

Overcoming Psychological Barriers to Insulin Use

a report by

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Despite the well-known benefits of achieving glycemic targets that prevent long-term complications associated with diabetes,¹⁻³ the transition to insulin therapy (IT) remains a difficult threshold for many patients to cross. In addition to provider obstacles such as lack of staff time, lack of resources, and clinical inertia,⁴⁻⁶ psychological barriers common among patients with type 2 diabetes constitute significant obstacles to IT initiation. In fact, these psychological barriers are so prevalent that they are described as a syndrome called 'psychological insulin resistance' (PIR).⁷⁻¹⁰ Exploring, addressing, and eventually overcoming these psychological barriers is essential in order to achieve effective treatment outcomes and prevent prolonged and unnecessary exposure to hyperglycemia.

The incidence of type 2 diabetes has increased dramatically in recent years,¹¹⁻¹³ and evidence-based treatment algorithms have encouraged the utilization of IT earlier in the course of the disease when glycemic control is inadequate.¹⁴ More than half of all patients diagnosed with type 2 diabetes will require insulin for effective glucose management due to β -cell failure and the natural course of disease progression.¹⁵ Therefore, any barrier to its use when indicated needs to be addressed to avoid a deleterious effect on long-term health. Psychological barriers can be complex and may at times seem insurmountable to patients, but providers are gradually developing evidence-based interventions designed to assist patients in overcoming such obstacles. Several studies aimed at exploring the complexity of PIR have heightened our awareness of its importance in clinical practice. However, easing the transition to IT when psychological barriers exist continues to challenge even the most experienced clinicians.

Brief Overview of the Literature

A review of the literature pertaining to patients' psychological barriers to starting insulin reveals common themes. PIR has been described as a

constellation of psychosocial attitudes and beliefs, including fear of injections, pain, or side effects, such as hypoglycemia, feelings of personal failure, concern about not being able to handle the daily demands of an insulin regimen, perceptions about loss of control over one's life, and doubts about the actual benefit of using insulin.^{5,7,16} To some, a recommendation to start IT triggers fears that his or her disease has or will become much worse, that they will be stigmatized, or that his or her lifestyle flexibility, quality of life, and relationships with family, friends, and co-workers will be adversely affected.^{9,10,16} They may also feel that the need for insulin is somehow a reflection of personal failure in their disease self-management efforts. They may experience feelings of depression caused by a misperception of IT as 'the medication of last resort,' or may think of IT as punishment for not dieting or exercising enough.^{10,16,17}

A number of studies have described methods to screen for and/or measure PIR. In a multicity sample of 708 patients with type 2 diabetes who were not taking insulin, responses on a self-report survey showed that unwillingness to start IT if recommended was common (28.2%).⁹ In this sample, unwillingness was more common in females (32%) than males (21.1%) and more common among ethnic minorities (35.1%) than non-Hispanic whites (22.4%). The most common negative attitudes toward insulin were patients thinking that IT would be permanent, restrictive, cause hypoglycemia, represent personal failure, and low self-efficacy. The belief that needing insulin would indicate failure to manage their diabetes was the most distinguishing factor between those who were willing versus unwilling.

In another study, a survey of 165 insulin-naïve patients with type 2 diabetes, more than 40% were not willing or only slightly willing to take insulin if advised.¹⁸ Among the most frequent barriers were the belief that IT would be permanent (61.4%) and concern that IT would restrict their lives (50.6%). Larkin et al.¹⁶ reported similar results, and found that one-third of the patients surveyed would be unwilling to start IT if recommended. Furthermore, higher levels of depression and poorer general health by self-report were significantly correlated with increased resistance to IT.

