

MODULE 2.1

The Diabetes Epidemic

**D**iabetes has reached epidemic levels.<sup>1</sup> Globally, 387 million adults aged 20 to 79 years, or 8.3% of the world's population, were estimated to be living with diabetes in 2014.<sup>1,2</sup> This serious health burden is expected to rise to 592 million individuals by 2035, an increase of 53% in 21 years.<sup>2</sup> By the end of 2013, there were 5.1 million deaths among adults aged 20 to 79 years worldwide attributable to diabetes.<sup>2</sup> Globally, roughly 50% of these deaths occurred in individuals younger than age 60 years.<sup>2</sup> By comparison, in less-developed regions, such as Sub-Saharan Africa, this proportion is a staggering 75%.<sup>2</sup>

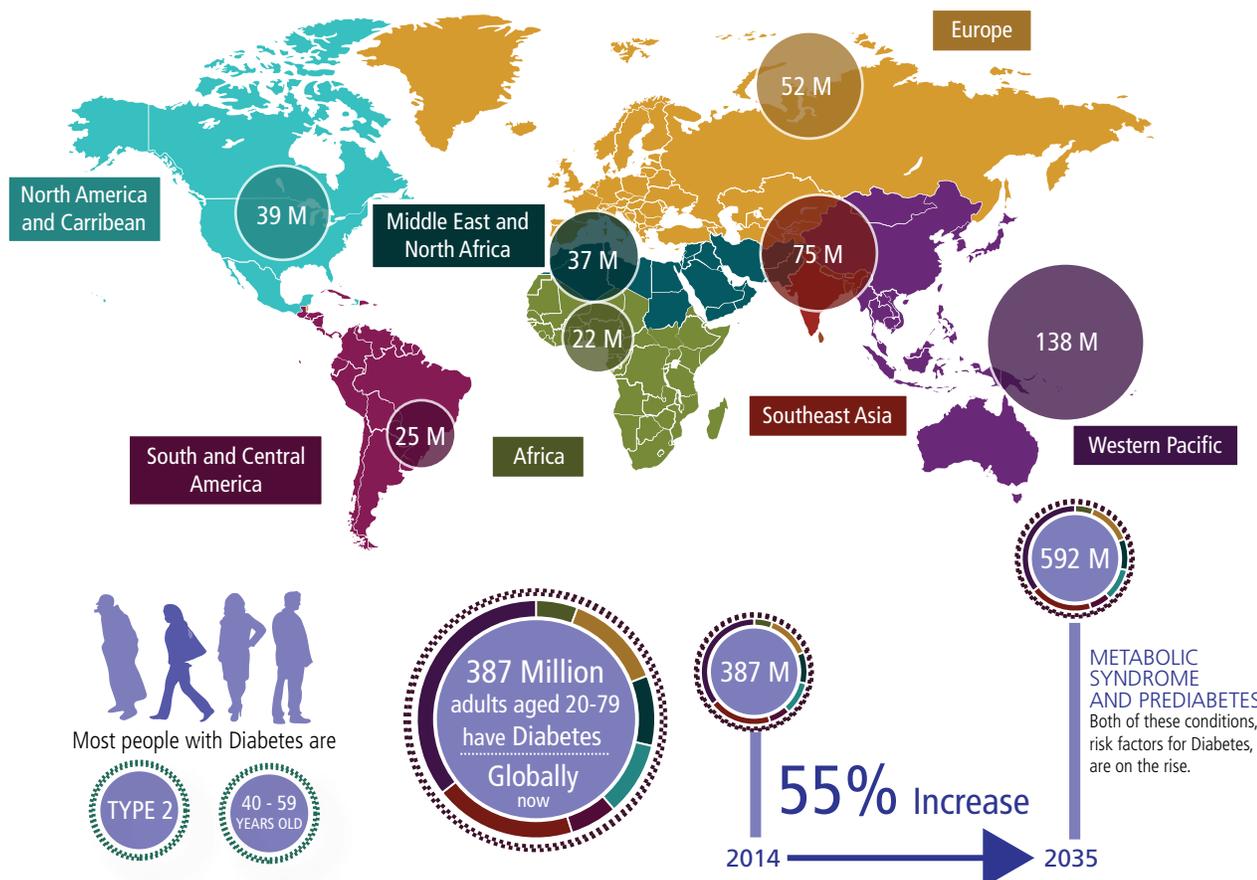
Most people who have diabetes are between the ages of 40 and 59 years, and about 80% live in low-and middle-income countries. The greatest increases in future diabetes cases are expected to occur in these developing countries. If the global prevalence of diabetes increases as projected, 86% of the world's diabetes population will reside in low-and middle-income countries by 2035.<sup>1,2</sup> Developed nations are suffering from the impact of the diabetes epidemic as well.<sup>2</sup> For example, the US Centers for Disease Control and Prevention (CDC) predicts that up to 33% of the US population will have diabetes by 2050.<sup>3</sup>

