outcomes.



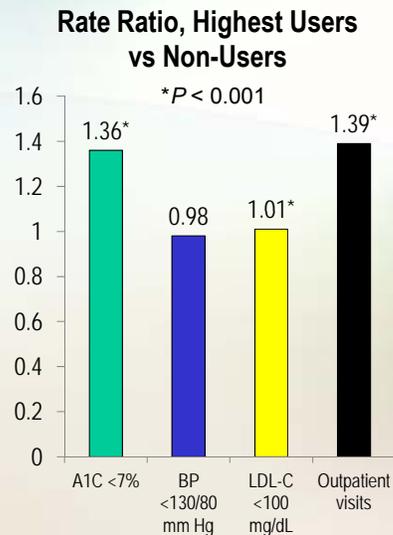
Use of EHRs can improve disease management and intermediate outcomes for patients with diabetes. A study that examined the effects of EHR use included data for 27,207 adults who received care from 569 primary health care providers in 46 practices in Cuyahoga County, Ohio. Data were reviewed for 2660 patients in paper-based medical practices and 24,547 patients in EHR-based practices. Thirty-one percent of patients in EHR-based practices were treated in “safety-net” practices, practices treating high proportions of socioeconomically vulnerable patients.

The first part of the study analyzed the proportions of patients whose care met 4 standards: receipt of an A1C value, testing for urinary microalbumin or prescription of an angiotensin-converting–enzyme (ACE) inhibitor or an angiotensin-receptor blocker (ARB), a screening eye examination for diabetic retinopathy, and administration of a pneumococcal vaccination. The investigators found that achievement of composite standards of care was 35.1% higher at EHR sites than at paper-based sites, a statistically significant difference. EHR sites also showed higher achievement on all components of the composite standard of care.

The second part of the study analyzed the proportions of patients who attained 5 intermediate outcomes: A1C below 8%, BP below 140/80 mm Hg, LDL-C value below 100 mg/dL or documented prescription for a statin medication, a body mass index (BMI) below 30 kg/m², and nonsmoking status. Achievement of composite standards for outcomes was 15.2% higher at EHR sites than at paper-based sites, a significant difference. As shown on the graph, achievement was higher for EHR-based sites than for paper-based sites on all but one outcome standard—the proportion of patients with a BMI of less than 30 kg/m².

Electronic Patient-Provider Messaging

- Electronic patient-provider messaging has potential to fill unmet needs of patients with diabetes
- 15-month observational study showed that A1C of patients who used electronic messaging most frequently was 36% lower than that of non-users
- Electronic messaging also associated with 39% increase in outpatient visits



Harris. *Diabetes Care*. 2009.

A cross-sectional analysis of electronic patient-provider messaging (EM) conducted over a 15-month period suggests that EM has the potential to fill unmet needs of patients with diabetes. Participants were adults with diabetes who were enrolled in the Group Health Cooperative, a consumer-governed, nonprofit health care system based in the northwestern US. Cooperative members could register to access Web services, including prescription refills, appointment scheduling, medical records, and secure EM to contact their health care providers.

Of 15,427 study participants, 15% registered for EM but did not use this feature and 19% both registered for and used EM. Among the 2924 EM users, the highest users were the 218 participants who had at least 12 message threads over the 15-month study period. At end point, the mean A1C of the highest users was 36% lower than that of registered non-users, a statistically significant difference. There was also a small but statistically significant association between high EM use and an LDL-C value of less than 100 mg/dL. An unexpected finding was that the outpatient visit rate was 32% higher among the highest users of EM than among non-users. This difference was also statistically significant.

The investigators speculated that EM may have enabled lower A1C values in high users by filling unmet needs for care. Providers may have used EM to recommend medication changes between in-person visits, thereby optimizing treatment regimens more quickly than was possible for non-users. The reason for the increased number of outpatient visits is unclear. It is possible, however, that patients who use EM may be more proactive with care providers both online and in person. They may use EM as a complement to rather than as a substitute for in-person care.