Cultural differences may also influence the types of negative feelings associated with IT and have been noted in the literature. A qualitative study of 44 Mexican patients with type 2 diabetes revealed that their negative attitudes were focused on technical concerns about taking insulin, anxiety about pain, hypoglycemia, or perception that their disease had become worse, and that they have not been taking proper care of themselves.¹⁹ In two studies that examined perceptions of social stigma and the influence on diabetes self-management in Chinese patients with type 2 diabetes, recurring themes included fear of losing their jobs, embarrassment about



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taking insulin in public, and concerns about discrimination due to their chronic illness.^{20,21}

Two large multicenter trials have also reported negative patient attitudes toward the use of insulin. The United Kingdom Prospective Diabetes Study (UKPDS) showed that 27% of patients randomized to IT initially refused to take insulin.^{10,15} Resistance to IT among patients and providers was studied in the Diabetes Attitudes, Wishes, and Needs Study (DAWN). Data from surveys of patients with type 2 diabetes not taking insulin in 13 countries showed that patient resistance was substantial. Patients rated the clinical efficacy of insulin as low, and would blame themselves if they had to start IT.⁶

The Challenge for Clinicians

It is apparent from the research results cited above that PIR is multifactorial in nature. It encompasses the complexities of behavioral, social, emotional, and medical components of the human experience in health and illness, and may also be culturally influenced. Therefore, providers are faced with a challenge requiring a correspondingly comprehensive, multifaceted, flexible, and ongoing approach. The patient may demonstrate reluctance to accept a recommendation to start IT through a variety of behaviors such as anxiety, fear, anger, or evasiveness. When this reluctance is encountered, initial steps should be taken to identify the specific cause(s). Different intervention strategies may be indicated depending on whether the patient's reluctance is rooted in emotional conflict or due to a knowledge deficit or misperception about the use of IT.

Developing a competent therapeutic relationship will provide a non-threatening, positive environment for patients to share their concerns and may prove critical to their long-term health. Patients who feel informed, supported, empowered, and engaged in the goal-setting and decision-making process, matched with providers who feel well-versed in identifying and addressing psychological barriers, are important elements in ensuring a successful transition to IT. The clinician should explore the unique and individual nature of each patient's interpretation of what it means to them to need or use insulin daily. Achieving a smooth and easy transition requires a patient-centered approach that is culturally competent, individualized, and responsive to specific anxieties, fears, or misperceptions. Ongoing reassessment and evaluation of PIR may be necessary to sustain effective diabetes self-management, and patients may vary in the amount of time and support needed to address and overcome psychological barriers.

Using a Patient-centered Approach to Ease the Transition to Insulin Therapy

Once it becomes evident that a patient is experiencing undue distress, anxiety, or reluctance regarding a recommendation to start insulin, the use of a comprehensive patient-centered, knowledge-based, and coping-oriented approach is needed. The clinician should determine whether the barrier is due to a knowledge deficit or misperception, or a difficulty in coping with the change in treatment regimen. Depending on the nature of the resistance encountered, appropriate tailored interventions can be selected to support the patient as he/she progresses from the stage of 'anxious resistance' to reach 'confident acceptance.'

Certain patient-centered assessment techniques have been found useful when exploring the cause of PIR.^{10,16,17} Instruments used to identify and quantify causes have been generally consistent in their results.^{9,16,22,23} These

Table 1: Coping-oriented versus Knowledge-based Barriers

Coping-oriented Barriers	Knowledge-based Barriers
Feelings of anxiety, shock, shame, depression, burn-out	Myths or misperceptions about IT
Feelings of personal failure	Thinking of IT as the 'medication of last resort'
Embarrassment or worries about social stigmatization if they use IT	Thinking that using insulin is very complicated
Loss of control or self-image concerns	Inadequate education about the natural course of type 2 diabetes
Feelings of inadequacies due to the fact that an injection is required every day	Thinking that insulin causes type 2 diabetes to get worse
Perceiving the change to IT as a crisis situation	Inadequate knowledge of glycemic targets
Lack of confidence to handle IT	Doubting the effectiveness of IT
Needle phobia	Fear of side effects such as hypoglycemia

IT = insulin therapy.

surveys are brief (fewer than 20 items) and can easily be completed by the patient in a waiting room. Asking a few simple questions such as "What worries you about using IT?" or "What would help you to feel comfortable starting IT?" can also be useful in delineating personal obstacles.²⁴

Focusing on the positives by using positive terminology (such as facilitators versus barriers or treatment option versus treatment failure) and recounting past experiences when the patient experienced success in meeting a personal challenge are also important techniques. Assessing levels of motivation and confidence to make the change to IT can help to prioritize planned interventions. If fear related to injections or needles is a prominent concern, it can supersede all other factors and may necessitate a referral for additional psychological support. However, true 'needle phobia' is rare and is amenable to expert therapy.^{5,10} Once the specific obstacles unique to each patient's experience have been identified, steps to overcome the barriers can be taken. Specific strategies will differ depending on whether the factors identified require a knowledge-based or coping-oriented approach, or, as is extremely common, a combination of the two (see *Table 1*).

