

We Must Determine How to Implement Advances in Diabetes Management

The AACE recently stepped forward to address this major hurdle still to be overcome in diabetes care.

Many advances are being made in the treatment of diabetes including new glucose monitoring technology, new classes of glucose-lowering medications, along with new innovations in information technology. Yet with all of these advances we are only slowly improving the quality of diabetes care delivered as measured by variables like achieving HbA1c <6.5-7%, LDL cholesterol <100 mg/dL, and blood pressure of <130/80 mm Hg; or prescribing aspirin and angiotensin-converting enzyme inhibitors, performing regular eye and foot exams, and seeing that our patients receive diabetes self-management education.

On Jan. 31, 2005 the American Association of Clinical Endocrinologists (AACE) stepped forward to address the major hurdle still to be overcome in improving diabetes care: How do we actually translate or implement these advances into real-world clinical practice? Jamie Davidson, MD; Larry Blonde, MD; and Paul Jellinger, MD chaired an Implementation Conference to develop "Outpatient Diabetes Mellitus Consensus Recommendations." Please look at the AACE online summary of the conference (writing team led by Harold Lebovitz, MD) at www.aace.com/pub/odimplementation/index.php.

IDC MODELS

I was fortunate enough to attend the conference and present the models the International Diabetes Center (IDC) has developed for translating new research findings

into practice. I took away many important ideas from the conference. Let me highlight just a few.

Although hearing the results of the most recent diabetes clinical trials was fascinating, even more informative was what you never see published: How did this trial

change the way the principal investigator practices diabetes? A few messages were emphasized several times, including the fact that we need glycemic targets we are serious about (if the HbA1c or self-monitoring of blood glucose results are above this target we will take action), we need roadmaps to head providers and patients down the right path, and our patients need more self management education (only 44% receive formal education) so they can be part of the diabetes care team.



If you had attended this conference you would know – or at least be intrigued by the possibility – that:

The higher rate of diabetes among certain ethnic groups is due to an increased rate of development of impaired glucose tolerance (IGT) and not an increased rate of progression from IGT to diabetes.

BETA-CELL REST

Beta-cell rest (less insulin output by the beta-cell) is the best indicator of the potential for diabetes prevention, and early intervention is more effective than later intervention when it comes to preventing the transition from at risk for diabetes to diabetes.

One might speculate that metabolic memory, which is the fact that the rate of development of complications is

strongly influenced by glucose control from many years prior to the complication being developed, has something to do with glycation or other damage to tissue like collagen that has a half-life of some 15 years.

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A casual glucose reading >150 mg/dL is a very good predictor that the HbA1c will be unacceptably elevated, and that striving for a postprandial glucose after breakfast of 180 mg/dL maybe equivalent to striving for a postlunch or postsupper glucose of 140 mg/dL.

TWO WAYS TO START INSULIN

Over and over again the point was made that we are dangerously delaying (or never starting) the use of insulin in our patients with type 2 diabetes. Importantly, there are at least two ways to start insulin effectively in type 2 diabetes. One dose of a long-acting basal insulin added to oral agents, or 2 doses of premixed (particularly premixed analog insulins) with or without oral agents. Which regimen you choose depends on the patient's and provider's tolerance for weight gain and hypoglycemia, balanced with the need or desire for flexibility in one's schedule. Also, possibly taking into account the starting HbA1c level.

All agreed the most effective insulin regimen for type 1 and type 2 diabetes is a basal:bolus (meal:background) regimen. Therefore, establishing a strategy to make a smooth and timely transition from a starting insulin regimen to a basal:bolus insulin regimen is a critical element in sustaining effective insulin therapy in type 2 diabetes.

The UKPDS (United Kingdom Prospective Diabetes Study) has taught us many things about the management of type 2 diabetes. I was intrigued and gratified to learn that one of the principal investigators in the UKPDS trial, Rory Holman, MD, wanted us to know that having a systematic management approach and consistently applying it seems to be one of those critical elements needed to improve glycemic control on a large-scale basis. He also informed us that achieving good glycemic control was highly valued and rewarded in the ground-breaking nationwide pay-for-performance initiative for general practitioners in England.

Glucose monitoring appears to have value in all patients with diabetes as does obtaining a medical nutrition therapy consultation as part of formal diabetes self-management education.

CHANGE THE DELIVERY SYSTEM

The IDC and the University of Pittsburgh presented data reinforcing the importance of making changes in the system by which diabetes care and education are delivered across a multispecialty clinic, a University setting, and IPA setting or a multiple hospital system. Obtaining American Diabetes Association (ADA) education recognition and National Committee for Quality Assurance/ADA diabetes provider recognition are good measures that the system changes are yielding meaningful outcomes.

As the chair of the Implementation Conference, Jamie Davidson, MD said, "We must work together to implement or translate the latest clinical trials and diabetes advances into practical education and care solutions if we are to put out this wildfire of prediabetes and uncontrolled diabetes." ■



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