

New ADA Recommendations More Comprehensive

To enhance the Standards of Medical Care, only select statements are included in the 2005 recommendations.

BY LAURA SUAREZ, ASSOCIATE EDITOR

The American Diabetes Association (ADA) has updated its Clinical Practice Recommendations¹ to provide diabetes care physicians with a more comprehensive document.

The guidelines – updated each year – are very similar to last year's, said ADA national vice president of clinical affairs Nathaniel Clark, MD, in a recent interview. The major change is in its presentation, he said.

COMPREHENSIVE STANDARDS

Instead of publishing all updated position statements in this year's recommendations, the ADA only published a select few position statement updates, including the Standards of Medical Care. "This decision was made to enhance the standards of care. What we are trying to do is build a standards of care that will be comprehensive," Dr. Clark said, adding that the document still includes all ADA recommendations. "We thought it was important to create a document – being the standards of care – where if somebody wants to know [a specific] ADA recommendation, there would be only one place they would have to look."

The standards of care, as stated in a supplement to *Diabetes Care*, "are intended to provide clinicians, patients, researchers, [payers] and other interested individuals with the components of diabetes care, treatment goals and tools to evaluate the quality of care."

AT RISK FOR CVD

Dr. Clark pointed out that the major change in the recommendations is for LDL cholesterol and was influenced by amended guidelines of the National Cholesterol Education Program. Due to increases in lipid abnormalities, type 2 diabetic patients are at risk for cardiovascular dis-

Revised guidelines strongly recommend that diabetic patients aged >40 years with total cholesterol >135 mg/dL use a statin and reduce LDL.

ease (CVD) and should lower their LDL and raise their HDL levels to prevent CVD.

Previous ADA guidelines suggested that all patients, regardless of LDL levels, could benefit from statins. The revised guidelines strongly recommend that diabetic patients aged >40 years who have a total cholesterol level >135 mg/dL take a statin and reduce their LDL by 30%.

The guidelines suggest that these patients who also have a very high risk of overt CVD use a statin. "The risk of side effects with high doses of statins is significantly outweighed by the benefits of such therapy in these high-risk patients," the authors of Clinical Practice Recommendations wrote.

SIMILAR THERAPY

Although type 1 diabetic patients should consider similar therapy, no definitive data suggest that statins lower LDL in this population. This is particularly true for patients at risk for CVD or the metabolic syndrome, the authors wrote.

In a recent interview, Dr. Clark further stated: "For those who are considered at very high risk of a cardiovascular event, they might consider a lower LDL goal. Previously, our goal has always been <100 mg/dL, but in this specific population, one might consider a goal of <70 mg/dL."

Other suggestions regarding LDL cholesterol have not changed from those previous. They include increasing physical activity, losing weight and quitting smoking to lower

TABLE 1. SUMMARY OF RECOMMENDATIONS FOR ADULTS WITH DIABETES

Glycemic control

• HbA1c	<7.0%*
• Preprandial capillary plasma glucose	90-130 mg/dL (5.0-7.2 mmol/L)
• Peak postprandial capillary plasma glucose†	<180 mg/dL (<10.0 mmol/L)
• Blood pressure	<130/80 mm/Hg

Lipids‡

• LDL	<100 mg/dL (<2.6 mmol/L)
• Triglycerides	<150 mg/dL (<1.7 mmol/L)
• HDL	>40 mg/dL (>1.1 mmol/L)

Key concepts in setting glycemic goals

- HbA1c is the primary target for glycemic control.
- Goals should be individualized.
- Certain populations (children, pregnant women and elderly) require special considerations.
- Less intensive glycemic goals may be indicated in patients with severe or frequent hypoglycemia.
- More stringent glycemic goals (ie, a normal HbA1c <6%) may further reduce complications at the cost of increased risk of hypoglycemia (particularly in those with type 1 diabetes).
- Postprandial glucose may be targeted if HbA1c goals are not met despite reaching preprandial glucose goals.

* Referenced to a nondiabetic range of 4.0% to 6.0% using a DCCT-based assay.

† Postprandial glucose measurements should be made 1- to 2 hours after the beginning of the meal, generally peak levels in patients with diabetes.

‡ Current NCEP/ATP III guidelines suggest that in patients with triglycerides ≥ 200 mg/dL, the non-HDL cholesterol (total cholesterol minus HDL) be used. The goal is ≤ 130 mg/dL (31).

|| For women, it has been suggested that the HDL goal be increased by 10 mg/dL.

lipid levels. A list of LDL and glycemic control recommendations for adults with diabetes can be found in Table 1.

NEW AREAS

Two new areas debut in the 2005 recommendations: diabetes care in specific populations and diabetes care in specific settings (hospitals). The first section summarizes recent recommendations from Care of Children and Adolescents with Type 1 Diabetes, an ADA statement published in *Diabetes Care*. It covers care in children and adolescents with type 1 diabetes.² "This is significant because it represents the first time that standards for children with type 1 diabetes [have been] published in the United States and published by the ADA," Dr. Clark said in the interview.

