# NEW REAL-WORLD DATA SHOW THAT ABBOTT'S FREESTYLE LIBRE SYSTEM DELIVERS POSITIVE HEALTH OUTCOMES FOR PEOPLE WITH TYPE 1 AND TYPE 2 DIABETES

- Data at ATTD reinforce and add to a growing body of clinical research and real-world evidence from users of the FreeStyle Libre system around the world

- People in Germany living with Type 1 or Type 2 diabetes on insulin showed a sustained reduction in HbA1c over one year following use of the FreeStyle Libre technology

MADRID, Feb. 20, 2020 /PRNewswire/ -- Abbott (NYSE: ABT) announced today that four real-world data abstracts[i,ii,iii,iv] are being presented during the 13th Advanced Technologies & Treatments for Diabetes (ATTD) in Madrid. The new data show that users of the FreeStyle Libre system have improved glucose control,[iii] increased time in target glucose range,[iii] and decreased time in hyperglycemia[iv] (high glucose levels) and hypoglycemia[iv] (low glucose levels), as well as reduced HbA1Ci,[ii] (average glucose levels over a three month period).[ii]

"As the world leader in sensor-based glucose monitoring with more than two million users, Abbott's FreeStyle Libre system has an unmatched body of real-world evidence supporting its clinical benefits," said Mahmood Kazemi, M.D., divisional vice president, global medical and scientific affairs, and chief medical officer, Diabetes Care, Abbott. "Time and time again, we've seen meaningful data that reaffirm our technology's direct impact in achieving better health outcomes for people with diabetes – and the findings at ATTD underscore how we're continuing to transform people's lives."

The following abstracts are being presented at ATTD:

**Improving HbA1c Control in People with Type 1 or Type 2 Diabetes Using FreeStyle Libre**

- People living in Germany with Type 1 or Type 2 diabetes on insulin show a sustained reduction in HbA1c over 12 months following use of the FreeStyle Libre system,[ii] which indicates that FreeStyle Libre users had an improved HbA1c that was maintained over a substantial period of time. The American Diabetes Association recommends an HbA1C goal of less than 7% for adults with diabetes.[v] People with Type 1 diabetes using the FreeStyle Libre system with a baseline HbA1c greater than 7.5% showed an average reduction of 1.4%, and people with Type 2 diabetes showed an average reduction of 1.2%. An HbA1c level that is reduced by almost 1% is linked to an overwhelming reduction in long-term complications of diabetes by 30% according to landmark studies.[vi]

**Real-World Study of FreeStyle Libre System Among Adults with Type 1 and Type 2 Diabetes within the Sweden National Diabetes Register**

- Notable data[i] from Sweden's National Diabetes Register conclude that people with Type 1 and Type 2 diabetes significantly reduced their HbA1c when they used the FreeStyle Libre system for three to nine months. A reduction of HbA1c of 0.44% for people with Type 1 and 0.67% for people with Type 2 were observed with first-time users of FreeStyle Libre system.

**Canadian Real-World Analysis of FreeStyle Libre and Glycemic Control**

- Expanded analysis[iii] of real-world data from Canada demonstrate that higher frequency of scanning is associated with increased time in target glucose range (hours per day spent in between 70-180 mg/dL[vii]) and decreased hypoglycemia. Greater time in range has been linked to more stable glucose control, which could lead to fewer complications. FreeStyle Libre users who scanned at the lowest frequency (3.3 scans per day) spent 54.6% time in range, and users with the highest scanning frequency (29.3 scans per day) spent 66.7% time in range.

  This analysis, in addition to previous real-world findings,[viii] consistently show a strong association between FreeStyle Libre users who scan more frequently and overall improved glucose control.