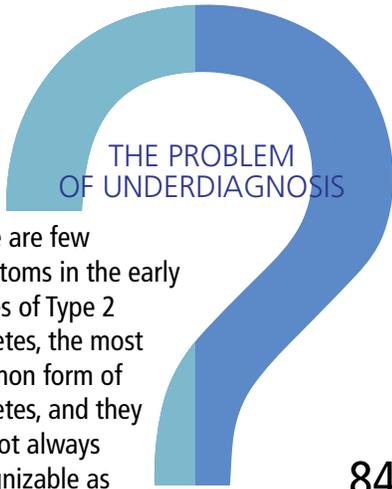
Equally troubling is the fact that this major health burden is significantly underdiagnosed and thus untreated. Results of population-based screening indicate that 175 million cases, nearly half (46%) of all individuals currently living with diabetes, are undiagnosed.<sup>2</sup> Of the global undiagnosed diabetes population, 84% live in low-and middle-income countries.<sup>2</sup> In some of these developing countries, where public health resources often do not provide easy access to public health education and medical care, such as in Sub-Saharan Africa, the proportion of those undiagnosed is estimated to be as high as 90%.<sup>2</sup> However, even in high-income countries that prioritize awareness and screening, roughly 33% of the diabetes population remains undiagnosed.<sup>2</sup>

Most undiagnosed cases are type 2 diabetes, the most common form of diabetes. In part, diagnosis is missed because there are few symptoms in the early stages of type 2 diabetes, and they are not always recognizable as diabetes related.<sup>2</sup> This diagnostic challenge underscores the need for universal health education and screening measures.

Diabetes Epidemiology

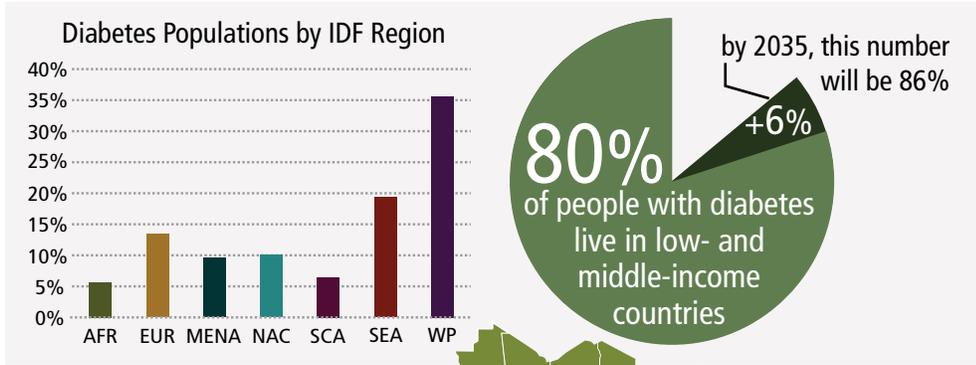
DIABETES POPULATION, BY INTERNATIONAL DIABETES FOUNDATION REGION, 2014





There are few symptoms in the early stages of Type 2 Diabetes, the most common form of Diabetes, and they are not always recognizable as diabetes-related.

Half of people with diabetes do not know they have it



84% of people with undiagnosed diabetes live in low- and middle-income countries



where medical care, screening, and health education programs are not widely available,

but even in developed nations, where these programs are prioritized, underdiagnosis is still high,

such as in regions like Sub-Saharan Africa, where 90% are undiagnosed.



such as in regions like the US, where 33% are undiagnosed.



\*\*IDF: International Diabetes Foundation

In developing countries where diabetes is disproportionately more prevalent and undiagnosed, the risk of developing diabetes-related complications such as retinopathy is greater.<sup>2</sup> For example, among individuals newly diagnosed with diabetes in Egypt, the prevalence of retinopathy is 15.7%, compared with a rate of just 6.2% among individuals newly diagnosed in Australia.<sup>2</sup>

Nonetheless, diabetic retinopathy remains a major cause of visual impairment and blindness among adults with diabetes living in developed countries such as the US.<sup>4</sup> According to the CDC, approximately 5.5 million US adults were affected by diabetic retinopathy in 2005, and the number is expected to grow to 16 million by 2050.<sup>5</sup>

References

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4. Centers for Disease Control and Prevention. Common eye disorders. Last updated April 23, 2013. [www.cdc.gov/vision-health/basic\\_information/eye\\_disorders.htm](http://www.cdc.gov/vision-health/basic_information/eye_disorders.htm). Last updated April 23, 2013. Accessed October 12, 2015.
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