Medtronic announces latest data on MiniMed™ 780G system with the newest Guardian™ 4 sensori at American Diabetes Association 82nd Scientific Sessions

This week, Medtronic is presenting new MiniMed™ 780G system real-world data from Europe and Chile and clinical data at the American Diabetes Association (ADA) 82nd Scientific Sessions. The MiniMed™ 780G insulin pump system[i] is the only advanced hybrid closed loop system with meal detection technology[i] that provides automatic adjustments and corrections[ii] to glucose levels every five minutes.

All data demonstrates improvements in glycemic outcomes that met consensus guideline recommendations of 70 percent Time in Range with less user interaction.

MiniMed™ 780G System Real-World Data

This weekend, Medtronic announced real-world data from Europe and Chile during the ADA meeting, including the first real-world data on individuals in Europe using the latest Guardian™ 4 sensor.

In Europe, the results from 7,346 real-world individuals using the MiniMed™ 780G system use with the Guardian™ 4 sensor demonstrated improved user experience

and strong glycemic outcomes. This is the first time real-world data with the Guardian™ 4 sensor is being reported.

Percentage of Real-World Users Achieving Glycemic Goals in Europe with Guardian™ 4 Sensor			
	Overall (n=6,989)	**Age ≤ 15 years (n=2,159)**	**Age > 15 years (n=4,786)**
Overall Time in Range	72.9%	70.2%	74.2%
Time in SmartGuard™	92.2%	92.6%	92.8%
Daily SmartGuard™ Exits by System	0.06%	0.06%	0.06%
GMI	6.98%	7.04%	6.95%
Time Below Range (70 mg/dL)	1.7%	2.2%	1.5%
Time Above Range (180 mg/dL)	25.4%	27.6%	24.3%
Overnight TIR	80.5%	80.6%	80.5%

Individuals with recommended settings (active insulin time of two hours and target glucose of 100mg/dL) achieved the highest TIR (78.8%)

and lowest Time Below Range (TBR) (1.8%).

A second real-world evaluation of 674 users in Europe compared results for those patients using the MiniMed™ 780G system with the Guardian™ 4 sensor who previously used Guardian™ sensor 3. System use with the Guardian™ 4 sensor reduced SmartGuard™ exits (0.83 vs, 1.1/week) and fingersticks. These real-world findings indicate reduced burden related to fingersticks and SmartGuard™ exits with the Guardian™ 4 sensor - while maintaining favorable glycemic outcomes, comparable to that seen with the previous generation sensor.

Medtronic also presented data from 37 MiniMed™ 780G system users with type 1 diabetes (aged 5-76 years) at 12 centers throughout Chile. Overall, average TIR was 78.4%, average GMI was under 7% throughout the study, and 77% of study participants achieved both glycemic targets of TIR over 70% and GMI under 7%.

Percentage of Real-World Users Achieving Glycemic Goals in Chile		
	Baseline	**6-months post SmartGuard™-initiation**
Overall Time in Range	74.1%	78.4%
Time in SmartGuard™	-	95%
Sensor Use	83.5%	90.9%
GMI	6.8%	6.7%
Percent of patients with TIR > 70%	70.3%	86.5%
Percent of patients with GMI < 7%	63.6%	82.4%
Percent of patients with TBR < 4%	73%	67.6%
Percent of patients with GMI < 7%and TIR > 70%	54.3%	77.1%

Individuals with recommended settings achieved the highest TIR (80.1%) and lowest TBR (2.6%). Additionally, TIR increased from 68.9% to 79.5% in seven former MiniMed™ 640G users, and from 75.3% to 78.1% in 30 former MiniMed™ 670G users.

Overall, MiniMed™ 780G system use in Chile allowed most to increase TIR within two weeks that was sustained over six months.

MiniMed™ 780G Continued Access Study Data

Lastly, data from 176 continued access study participants who continued using the MiniMed™ 780G system with the Guardian™ 4 sensor after the U.S. pivotal trial was also shared out at ADA 2022 in a late-breaking poster presentation. At three months with recommended settings, HbA1C was 7.1% overall with 7.2% for pediatric participants and 6.8% for adult participants. TIR and TBR among those groups was 74.7% and 2.1% overall, 72.7% and 2.4% for pediatrics, and 77.0% and 1.7% for adults.

These data demonstrate that with less effort (fewer calibrations) individuals safely exceeded clinical consensus guidelines and mirror results of the pivotal trial which was originally conducted with Guardian™ Sensor 3.

The MiniMed™ 780G system is now available in over 40 countries around the world and is currently being reviewed by the Food and Drug Administration (FDA) for approval in the U.S.

About the MiniMed™ 780G system

The MiniMed™ 780G system is the most advanced insulin pump system from Medtronic, currently approved for the treatment of type 1 diabetes in people aged 7 to 80 years. The MiniMed™ 780G system's SmartGuard™ algorithm (also referred to as the advanced hybrid closed-loop algorithm) automates the delivery of insulin every five minutes – personalizing these doses to auto-correct highs every five minutes based on CGM readings[iii] [iv]. The system enables the personalization of glucose goals with an adjustable target setting as low as 100 mg/dL (5.5 mmol/L).

About the Diabetes Business at Medtronic (www.medtronicdiabetes.com)

Medtronic is working together with the global community to change the way people manage diabetes. The company aims to transform diabetes care by expanding access, integrating care and improving outcomes, so people living with diabetes can enjoy greater freedom and better health.

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[i] Taking a bolus 15 – 20 min before a meal provides significant improvement in post meal control. We recommend taking a meal bolus.

[ii] Refers to auto correct, which provides bolus assistance. Can deliver all correction doses automatically without user interaction, feature can be turned on and off.

[iii] Carlson, A.L. et al. Safety and glycemic outcomes during the MiniMed™ Advanced Hybrid Closed-Loop system pivotal trial in adolescents and adults with type 1 diabetes. Diab Tech Ther 2021; in press.

[iv] Collyns.O. et al. Improved Glycemic Outcomes With Medtronic MiniMed Advanced Hybrid Closed-Loop Delivery: Results From a Randomized Crossover Trial Comparing Automated Insulin Delivery With Predictive Low Glucose Suspend in People With Type 1 Diabetes. Diab Care 2021, 44: 969-975

Additional assets available online: Photos (

https://news.minimed.com/2022-06-04-Medtronic-announces-latest-data-on-MiniMed-TM-780G-system-with-the-newest-Guardian-TM-4-sensori-at-American-Diabetes-Association-82nd-Scientific-Sessions