Quality of Online Social Networks

Evaluation of the Quality of the 10 Most Frequently Used Diabetes-Related Social Networking Sites

Domain	Average Score, %	Score Range, %
Content aligned with diabetes science and clinical practice guidelines	60	0–100
Safety practices for auditing and supporting transparency and moderation of content	44	20–90
Accessibility of privacy policies; communication and control of privacy risks	38	0–80
Centralized sharing of member data, member control over sharing	13	0–29

National Library of Medicine 16-minute video to help patients evaluate health information on the Internet:
<http://www.nlm.nih.gov/medlineplus/webeval/webeval.html>

Weitzman. *J Am Med Inform Assoc.* 2011.

Today, 47% of US adults with Internet access make use of social networking (SN) websites to obtain or share health-related information. Results of an observational study of the quality of the 10 most frequently used diabetes-related SN websites were recently reported. Investigators reviewed these English-language websites using a structured protocol covering 28 quality indicators in 4 domains. These domains were: (1) the alignment of content with diabetes science and clinical practice guidelines; (2) the presence of safety practices for auditing content and supporting transparency and moderation; (3) accessibility of privacy policies and the communication and control of privacy risks; and (4) centralized sharing of member data and member control over sharing.

As the table shows, the quality of the evaluated websites varied greatly, and overall performance was better in the content area than in the privacy area. With regard to the first domain, the major shortcoming was a failure to recommend that patients should always discuss their regimens with a health care provider. Another omission was a clear definition of A1C and a statement about current evidence-based A1C targets. Regarding the auditing of website content, 7 sites included claims that lay or professional moderators were overseeing member-generated content. However, member-posted misinformation was found on 4 of the 7 sites. Privacy policies were published on 8 of the 10 sites, but the readability of the policies ranged from 9.5 to 18.4 years of education, thus making them inaccessible to many users. With respect to privacy protection, none of the sites supported a mechanism that allowed users to restrict access or sharing to community members. The investigators concluded that more oversight of the accuracy of information and more robust consumer protection is needed on frequently used diabetes-related SN websites.

The National Library of Medicine has developed a 16-minute video to help patients evaluate health information found on the Internet. It can be accessed at: www.nlm.nih.gov/medlineplus/webeval.html.

Checkpoint 2

The correct statement is: _____.

- a. asking many questions about the treatment plan is a “red flag” that a patient may have low health literacy
- b. the health care provider should not give written materials about diabetes to a patient with low health literacy
- c. the tone of motivational interviewing is nonjudgmental, empathetic, and encouraging
- d. in comparative studies, outcomes were markedly better with electronic interventions than with standard care

The correct statement is: _____.

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- d. in comparative studies, outcomes were markedly better with electronic interventions than with standard care

Answer to Checkpoint 2

The correct statement is **c**.

The tone of motivational interviewing is nonjudgmental, empathetic, and encouraging.

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**PROVIDER-PROVIDER
COMMUNICATION**

Provider-Provider Communication Issues

- Issues surrounding patient referrals
 - Primary care provider referrals to diabetes specialists
 - Physician referrals for DSME
- Quality improvement initiatives to increase glycemic control: benefits of collaborative approaches
- Medication errors caused by communication problems
- Adverse patient outcomes in inpatient setting often associated with communication failures

Beaser. *Endocr Pract.* 2011. Peyrot. *Diabetes Educ.* 2009.
Shojania. *JAMA.* 2006. Grissinger. *J Natl Med Assoc.* 2003.
Denver Health. www.safecomms.org. 2012

In addition to communication problems between patients and their health care providers, communication problems among providers can also lead to suboptimal outcomes for patients with diabetes. Today, many primary care physicians are reluctant to refer their patients to diabetes specialists for consultations, and research shows that communication problems are an important factor in this reluctance. Similarly, communication issues are a major contributor to low rates of referrals for DSME.

Given the high proportion of US adults with diabetes whose A1C is not at goal, there is great interest in quality improvement strategies to increase glycemic control. Approaches that emphasize close collaboration and open communication among the members of multidisciplinary care teams have been especially effective.

Clinically significant medication errors involving glucose-lowering drugs—especially insulin—occur frequently in patients with type 2 diabetes. Medication errors have many causes, but miscommunication among health care providers plays a key role in these errors.

Systemic communication issues within health care institutions are major contributors to adverse patient outcomes. Therefore, aggressive efforts are now under way to improve communications within these institutions.