**Continuous Glucose Monitoring (CGM) Use in the U.S. is Associated with Reduction in Acute Diabetes Complications, Even with Prior Low Test Strip Use**

- More than 12,000 people with diabetes using a CGM for the first time, including the FreeStyle Libre system, experienced a significant reduction in acute diabetes complications[iv]-- even in people with diabetes that have a history of self-monitoring of blood glucose (SMBG) using less than four test strips per day.[ix] People with Type 1 diabetes experienced a significant reduction in acute diabetes complications of 44% after CGM usage.[iv] For people with Type 2 diabetes, there was a significant

reduction of 51%.[iv]

Abbott's FreeStyle Libre system is now being used by more than 2 million people living with diabetes across 46 countries.[x] Abbott has secured partial or full reimbursement for the FreeStyle Libre system in 36 countries, including France, Ireland, Japan, the United Kingdom, and the U.S.

**About FreeStyle Libre System**

Abbott's FreeStyle Libre system, the world leading sensor-based glucose monitoring technology,[xi] is designed to change how people with diabetes measure their glucose levels and ultimately help them achieve better health outcomes.[xii] The system reads glucose levels through a sensor that can be worn on the back of the upper arm, eliminating the need for finger sticks.[xiii]

For the U.S., important safety information: https://www.freestylelibre.us/safety-information.html

**About Abbott**

Abbott is a global healthcare leader that helps people live more fully at all stages of life. Our portfolio of life-changing technologies spans the spectrum of healthcare, with leading businesses and products in diagnostics, medical devices, nutritionals and branded generic medicines. Our 107,000 colleagues serve people in more than 160 countries.

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[i] Real-world study of FreeStyle Libre system among adults with Type 1 and Type 2 diabetes within the Swedish National Diabetes Register; Katarina Eeg-Olofsson, Ann-Marie Svensson, Stefan Franzén, Hodan Ahmed Ismail, Michael Törnblom, Fleur Levrat-Guillen

[ii] Improving HbA1c control in people with Type 1 or Type 2 diabetes using flash glucose monitoring: a retrospective observational analysis in two German centers; Gerhard Klausmann, Ludger Rose, Alexander Seibold

[iii] Canadian real-world analysis of flash glucose monitoring and glycemic control; Lori Berard, Laura Brandner

[iv] Acute diabetes complications defined by hypoglycemia, hypoglycemic coma, hyperglycemia, ketoacidosis, or hyperosmolarity ICD-10 codes as primary diagnosis for inpatient or as any position in the outpatient emergency claim; Matthew Kerr, Gregory Roberts, Diana Souto, Yelena Nabutovsky

[v] American Diabetes Association (ADA), https://www.diabetes.org/a1c

[vi] The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus, *The New England Journal of Medicine*, September 30, 1993, Volume 329, Number 14

[vii] ADA, International Consensus on Time-In-Range. The group recommends a target range of 70-180 mg/dL [3.9-10.0 mmol/L] for individuals with Type 1 diabetes and Type 2 diabetes, and 63-140 mg/dL [3.5-7.8 mmol/L] during pregnancy, along with a set of targets for the time per day

[viii] Expanded real-world use confirms strong association between frequency of flash glucose monitoring and glucose control. Presented at the 12th Advanced Technologies & Treatments for Diabetes (ATTD) in Berlin, Germany; Lang, SR Jangam

[ix] Compared outcomes before and after purchase of continuous glucose monitoring

[x] Data on file, Abbott Diabetes Care

[xi] Data on file, Abbott Diabetes Care. Data based on the number of users worldwide for the FreeStyle Libre system compared to the number of users for other leading personal use, sensor-based glucose monitoring systems

[xii] Bolinder, Jan, et al. Novel glucose-sensing technology and hypoglycemia in Type 1 diabetes: a multi-center, non-masked, randomized controlled trial. *The Lancet* 388.10057 (2016): 2254-2263

[xiii] A fingerstick test using a glucometer is required during times of rapidly changing glucose levels when interstitial fluid glucose levels may not accurately reflect blood glucose levels; or if hypoglycemia or impending hypoglycemia is reported by the system; or when symptoms do not match the system readings

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