Past ADA recommendations focused on the management of type 1 diabetes among adults. "Because children are not simply 'small adults,' it is appropriate to consider the unique aspects of care and management of children and adolescents with type 1 diabetes," the authors wrote.¹ They suggest that at diagnosis, type 1 diabetic children and their families receive educational instruction on disease manage-

ment. A multidisciplinary team trained in pediatric diabetes should treat the child patient.

In order to maintain glucose control as near to normal as possible, guidelines for glycemic control in type 1 diabetic children (Table 2) are broken down by age group. Goals are age-specific and reflect varying levels of "hypoglycemic unawareness." Awareness is lowest among children aged <6 or 7 years. In this population, a tight control of HbA1c is needed.

"This is the first time standards give different HbA1c level recommendations based on the age of the child," Dr. Clark said. "We've always said the goals [for HbA1c] should be individualized, but in this case we give some specific guidance based on age."

DIABETIC COMPLICATIONS

Screening for complications, including diabetic nephropathy, hypertension, dyslipidemia and diabetic retinopathy is also necessary in this population. Authors give the following recommendations:

- Nephropathy: Annual screenings of microalbuminuria

TABLE 2. PLASMA BLOOD GLUCOSE GOAL RANGE (MG/DL)

Values by age (years)	Before meals	Bedtime/ overnight	HbA1c (%)	Rationale
Toddlers and preschoolers (<6)	100-180	110-200≤	≤8.5 (but ≥7.5%)	• High risk and vulnerability to hypoglycemia
School age (6-12)	90-180	100-180	<8%	• Risks of hypoglycemia and relatively low risk of complications prior to puberty
Adolescents and young adults (13-19)	90-130	90-150	<7.5%*	• Risk of hypoglycemia, developmental and psychological issues

Key concepts in setting glycemic goals

- Goals should be individualized and lower goals may be reasonable based on benefit: risk assessment.
- Blood glucose goals should be higher than those listed above in children with frequent hypoglycemia or hypoglycemia unawareness.
- Postprandial blood glucose values should be measured when there is a disparity between preprandial blood glucose values and HbA1c levels.

*A lower goal (<7.0%) is reasonable if it can be achieved without excessive hypoglycemia.

should begin at age 10 years, and after diabetes duration of 5 years. If elevation is present, treatment with an angiotensin-converting enzyme (ACE) inhibitor is recommended.

- Hypertension: Dietary intervention and exercise is the preferred treatment for high-normal blood pressure. Initial treatment with an ACE inhibitor is recommended.

- Dyslipidemia: Fasting lipid profile should be performed on prepubertal children aged >2 years at time of diagnosis who have a family history of cardiovascular events. If no family history, it should be performed at puberty. Profiling should be repeated every 5 years, and treatments should control glucose and decrease dietary saturated fats.

- Retinopathy: After diabetes duration is 3 to 5 years and the patient is aged >10 years, they should have an ophthalmologic examination. Annual visits are recommended.

IN THE HOSPITAL

The second newcomer section in Clinical Practice Recommendations reveals standards of care for the hospital setting. "It's a new area that a number of groups are getting really interested in," Dr. Clark commented. This portion of the position statement focuses on target blood glucose levels and treatment options for hospitalized patients.

According to observational studies, hospitalized diabetic patients fared better with fasting and admission blood glucose levels of <126 mg/dL and random blood

glucose levels of <200 mg/dL. Authors suggest that such levels should decrease hospital stay and in-house mortality rates. New guidelines target specific glucose levels goals for general medicine and surgery, CVD and critical care, cardiac surgery, critical care and acute neurological disorders.

QUALITY OF CARE

Unfortunately, the impact of the updated Clinical Practice Recommendations upon the quality of diabetes care will not be significant. "I don't think that we are as successful as we need to be in getting patients to the end point they need to get to [in order] to minimize the risk of the complications of diabetes," Dr. Clark said.

ADAs Clinical Practice Recommendations can be downloaded to a computer or personal digital assistant at www.diabetes.org in the "For Health Professionals and Scientists" section. The guidelines are also available as a supplement on a CD-ROM to all physicians who subscribe to *Diabetes Care* or *Diabetes*. ■

Nathaniel Clark, MD, is the National Vice President, Clinical Affairs with the American Diabetes Association. He may be reached at nclark@diabetes.org.

1. Clinical Practice Recommendations. *Diabetes Care*. 2005;28(Suppl):S1-79.
 2. Silverstein J, Klingensmith G, Copeland K, et al. Care of Children and Adolescents With Type 1 Diabetes: A statement of the American Diabetes Association. *Diabetes Care*. 2005;28:186-212.