Primary Care-Specialist Issues (1)

From PCP's perspective

- 68% of PCPs referred less than 25% of their patients with diabetes to diabetes specialist in last 6 months
- 68% of PCPs who referred reported that quality of consultative services was good or very good
- Negative aspects of consultative experience
 - Delays and incomplete reporting of patient assessments
 - Confusion about who will manage patient in future
 - Belief that specialists develop treatment plans too complicated for patients to manage
- Of 36% of PCPs who regularly used clinical practice guidelines, most used 2009 ADA/EASD guideline

EASD = European Association for the Study of Diabetes;
PCP = primary care physician.

Beaser. *Endocr Pract.* 2011.
Nathan. *Diabetes Care.* 2009.

Many communication issues among health care providers involve the referral process. Today, most patients with diabetes, including 90% of those with type 2 diabetes, are managed in the primary care setting. A recent study surveyed 491 primary care physicians (PCPs) and 249 diabetes specialists, most of whom were clinical endocrinologists. The study focused on the coordination of care between PCPs and specialists as it relates to referral practices for people with diabetes.

Sixty-eight percent of PCPs who participated in the study referred fewer than 25% of their patients with diabetes to a diabetes specialist over a 6-month period. Issues related to insulin therapy was the primary reason for referral. Although 68% of referring PCPs rated the quality of consultative services as being good or very good, they also said that the consultative experience had several negative aspects. PCPs reported delays and incomplete reporting of patient assessments by specialists, confusion about who would manage the patient's diabetes in the future, and the belief that specialists develop treatment plans that are too complicated for patients to manage.

Thirty-six percent of PCPs routinely used clinical practice guidelines in making treatment decisions for their patients with type 2 diabetes. PCPs who used guidelines were most likely to use the 2009 ADA/European Association for the Study of Diabetes (EASD) guideline.

Primary Care-Specialist Issues (2)

From specialist's perspective

- 83% of specialists said that fewer than 50% of PCPs managed their patients effectively
- Reasons for suboptimal care by PCPs:
 - Limited time (73%)
 - Unrealistic perspective on whom they can treat and when they should refer (69%)
 - Lack of experience/confidence in designing treatment plans (68%)
 - Limited knowledge about standards of care (61%)
 - Low/very low level of knowledge about clinical practice guidelines (57%)
- Many patients referred to specialist continued to be managed for diabetes within specialty practice
- Of 18% of specialists who regularly used clinical practice guidelines, most used AACE/ACE guidelines

AACE = American Association of Clinical Endocrinologists;
ACE = American College of Endocrinology.

Beaser. *Endocr Pract.* 2011.
Rodbard. *Endocr Pract.* 2009.

The study of PCP-specialist interactions also looked at communication issues from the specialist's standpoint. Eighty-three percent of specialists said that fewer than 50% of PCPs managed their patients effectively. Specialists provided several explanations for the suboptimal care provided by PCPs. Seventy-three percent of specialists said that PCPs have too little time to manage patients with diabetes effectively. Sixty-nine percent indicated that PCPs have an unrealistic perspective on whom they can treat successfully and when they should refer a patient. Sixty-eight percent said that PCPs lack experience and confidence in designing diabetes treatment plans. Sixty-one percent of specialists reported that PCPs had limited knowledge about standards of care, and 57% said that PCPs have a low or very low level of knowledge about clinical practice guidelines.

The study also showed that many patients referred to a specialist continued to have their diabetes managed within a specialty practice. Twenty-four percent of specialists said that 51% to 75% of referred patients continued to receive care in their practice and 43% said that more than 75% of patients remained within their practice.

Only 18% of specialists said that they routinely used clinical practice guidelines in making treatment decisions about their patients with type 2 diabetes. Specialists who followed guidelines were most likely to use those developed by the American Association of Clinical Endocrinologists in conjunction with the American College of Endocrinology.