Summary

Psychological barriers to IT are commonly encountered in clinical practice. These barriers are complex and require patience, understanding, and a multifaceted approach. Helping patients progress through the stages of anxious resistance to confident acceptance of a recommendation to start IT can be a challenging endeavor. Assessing the unique nature of each patient's resistance and determining whether the major cause is due to a knowledge deficit or is coping-oriented in nature enhances prioritization and direction of tailored interventions aimed at reducing resistance. Facilitating a quicker and less stressful transition to IT while providing the education and/or counseling needed to inform, empower, and equip patients to confidently manage the daily demands of IT is critical to achieving long-term health. Using a patient-centered, knowledge-based, and coping-oriented approach, while remembering that overcoming psychological barriers does not readily conform to a 'one size fits all' solution, is required. Overcoming PIR may take time, but in the process patients will regain control over their diabetes and achieve their personal treatment goals, rather than persisting in a defeated emotional state with subsequent deleterious impact on their capacity for diabetes self-management. ■

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Related Articles

Affecting Behavior Change in Individuals with Diabetes: Findings from the Study to Help Improve Early Evaluation and Management of Risk Factors Leading to Diabetes (SHIELD)

Bazata DD, Robinson JG, Fox KM, Grandy S; SHIELD Study Group
Diabetes Educ, 2008;34(6):1025–36.

This study evaluated whether health knowledge, attitudes, and behaviors of individuals with type 1 or type 2 diabetes and those at high or low risk for type 2 diabetes were reflected in healthy behaviors and whether these attributes differed for type 2 diabetes respondents who did or did not see a health educator. SHIELD findings show that respondents know and understand that improving their diet or exercise will affect their health, but the majority of respondents have not translated it into a behavior. Interaction with health educators and patient-empowering support may improve the transition to behavior change. ■

Insights and Trends in Diabetes Education: Results of the 2008 AADE National Diabetes Education Practice Survey

Martin AL, Lumber T, Compton T, Ernst K, Haas L, Regan-Klich J, Letassy N, McKnight KA, Nelson JB, Seley JJ, Toth JA, Mensing C
Diabetes Educ, 2008;34(6):970, 972–4, 977–8 passim.

This study aimed to describe current diabetes education practice and specific interventions and responsibilities of diabetes educators in the US. The 2008 National Practice Survey (NPS) was hosted online for American Association of Diabetes Educators (AADE) members. Many 2008 NPS results concur with those obtained in 2005 through 2007. Areas of variability among programs suggest a need for standardized interventions and practice guidelines. Educators are encouraged to report outcomes to elucidate the contributions of their programs to patient care. AADE can

use the results and comparative data obtained from the 2008 survey when developing practice, research, and advocacy activities. ■

Meta-analysis of Quality of Life Outcomes Following Diabetes Self-management Training

Cochran J, Conn VS
Diabetes Educ, 2008;34(5):815–23.

The purpose of this meta-analysis was to meet the need to quantify the influence of diabetes self-management training on quality of life (QOL) of adult diabetes patients. The study concludes that people with diabetes experience improved QOL from participation in diabetes self-management training programs. Future diabetes self-management intervention studies should include quality of life outcomes so that this important outcome can be further studied. After more primary studies are available, future meta-analyses can explore important moderator analyses. ■

Barriers to Medication Adherence in Poorly Controlled Diabetes Mellitus

Odegard PS, Gray SL
Diabetes Educ, 2008;34(4):692–7.

This study aimed to characterize the adherence and medication management barriers for adults with poorly controlled type 2 diabetes (A1c 9% or above) and to identify specific adherence characteristics associated with poor diabetes control. Taking more than two doses of diabetes medication daily and difficulty reading the medication prescription label were significantly associated with higher hemoglobin A1c. Overall, the findings highlighted the importance of identifying potential challenges to medication adherence for those with diabetes and providing support to minimize or resolve these barriers to control. ■