

MEDICAL TECHNOLOGY  
**life changing  
innovation**



## IMPACT OF DIABETES

# The Value of Medical Technology

The medical technology industry is continually advancing and developing new innovations that improve the health and well-being of patients worldwide.

### What is Diabetes?

Diabetes is a group of diseases characterized by high blood glucose, or blood sugar, caused when the body either does not produce enough insulin or is unable to use insulin in an effective way. When not controlled, the high level of glucose can lead to serious health complications, including death.<sup>1</sup>

### Did you know

- Nearly 26 million Americans are thought to have diabetes, although only roughly 19 million of them have been diagnosed, leaving millions more untreated.<sup>2</sup>
- The Centers for Disease Control and Prevention (CDC) estimates that one in three U.S. adults could have diabetes by 2050, if recent trends continue at the same rate.<sup>3</sup>
- Diabetes imposes a substantial economic burden on society and is one of the costliest chronic diseases, accounting for \$245 billion in economic costs in 2012 alone for diagnosed cases, including \$176 billion in direct medical costs and \$69 billion in reduced productivity.<sup>4</sup>

### Managing Diabetes with medical technology solutions

- The **HbA1c blood test** helps diagnose pre-diabetes, Type 1 and 2 diabetes and then to gauge how well a person is managing the disease so that physicians can appropriately tailor treatments.
- **Continuous glucose monitoring technology** allows patients with Type 1 diabetes to check their glucose levels on a continuous basis, as opposed to three to four times per day<sup>5</sup>, and without a blood draw.
- For patients who inject insulin, advancements in **needle technology**—including shorter needles with finer gauge—have been shown to improve the patient experience through reduced pain, and greater ease and convenience, all of which may help patients overcome barriers to injection and support better adherence to prescribed therapies.<sup>6,7,8</sup>
- **Insulin pumps** can provide patients with the insulin they need to stabilize their glucose levels, either on a continuous basis or as needed, such as around mealtime. The pump imitates the insulin secretion patterns from the pancreas of a person without diabetes, enabling the patient to maintain blood glucose levels that are closer to normal than often can be achieved through injection treatment.<sup>9</sup>
- Most recently, the FDA approved a **hybrid closed loop insulin delivery system** that combines advanced, continuous glucose monitoring with a smart algorithm that for the first time, personalizes the delivery of insulin.

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