Improving PCP-Specialist Communication

- PCPs should clearly define what competencies for care they can develop within their own practices and when they need to seek support from a specialist
- Patient, PCP, and specialist should decide early in consultative process who will participate in ongoing diabetes care team and what their roles will be
- Specialist should be educational resource for PCP
- Specialist should provide timely feedback to PCP
- Diabetes treatment plan should be clearly defined
- Clinical practice guideline(s) should guide PCP-specialist interactions
- CME/CE activities should provide practical guidance on implementing clinical practice guidelines

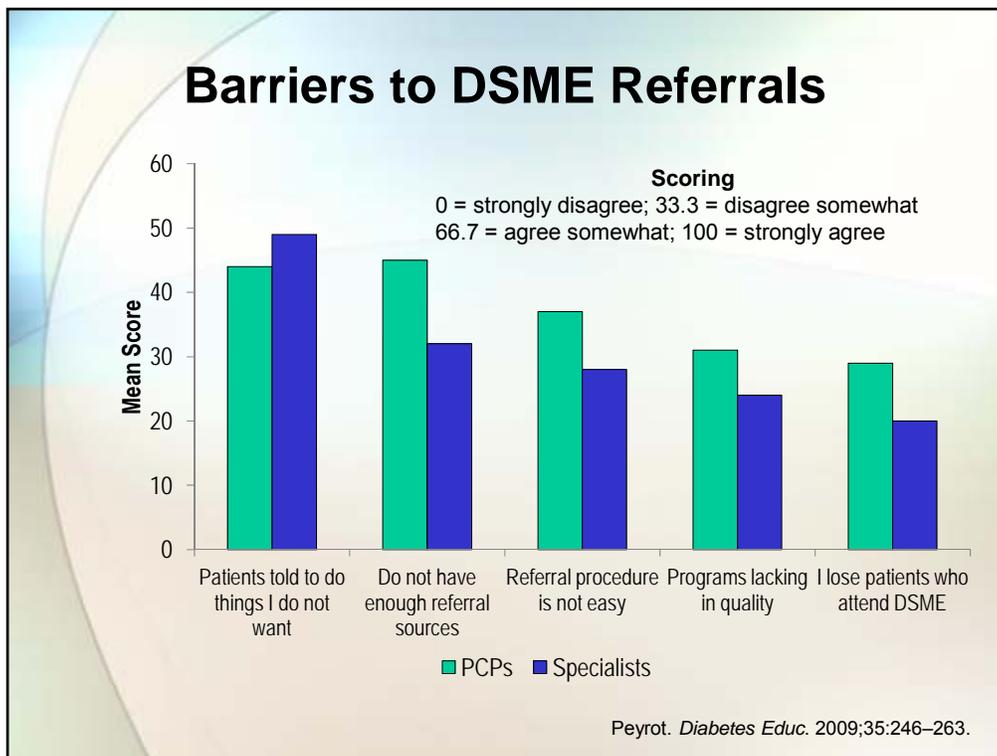
Beaser. *Endocr Pract.* 2011.

The investigators who conducted the survey of PCP-specialist practice patterns and attitudes offered several suggestions for improving communications between PCPs and diabetes specialists.

PCPs should clearly define what competencies for care they need to develop within their own practices and when they need to seek support from a specialist. The patient, the PCP, and the specialist should decide early in the consultative process who will participate in the ongoing diabetes care team and what their roles will be.

In addition to providing guidance on patient management issues, the specialist should serve as an educational resource for the PCP. Specialists must provide timely feedback to PCPs, either by direct communication or through a consultation note, to avoid miscommunication or delay in advancing patient care. The diabetes treatment plan should be defined clearly to ensure that the patient and all members of the diabetes team understand it.

Clinical practice guidelines should serve as the template for PCP-specialist interactions. When possible, providers should follow a single guideline, since there are important differences among current guidelines. Future CME and CE activities should focus on providing practical approaches for implementing clinical practice guidelines within a medical practice and on individualizing guidelines to meet the needs of a specific patient.



According to the ADA, DSME is a critical element of care for all people with diabetes and is necessary for improving patient outcomes. Nevertheless, only one third to one half of US patients with diabetes receive DSME. Although a number of personal, geographic, and financial barriers to receiving DSME have been identified, one of the most important barriers is the resistance of many physicians to referring patients for DSME. Physician referrals are a key motivator for patients to obtain DSME, but many physicians are not supportive of and do not refer their patients for DSME.

