October, 2011

Diabetes and American Life

Module 2: Top Challenges in Patient Care

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Foreword

Dear Reader,

It is no secret that diabetes patients must overcome significant challenges in order to live healthy lives. They grapple daily with diet and exercise, complex treatment regimens, and co-morbidities such as mood disorders. It takes significant motivation, education, and resources, to stay healthy. Additionally, the high prevalence of diabetes in lower income populations means that many patients layer these diabetes-specific challenges on top of a whole host of other challenges in their lives.

Given these hurdles, I am very pleased that QuantiaMD is working to bring them to light from a physician perspective. Importantly, this research is also about clinicians sharing solutions with each other. The goal has been to enable a dialog amongst diabetes professionals so that they can help each other to better understand and deal with these challenges in patient care.

The responses in this study illustrate the passion, concern and commitment of the more than 5,000 diabetes professionals that participated in this study. We thank all of the panel members for their thoughtful participation and their commitment to improving diabetes care.

The results point to the importance of motivating behavioral change in diabetes patients, yet at the same time it highlights the prevalence of mood disorders. I would warn against overtly blaming patients for failures of adherence, especially given that depression is a well known accompaniment of any chronic illness, including diabetes. We must treat depression in diabetes patients. Otherwise, the patient's failure to follow instructions and participate in follow-up care is often beyond their control.

The third module of Diabetes and American Life is underway and addresses physician pay and incentives in diabetes. We look forward to sharing clinician views on whether incentives are aligned with providing optimal care to diabetes patients, and—in cases where they are not—what might be done to address misaligned incentives.

Sincerely,

Paul S. Jellinger, MD, MACE

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Professor of Clinical Medicine, University of Miami

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Executive Summary

Our second module of Diabetes and American Life explores physician perspectives on what makes treating diabetes particularly challenging. Our panel members have also offered their perspectives on how they deal with many of these challenges in patient care. Here are some of the highlights from our research:

- Physicians report only 25-30% of patients achieve weight loss and exercise goals
- Over 80% of clinicians recommend a specific weight loss program; nearly 80% of these recommendations are for Weight Watchers
- More physicians see lack of motivation as the key problem, not lack of education
- High co-morbidity of mood disorders makes motivating patients tough; nearly 90% of clinicians say mood disorders result in non-adherence to self-care instructions
- A majority of clinicians (56%) report that at least one out of every four of their patients have mood disorders and thirteen percent say that over half of their patients have a mood disorder.
- The socioeconomics of diabetes magnify patient challenges; clinicians with more Medicaid patients report more mood disorders, and indicate more need for education
- Over 80% say the cost of newer drugs is a problem given the socioeconomics of diabetes, and 86% say poor access to these drugs negatively impacts patients
- Awareness of insurance and pharmaceutical company-sponsored diabetes programs is low; while widely available, only 30-35% say their patients have access to such programs

Patient education is seen by physicians as a powerful tool in combating diabetes; however, the findings from this study infer that complicating factors such as mood disorders and the socioeconomics of the disease must be addressed in order to provide optimal care to diabetes patients.

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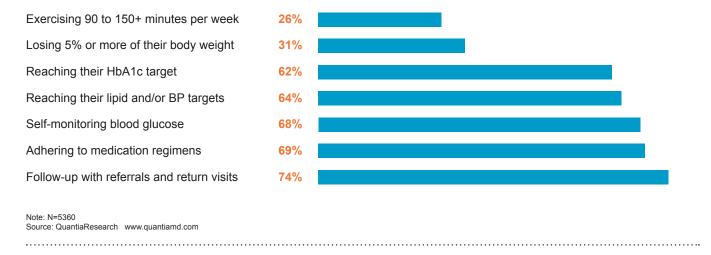
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Large Numbers of Patients Not Reaching Critical Care Goals

Physicians on our panel report that substantial numbers of their patients are not reaching critical care goals. In their first year after diagnosis, clinicians report that only 26% of patients reach exercise goals, and only 31% reach weight loss goals (*Fig. 1*). This figure is even more sobering given the difficulty of sustaining weight loss beyond one year.

In addition, more than 30% of patients are not reaching their lipid, blood pressure, or HbA1c targets. Almost one-third of patients are not adhering to medications, monitoring their blood glucose levels, and completing the following up visits and referral appointments that are important to their care.

