



Preface

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Making and Using the PRG

The *Diabetes and Cardiovascular Disease Provider Reference Guide (PRG), 2011 (2nd ed.)* was first published in 2010 by the California Medical Association (CMA) Foundation. The impetus for its creation was to provide healthcare providers with an easy-to-use tool that would help reduce the risk of comorbidities that often affect patients with diabetes, such as heart attack, congestive heart failure and chronic kidney disease. By describing the comprehensive management of diabetes to include hypertension and lipid management, the PRG presents the opportunity to improve diabetes-related clinical processes and patient outcomes that lead to healthier individuals and communities.

This second edition of the PRG is the product of countless hours of review of current clinical guidelines, medical literature and patient education materials by a dedicated team of physicians and other healthcare professionals with an expertise in diabetes care and cardiovascular risk management. Each of the chapters contains sections that provide information on key aspects of diabetes care. Throughout, you will find practical tips and tools to easily facilitate the integration of the recommendations into clinical practice.

The PRG can be viewed and downloaded via the web by going to:
www.thecmafoundation.org > **Publications**

Audience

The intended audience for the PRG are physicians and other healthcare providers who care for patients with type 2 diabetes, or who are part of the patient's diabetes care team including pharmacists, nutritionists, certified diabetes educators and others. The PRG can also be used by health plans and other health systems that support healthcare providers in their quest to provide the highest quality, patient-centered care possible.

Corporate Sponsors

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About the Diabetes Quality Improvement Project

The PRG is a product of the CMA Foundation's [Diabetes Quality Improvement Project \(DQIP\)](#). The goals of the project are to:

1. Improve the quality of care provided to diverse patients with type 2 diabetes
2. Effectively prevent and manage the cardiovascular risks and complications associated with diabetes
3. Support physician office capacity to improve, track and monitor diabetes care
4. Share best practices associated with providing quality diabetes care
5. Provide multicultural community and patient education materials through online resources

Comments on the Diabetes and Cardiovascular Disease Provider Reference Guide (PRG), 2009-2010 (1st ed.)

"The PRG is easy to comprehend and practical, with an informative global clinical approach ideal in a family practice setting, that has an ultimate goal of preventing cardiovascular events."

"If someone is going down the wrong road, he doesn't need motivation to speed him up. What he needs is education to turn him around."

"Ever wondered if there was an authoritative source of diabetes management that is up to date and practical, The PRG is the place."

Diabetes and Cardiovascular Disease Overview

Diabetes Prevalence

In California, 13.5% of the population, or 1 in every 7 adults, has diabetes.³ New cases of diabetes increased 36% over the last decade, ranking California first among all states in terms of the greatest number of annual new cases.

Nationally, according to a 2011 report issued by the Centers for Disease Control and Prevention (CDC), there are nearly 26 million people, with diabetes.¹ Of this figure, 7 million people are undiagnosed. This represents an increase of more than 8% from the previous CDC estimate in 2007. The costs, both indirect and direct, of diabetes is estimated at \$174 billion.¹

The CDC projects the prevalence of diabetes to rise sharply over the next 40 years due to factors such as an aging population and an increasing number of Americans whose ethnic background places them at greater risk of developing type 2 diabetes.⁴ The CDC's estimate is that as many as 1 in 3 Americans will have diabetes by 2050. This does not include the number of adults with prediabetes, which is estimated to be one-third of the entire US adult population.

Considering the current and future projections of diabetes prevalence, it is no wonder that healthcare providers and health systems are struggling to keep pace with providing high quality, patient-centered and cost effective care and management to this growing population.

Disparities in Diabetes¹

Data show that race and ethnicity correlate with persistent disparities in health. Rates of type 2 diabetes are significantly higher among certain ethnic groups. For example, African Americans and Hispanic adults are twice as likely to be diagnosed with diabetes than non-Hispanic Whites. Native American adolescents 19 years of age and younger are more likely than any other group to be diagnosed with type 2 diabetes. In California, Latinos (24%), American Indian/Alaskan Natives (24%) and African Americans (20%) between the ages of 50-64 have higher rates of diagnosed diabetes than Whites (7%).

Because ethnic groups will continue to comprise a growing proportion of the population, the health of the U.S. population is dependent on how well we can make improvements in the health and well being of these groups. Disparities in healthcare often result from socioeconomic factors, the environment, a lack of health resources and inadequate care and management to prevent disease. Interventions that are culturally and linguistically appropriate, based on recommended clinical guidelines, grounded in the community and comprised of multidisciplinary groups and individuals and organizations will help support improvements in these populations.

Diabetes Complications

Without effective and early intervention, patients with diabetes are at risk for major complications such as blindness, end-stage renal disease, amputations, heart disease and stroke. In fact, heart disease and stroke are the number one cause of death and disability among people with type 2

diabetes.⁵ Members of ethnic groups are disproportionately affected by higher rates of death and disability due to diabetes, which may be attributed to disparities in access to care and routine preventive care and treatment.⁶ For example, heart failure is striking African Americans in their thirties and forties at the same rate as non-Hispanic Whites in their fifties and sixties.⁷

Fortunately, lifestyle modifications such as better nutrition, improved fitness and weight loss can prevent or delay diabetes. For patients who are already diagnosed, lifestyle change coupled with medication management can significantly delay, prevent and/or manage the variety of diabetes-related complications. Both healthy lifestyle and medication management are key components of clinical treatment guidelines for patients with diabetes.^{8,9}

Diabetes and Cardiovascular Disease Link

Cardiovascular disease is defined as a class of diseases that include coronary artery disease (CAD), cerebrovascular disease, and peripheral arterial disease. Cardiovascular disease (CVD) is the primary cause of death for most people with diabetes.⁵ Hyperlipidemia, dyslipidemia, and hypertension are strong risk factors for cardiovascular disease.

Hypertension affects an estimated 50 million individuals in the United States, posing a major public health challenge. CDC estimates that 1 out of 3 American adults have high blood pressure. By ethnicity, it affects 2 in 5 African Americans, 1 in 6 Asians and 1 in 5 Hispanics and Native Americans. It is known as the “silent killer” as many people are asymptomatic.¹⁰

The American Heart Association estimates 98.8 million Americans over the age of 20 have total blood cholesterol levels that are higher than the recommended 200 mg/dL.¹¹ While most individuals with high cholesterol levels have no visible symptoms, over time elevated cholesterol levels result in narrowing and hardening of the arteries (arteriosclerosis or atherosclerosis) reducing the overall blood flow to the heart. The reduced blood flow increases the risk of myocardial infarction, stroke, kidney disease and eye damage.

A comprehensive treatment plan for patients with diabetes includes modification of these cardiovascular risk factors through lifestyle modification and medication management. It also includes the use of a multidisciplinary team to connect the patient with needed services and support long term self-management goals.⁸