An Internet-based survey of 415 PCPs and 214 diabetes specialists identified several major barriers to referral. In this study, physician responses to statements about DSME were reported on a scale of 0 to 100. A score of zero signified “strongly disagree,” 33.3 signified “disagree somewhat,” 66.7 signified “agree somewhat,” and 100 signified “strongly agree.” Major barriers to DSME included “patients are told to do things I do not want,” “do not have enough DSME referral sources,” “referral process is not easy,” “DSME programs do not have the quality I want,” and “I lose patients who attend DSME.” The pattern of responses was generally similar for PCPs and specialists.

With regard to physicians’ concerns about losing patients, the study also found that 11% of patients who received DSME did, in fact, change either their PCP or their specialist physician.

Removing DSME Referral Barriers

- Diabetes educators should:
 - Initiate and maintain close communication with referring physicians
 - Enhance DSME offerings in traditional settings and design alternative opportunities based on electronic media
 - Assess physician satisfaction about ease of referral process and quality of DSME services and address any problems
 - Inform physicians about patient-identified self-management barriers, issues, and goals set during DSME interventions
 - Find ways to help patients receive needed care when it is not forthcoming from physicians
- Future advocacy efforts by diabetes educators and physicians should target government and organizational policies and structures, so that DSME becomes universally accessible

Peyrot. *Diabetes Educ.* 2009;35:246–263.

The investigators who conducted the study that identified barriers to DSME referrals also suggested some strategies for removing these barriers. Most of these suggestions involve initiatives on the part of diabetes educators.

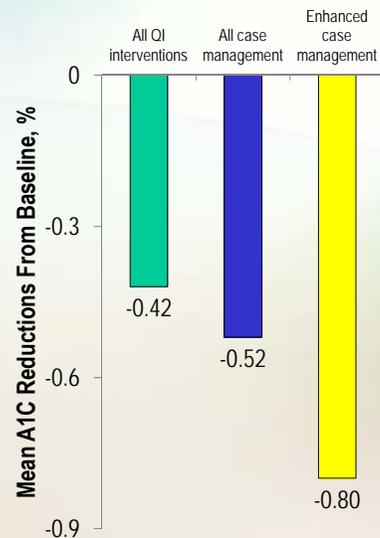
Educators need to initiate and maintain close communication with referring physicians so that their collaboration benefits patients more effectively. Educators should also enhance DSME offerings in traditional settings and design alternative educational opportunities based on interactive electronic media. Additionally, educators need to assess physicians' satisfaction about the ease of the referral process and the quality of the DSME services received by their patients and address any problems identified.

According to the investigators, diabetes educators should provide information to referring physicians about patient-identified self-management barriers, issues, and goals set during DSME interventions. Educators also need to develop effective strategies for dealing with the ethical and practical dilemma of helping patients receive the care they need when it is not forthcoming from their physicians.

Future advocacy efforts by diabetes educators and physicians should target governmental and organizational policies and structures, so that DSME becomes universally accessible.

Case Management Improves Outcomes

- Meta-analysis showed that case management is a highly effective approach for reducing A1C levels in adults with type 2 diabetes
- Case management was especially successful when a nurse or pharmacist case manager could make at least some medication changes without waiting for PCP approval (“enhanced case management”)



QI = quality improvement.

Shojania. *JAMA*. 2006.

Recently there has been intense interest in quality improvement (QI) strategies that might reduce A1C levels in patients with diabetes. QI efforts characterized by close collaboration and open communication among the members of a multidisciplinary team have been shown to be particularly effective.

A meta-analysis of 66 clinical trials studied the effectiveness of 11 different QI approaches, used alone or in various combinations. The analysis showed that case management, which was investigated in 26 trials, is an extremely successful QI approach. Case management is a system for coordinating diagnosis, treatment, and ongoing patient management by a person or interdisciplinary team in collaboration with the primary care provider.

In the meta-analysis, the overall effect of all types of QI interventions was a mean A1C reduction of 0.42% from baseline, whereas case management was associated with a mean reduction of 0.52%. Across the 11 case management trials in which nurse or pharmacist case managers could make at least some medication changes without waiting for the approval of the PCP, the mean A1C reduction was 0.80%.