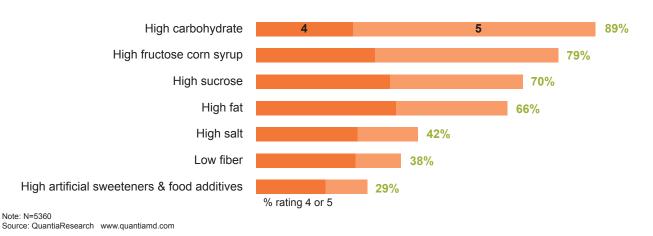
Fig. 1: What percent of your patients reach the following goals over the course of their first year post-diagnosis?



Physician Recommendations on Diet & Weight Loss Programs

The high failure rate on weight loss and exercise goals is particularly troubling in light of our finding from a previous Diabetes and American Life module that almost 90% of physicians see obesity and sedentary lifestyles as the primary drivers of diabetes. Physicians on our panel express strong views on the relationship between negative diabetes outcomes and patient diets that are high in carbohydrates or fats (*Fig. 2*). Approximately 70-80% say that diets with a lot of high fructose corn syrup and sucrose have a negative impact on patient outcomes. Hence, motivating patients to make the diet changes required is critical.

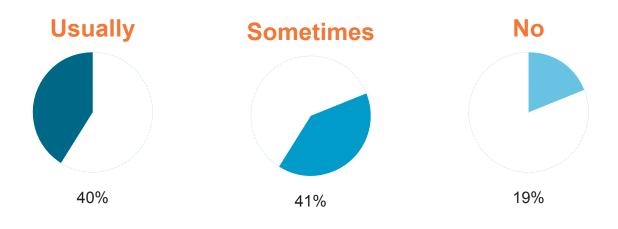
Fig. 2: How negative an impact do diet characteristics have on diabetes patient outcomes? (Rate1 to 5; 1=No impact; 5= High impact)



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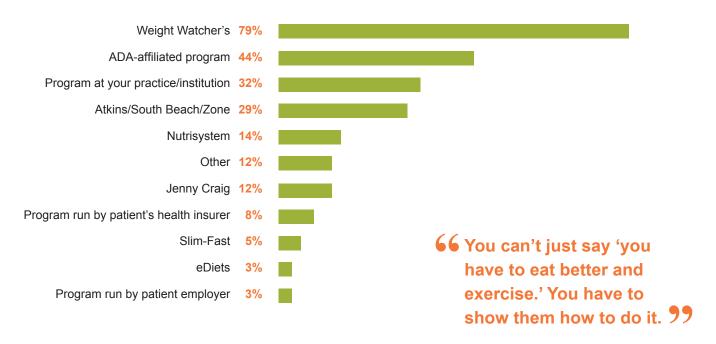
To help diabetes patients address obesity, most physicians say they often recommend a specific weight loss program (*Fig.* 3, 4). Weight Watchers is by far the most popular program recommended. Of those clinicians that do recommend a specific program, nearly 80% of recommendations are for Weight Watchers. This places it well ahead of ADA-affiliated programs, programs at physicians' own practices or institutions, and other prominent weight loss brands.

Fig. 3: Do you recommend any specific diet or weight loss programs to your patients?



N = 5360 Source: QuantiaResearch www.quantiamd.com

Fig. 4: Which programs do you recommend? (Choose up to 3)



N = 4338

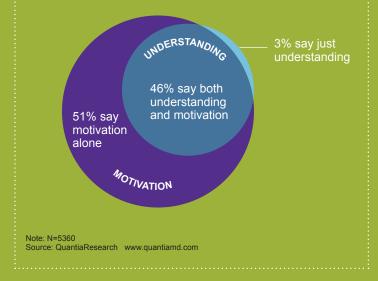
Source: QuantiaResearch www.quantiamd.com

Motivating Behavioral Change

Over half of clinicians say patients fall short of their weight and exercise goals due to their own lack of motivation (*Fig. 5*). The other half says it is an equal mixture of poor motivation and insufficient understanding by patients of how to engage in proper care. Only a small fraction of physicians feel that insufficient understanding alone is responsible. This clearly highlights patient motivation as fundamental to successful diabetes treatment.

Many physicians try to motivate patient behavioral change by emphasizing the severity and complications of diabetes (*Fig. 6*). "I stress the chronic, progressive nature of the disease and the resultant damage" said one physician. "I explain the consequences of noncompliance, such as amputation or dialysis," said another. Other physicians encourage frequent follow-up visits with doctors, nurses, and dieticians to reinforce positive patient behavior and create a sense of personal accountability. "I tell patients, we are their coaches and cheerleaders," one physician told us. Physicians also see great value in setting manageable short-term goals with their patients and using positive reinforcement to recognize and reinforce progress.

