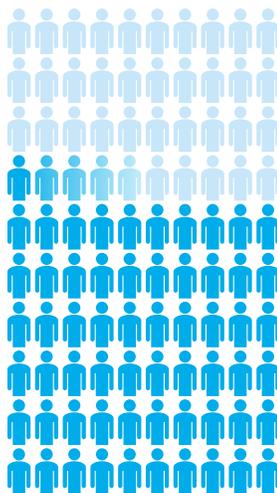


# CHALLENGES IN THE MANAGEMENT OF TYPE 2 DIABETES (T2D)

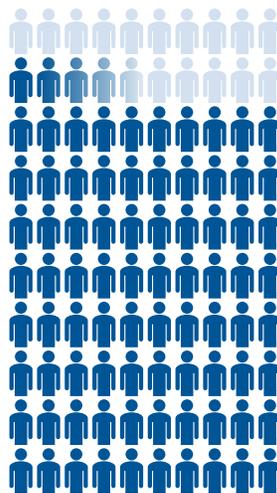
T2D is a growing healthcare concern. A 2010 Centers for Disease Control and Prevention study estimated that as many as 1 in 3 adults, over 100 million people, could have diabetes by 2050.<sup>1</sup> T2D accounts for 90% to 95% of all diabetes cases.<sup>2</sup> The cost of treating diabetes continues to grow.<sup>3</sup> One reason may be that many patients with T2D have additional risk factors that must be addressed, each with its own set of recommended goals.<sup>4</sup> Achieving these goals can be a challenge to healthcare professionals charged with the care of patients with T2D.<sup>5</sup> Opportunities exist to help manage risk in patients with T2D.

## Diabetes is associated with cardiovascular risk factors

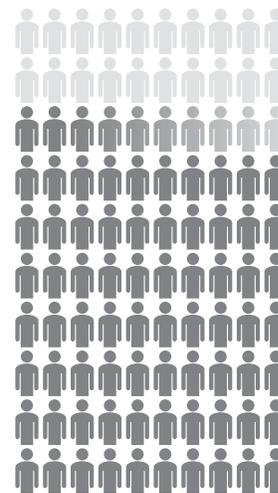
In addition to elevated A1C, people with T2D have a high prevalence of other risk factors, including obesity, elevated blood pressure, and LDL-cholesterol.\*



**~60% to 65%**  
for obesity



**~75% to 85%**  
for hypertension



**~70% to 80%**  
elevated LDL-C

\*Data are from the Framingham Heart Study Original, Offspring, and Third Generation cohort examining trends in characteristics for 50- and 60-year-old individuals with and without diabetes over the period from 2000 to 2005.

## The American Diabetes Association (ADA) recommendations for patients with diabetes

A1C, blood pressure (BP), and body mass index (BMI)/body weight are important measures in the treatment and monitoring of T2D. In alignment with the above measures, the ADA recommendations for people with diabetes include<sup>4</sup>:

- A1C: <7.0%\*
- Blood pressure: <140/90 mm Hg
- Improving the lipid profile of patients with dyslipidemia based on their cardiovascular risk factors

\*More or less stringent glycemic goals may be appropriate for individual patients. Goals should be individualized based on duration of diabetes, age/life expectancy, comorbid conditions, known CVD or advanced microvascular complications, hypoglycemia unawareness, and individual patient considerations.

## Confronting the challenges and managing risk

Current evidence suggests that while there has been a steady improvement in the proportion of patients achieving A1C and other quality measure goals, the level of attainment remains suboptimal. During 2007-2010, only 52.5% of patients with T2DM had A1C <7%.<sup>5</sup> Poor glycemic control may lead to hyperglycemia and other costly long-term complications.

Fortunately, controlling A1C can reduce diabetes complications.<sup>7</sup> In fact, a 1% drop in A1C was associated with a 37% reduction in the risk of microvascular complications.<sup>8</sup> In addition, improvements in areas such as A1C and BP for patients with T2D have been associated with reduced mortality and morbidity risks, improved quality of life, and reduced total costs of complications.<sup>9</sup>

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*Opportunities exist to help manage risk in people with diabetes.*  
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**References:** 1. Boyle JP, Thompson TJ, Gregg EW, et al. Projection of the year 2050 burden of diabetes in the US adult population: dynamic modeling of incidence, mortality, and prediabetes prevalence. *Popul Health Metr.* 2010;8(10):29. 2. Centers for Disease Control and Prevention. *Diabetes Report Card 2017.* Atlanta, GA: Centers for Disease Control and Prevention; 2017. 3. American Diabetes Association. Economic costs of diabetes in the U.S. in 2012. *Diabetes Care.* 2013;36(4):1033-1046. 4. American Diabetes Association. Standards of medical care in diabetes—2017. *Diabetes Care.* 2017;40(suppl 1):S1-S135. 5. Casagrande SS, Fradkin JE, Saydah SH, et al. The prevalence of meeting A1C, blood pressure, and LDL goals among people with diabetes, 1988-2010. *Diabetes Care.* 2013;36(8):2271-2279. 6. Preis SR, Pencina MJ, Hwang S-J, et al. Trends in cardiovascular disease risk factors in individuals with and without diabetes mellitus in the Framingham Heart Study. *Circulation.* 2009;120(3):212-220. 7. García-Pérez L-E, Álvarez M, Dilla T, Gil-Guillén V, Orozco-Beltrán D. Adherence to therapies in patients with type 2 diabetes. *Diabetes Ther.* 2013;4(2):175-194. 8. Stratton IM, Adler AI, Neil HAW, et al. Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study. *BMJ.* 2000;321(7258):405-412. 9. Palmer AJ, Roze S, Valentine WJ, et al. Impact of changes in HbA1c, lipids and blood pressure on long-term outcomes in type 2 diabetes patients: an analysis using the CORE Diabetes Model. *Curr Med Res Opin.* 2004;20(suppl1):S53-S58.