Medication Errors and Communication Problems

Medication Error	Solution
Patient given wrong insulin dose because oral instruction was misunderstood (eg, "16 units" rather than "60 units")	Establish procedures for communicating oral orders (eg, recipient spells back size of requested dose)
Patient given excessive insulin dose because written order was misinterpreted (eg, "4 U" misread as "40")	Recipients should question unclear written orders. Use abbreviations cautiously, and always write out "units"
Wrong insulin product is given due to similar names (eg, Novolin® rather than NovoLog®)	Use "tall-man" lettering to distinguish products in written orders and computer databases (eg, NovoLIN and NovoLOG) Change sequence of products on computer order entry screen so that look-alike names are not next to each other

Extensive information about preventing medication errors is available at the Institute for Safe Medication Practices (ISMP) website (<http://ismp.org>).

Grissinger. *J Natl Med Assoc.* 2003.
Pennsylvania Patient Safety Reporting System. *Patient Safety Advisory.* 2007.

Medication errors occur frequently in patients with diabetes, especially in those who are treated with insulin. Numerous studies have shown that insulin is one of the drugs that is most often involved in clinically significant medication errors, including those that lead to emergency department visits, hospitalization, and death. Medication errors have numerous causes, and a full discussion of these errors is beyond the scope of this activity. However, it is noteworthy that many insulin-related medication errors involve preventable communication problems between health care providers. The table shows some of the most common of these errors.

In the inpatient setting, patients may receive the wrong insulin dose because an oral instruction is misunderstood. For example, an order for "16 units" might be heard as an order for "60 units." To prevent this type of error, health care institutions need to establish procedures for communicating oral orders. For example, the recipient might spell back the size of the ordered dose to the originator. Patients may also receive an incorrect insulin dose because a written order is misread. Thus, an order for "4 U" might be misinterpreted as an order for "40 units." To avoid errors of this kind, recipients should question unclear written orders. Abbreviations should be used cautiously, and the word "units" should always be written out. The similar names of many insulin products—for example "Novolin" and "NovoLog"—is another source of errors, both when the names of the drugs are spoken and when they are written. It is helpful to use "tall-man" lettering to distinguish products in written orders and computer databases. Changing the sequence of products on computer order entry screens so that look-alike names are not next to each other is another useful strategy.

Improving Institutional Communications

- In 2005, Denver Health Medical Center received AHRQ grant for project entitled “Improving Patient Safety Through Provider Communication Strategy Enhancements”
- Objectives
 - Implement and evaluate comprehensive team communication strategy
 - Develop implementation toolkit that can be generalized to other settings
 - Improve patient safety by decreasing errors related to team communication failures
- Project team has developed extensive website (www.safecoms.org) providing resources for improving communications on institution-wide level

AHRQ = Agency for Healthcare Research and Quality.

Denver Health. safecoms.org. 2012.

Recently, many health care institutions have initiated programs to improve patient outcomes by enhancing teamwork and communication among staff members. In 2005, Denver Health Medical Center was awarded an Agency for Healthcare Research and Quality (AHRQ) Partnerships in Implementing Patient Safety (PIPS) grant for a project entitled “Improving Patient Safety Through Provider Communication Strategy Enhancements.”

The goals of this ongoing project are to implement and evaluate a comprehensive team communication strategy, develop an implementation toolkit that can be generalized to other care settings, and improve patient safety by decreasing errors related to team communication failures in the hospital setting.

In the course of implementing this program, the PIPS project team at Denver Health has developed an extensive website (www.safecoms.org) that includes valuable educational resources and forms that can be used to improve staff communications on an institutional level.

Denver Health Communications Tools

Multidisciplinary rounding	Allows for open and collaborative communication on decision making, information sharing, care planning, and patient safety issues. Information shared during rounds is supplemented by communication at shift changes. Increases autonomy for the practice of nursing on the units
Huddles	Quick meeting of a functional group to set day or shift in motion. Used to inform team members, review work, make plans, and move team ahead more rapidly
Rapid response and escalation	Well-documented, standardized process for escalating a concern regarding changes in the conditions of patients. Provides role clarification and a realistic timeframe for communicating with other team members
Structured communication: Situation Background Assessment Recommendation (SBAR) technique	Standardized method for communicating in patient care situations. Provides nurses and other health care providers with guidelines for preparing information before telephoning or speaking to another provider. Encourages a non-hierarchical structure and improves patient safety

Denver Health. safecoms.org. 2012.