Fig. 5: To what extent do you feel patients' barrier for managing weight and exercise is one of insufficient understanding of what they need to do, versus a lack of motivation to do it?



- 66 Every patient should know that the diagnosis of diabetes is serious. 99
- 66 I set short-term, realistic goals and check on them at each follow-up visit. 99

Fig. 6: Top strategies to motivate behavioral change

- 1 Emphasize consequences and seriousness of the disease
- 2 Frequent follow-up
- **3** Education (in-office, class, CDE)
- 4 Set short-term goals
- 5 Positive reinforcement and encouragement

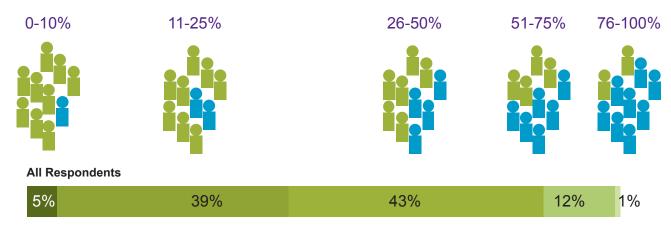
Note: N=5246, top strategies were ranked based on number and nature of physician open responses on how they motivate and sustain behavioral change Source: QuantiaResearch www.quantiamd.com

Mood Disorders Hamper Motivation and Behavioral Change

A majority of clinicians (56%) report that at least one out of every four of their patients have mood disorders (*Fig. 7*). Thirteen percent say that over half of their patients have a mood disorder. This high co-morbidity of mood disorders is particularly challenging when considering how critical patient motivation is to successful diabetes care.

When asked about the impact of mood disorders on their patients, nearly 90% of physicians say that they impede patients' ability to comply with care instructions (*Fig. 8*). In addition, mood disorders can underlie patients' failure to make follow-up appointments, manage their medications, and keep referral appointments. Physicians believe it is important that mood disorders are recognized and treated as part of a successful diabetes regimen, with more than half saying it is 'very important' to do so (*Fig. 9*).

Fig. 7: What percent of your diabetes patients also have depression or another mood disorder?



Note: N=5360 Source: QuantiaResearch www.quantiamd.com

Fig. 8: Among diabetes patients with mood disorders, which of the following do you most often see? (Check all that apply)

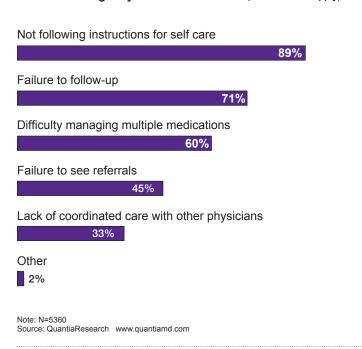
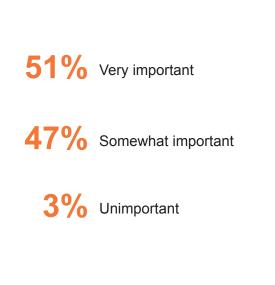


Fig. 9: How important is the recognition and treatment of mood disorders to overall diabetes treatment success?

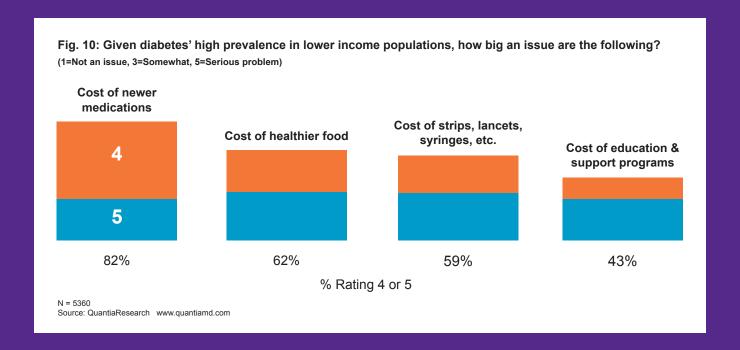


Note: N=5360 Source: QuantiaResearch www.quantiamd.com

Socioeconomic Factors Magnify Patient Challenges

When asked directly about the impact of diabetes' prevalence in lower income populations, clinicians express concern about access to newer medications. Over 80% say that the cost of the newer medications is a problem, and over 85% think insurance restrictions and high co-pays associated with these drugs negatively impact their low income patients (*Fig. 10, 11*). As stated by one physician: "It's difficult and frustrating to treat my diabetic patients because their insurance companies won't cover some of the medications I prescribe."

More broadly, clinicians who treat greater numbers of low-income patients indicate higher hurdles to patient care. Physicians that treat more Medicaid patients say more of their patients have mood disorders (*Fig. 12*). They also tend to see more of a need for patient education in addition to the motivation that is required. As a result of these added complexities to patient care, there is a trend towards clinicians with more low-income patients reporting that fewer of their patients reach their care goals (Fig. 13).



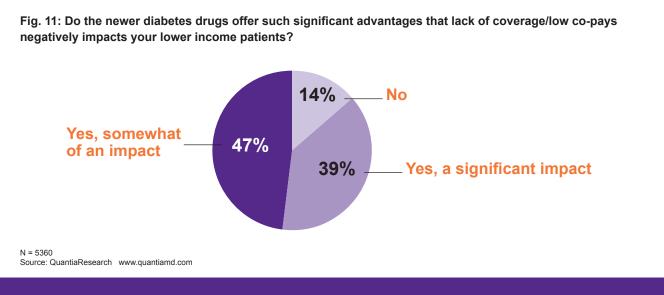
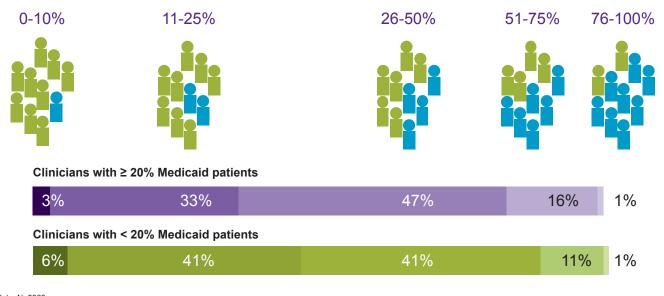
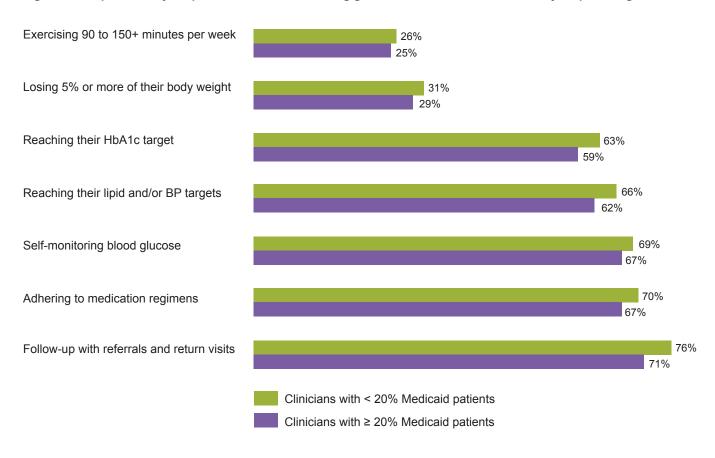


Fig. 12: What percent of your diabetes patients also have depression or another mood disorder?



Note: N=5360 Source: QuantiaResearch www.quantiamd.com

Fig. 13: What percent of your patients reach the following goals over the course of their first year post-diagnosis?



Note: N=5360 (All Clinicians), 3940 (Clinicians with < 20% Medicaid patients), 1420 (Clinicians with \ge 20% Medicaid patients) Source: QuantiaResearch www.quantiamd.com

Education is an Important Tool

Physicians see education as an important motivator for their diabetes patients. Most physicians provide diabetes education and other supports at their own practices or institutions, and many make referrals to professional diabetes educators (*Fig. 14*). Forty percent of clinicians say they make online tools, apps and websites available to their patients. However, given the widespread availability of insurance-company sponsored diabetes programs, it was surprising that only 35% of clinicians indicated such programs were available to their patients. The result was similar for pharmaceutical company-sponsored programs, with only 28% saying such programs were available to their patients. This data highlights a potential opportunity for both insurers and pharmaceutical companies to boost awareness amongst physicians and patients, ultimately increasing the range of resources patients have at their disposal.