The Denver Health PIPS project team developed 4 communication tools to improve patient safety: multidisciplinary rounding, huddles, rapid response and escalation, and structured communication. Multidisciplinary rounding allows for open, collaborative communication on decision making, information sharing, care planning, and patient safety issues. Additional advantages are decreased length of stay and costs as well as increased quality of care. Information shared during rounds is supplemented by communication at shift changes between incoming and outgoing care providers. This tool is intended to increase autonomy for the practice of nursing on the units and facilitates a proactive approach to patient care.

Huddles consist of quick meetings of functional groups to set the day or shift in motion through comments by key personnel. Huddles are used to inform team members, review work, make plans, and move the team ahead more rapidly.

Rapid response and escalation provides a well-documented, standardized process for escalating a concern regarding changes in patient conditions. This tool provides role clarification and a realistic timeframe for communicating with other team members.

Structured communication is based on the Situation Background Assessment Recommendation (SBAR) technique. SBAR is a standardized method for communicating in patient care situations. It provides nurses and other health care providers with guidelines for preparing information before telephoning or speaking with another provider. SBAR encourages a non-hierarchical structure within the patient care team and improves patient safety.

Structured Communication: SBAR

- More than 84% of untoward patient events involve communication failures among team members
- Active communication is single best predictor of team function
 - Situation: 5–10 second summary of patient's current condition
 - Background: what factors led up to event; pertinent history and objective data showing how situation developed
 - Assessment: what provider sees, severity of problem, what seems to be happening
 - Recommendation: proposed action, what patient needs from the other provider in what timeframe

Denver Health. safecoms.org. 2012.

The SBAR technique for structured communication is a way to communicate in a clear, succinct way about changes in a patient's condition that require an urgent response from another member of the health care team. SBAR was developed after a study conducted at Denver Health found that more than 84% of untoward patient events involved communication failures among team members. SBAR is based on the premise that active communication is the single best predictor of team function.

As mentioned previously, the 4 SBAR components are situation, background, assessment, and recommendation. Situation refers to a 5- to 10-second summary of the patient's current condition.

When describing the background, the health care provider briefly describes the factors that led to the event, including pertinent history. Objective data, such as vital signs and laboratory values, are also communicated.

During the assessment, the provider summarizes what he or she sees, how severe the problem is, and what seems to be happening.

In the recommendation phase, the provider who initiates the conversation states what needs to be done in what timeframe. For example, a provider who calls about an elderly woman with diabetes who has suddenly become lethargic and confused might say, "I need someone to assess her as soon as possible. Who will be coming and when can I expect them?"

The Denver Health PIPS project team has developed a training manual to familiarize members of the health care team with SBAR. Forms have also been developed to help providers use the technique effectively. Outcome data for this program are not yet available.

Checkpoint 3

The correct statement is: _____.

- a. most PCPs and diabetes specialists base their treatment decisions on clinical practice guidelines, but the 2 groups use different guidelines
- b. the major reason given by physicians for not referring patients for DSME is the difficulty of the referral process
- c. case management is most effective when the patient's physician is responsible for making all medication changes
- d. Denver Health found that most untoward patient events involve communication failures among team members

The correct statement is: _____.

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- d. Denver Health found that most untoward patient events involve communication failures among team members

Answer to Checkpoint 3

The correct statement is **d**.

Denver Health found that most untoward patient events involve communication failures among team members.

The correct statement is **d**.

Denver Health found that most untoward patient events involve communication failures among team members.

Summary (1)

- Approaches for improving communication between patients and health care providers include:
 - Overcoming language and cultural barriers
 - Enhancing verbal and nonverbal communication skills
 - Using “teach-back” to insure that patients understand key messages
 - Providing ongoing education about the progressive nature of diabetes
 - Making treatment decisions collaboratively
 - Assessing patients for and accommodating low health literacy
 - Providing diabetes education in multiple ways

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Summary (2)

- Approaches for improving communication among health care providers include:
 - Adopting strategies that facilitate referrals to diabetes specialists and DSME providers and that optimize the flow of patient information among providers
 - Using quality improvement approaches that foster multidisciplinary cooperation
 - Avoiding medication errors by removing barriers to oral and written communication
 - Making effective communication an institutional priority and implementing programs that enhance communications throughout health care institutions

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