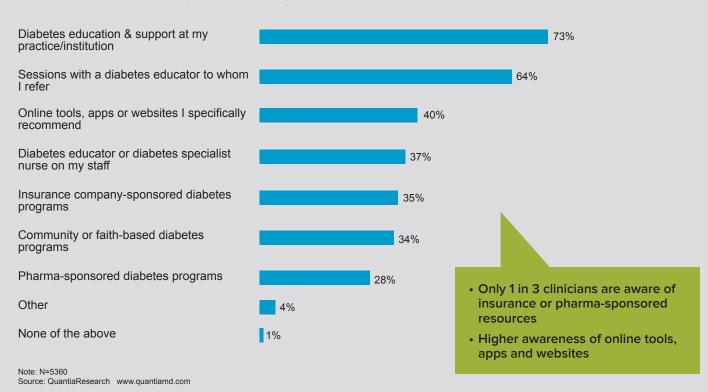
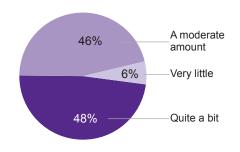


Fig. 14: Which of the following are available to your patients? (Check all that apply)

Given the importance physicians place on education, it is not surprising that so many believe in a high degree of information-sharing upfront with patients. When asked how much they tell newly-diagnosed patients about the progressive nature of the disease, nearly half said 'quite a bit' and only 6% said 'very little' (*Fig. 15*). Physicians who share a lot of information about the progressive nature of diabetes at the time of initial diagnosis say this increases patient "buy in" about necessary lifestyle changes and adherence to medication (*Fig. 16*). As expressed by one physician, "The progression of diabetes depends on compliance. Patients should be educated early to halt the progressive nature of the disease."

Many physicians give patients a clear view of the severity of the disease right from the start. "Most patients are not symptomatic at this point," a physician told us, "I want my patients to understand why they need to take diabetes seriously." Others dive into the details upfront to start prevention steps right away and prepare patients for the likelihood they will have to take insulin. One physician said, "I don't want patients caught by surprise when things progress, even when they are doing their best."

Fig.15: When you have a newly diagnosed patient with diabetes, how much do you tell them about the progressive nature of this disorder?



Note: N=5360 Source: QuantiaResearch www.quantiamd.com

Fig.16: Top reasons for telling patients quite a bit/moderate amount

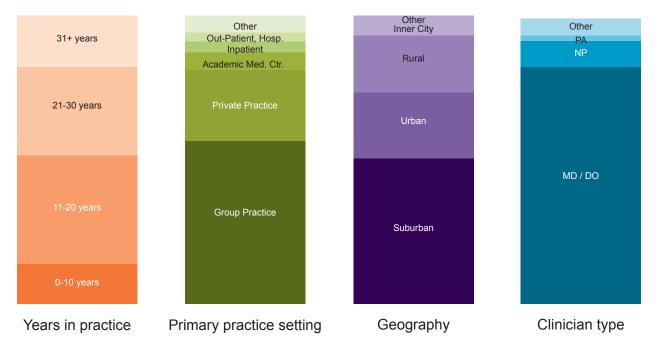
- Try to increase compliance
- So they understand the seriousness of the disease
- "Knowledge is power"
- To start prevention ASAP
- To prepare for insulin/medication

Note: N=5360, top reasons were ranked based on number and nature of physician open responses Source: QuantiaResearch www.quantiamd.com

Methodology & Demographics

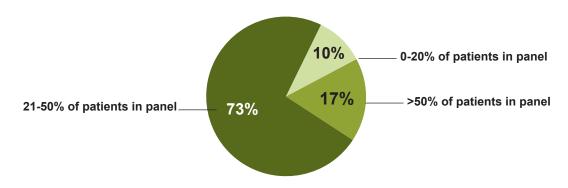
"Diabetes and American Life: Top Challenges in Patient Care" is an independent study. Our survey was fielded between June and July of 2011 on QuantiaMD, the leading mobile and online physician community. Physicians were invited via direct mail, fax, and email to join our study panel, making them eligible for participation in all six study modules. Among our panelists, the majority (83%) are MDs or DOs (Fig. 17). The remainder are nurse practitioners, physician assistants, and other diabetes professionals. Our respondents represent a mix of practice settings, geographies, and age groups.

Fig. 17: Demographics of Clinician Respondents



N=5360 Source: QuantiaResearch www.quantiamd.com Diabetes and American Life was designed to engage physicians and allied health professionals with a significant diabetes caseload. We did this to ensure that respondents are speaking from a position of significant direct clinical experience. The high diabetes caseloads reported below are thus a reflection of study design and panel recruitment, not an average measure for all physicians (*Fig. 18*).

Figure 18: What percent of your patient panel currently has or is at serious risk for Type 2 diabetes?



N = 4023 Source: QuantiaResearch www.quantiamd.com





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