Medtronic welcomes compelling evidence from Europe and Asia that reveal advanced hybrid closed loop systems are more cost-effective than standard management of type 1 diabetes

Groundbreaking studies in Europe and Singapore demonstrate the Medtronic MiniMed™ 780G system can generate cost-savings for health systems.

Medtronic, a global leader in healthcare technology, shared results from separate studies highlighting that the Medtronic MiniMed™ 780G system is a cost-effective therapy option for people living with type 1 diabetes (T1D) compared to standard of care (multiple daily injections (MDI) + intermittently scanned continuous glucose monitoring (isCGM)) in both a European and Singaporean setting.

Data from a study[1] published in *Diabetes Technologies and Therapeutics* found that the MiniMed™ 780G proved to be a cost-effective therapy in type 1 diabetes in various healthcare settings in Europe that saved on average €32,000* in long-term complications avoided per person, compared with standard of care. Moreover, the MiniMed™ 780G system provided up to three more years free-of-complications and greater quality adjusted life-expectancy that corresponds to 829 days of full health, thus reducing the burden of type 1 diabetes.

The analysis across six European countries featured clinical input data that was sourced from the peer reviewed ADAPT study[2]. Across all countries, the use of advanced hybrid closed loop (AHCL) systems was projected to result in an incremental gain of more than 2 in quality-adjusted life years (QALY) compared to standard management (MDI+isCGM).

This adds to separate data from Europe that demonstrated average savings of approximately €700 per person per year[3] in avoided complications costs and reduced absenteeism with the MiniMed™ 780G system.

Quality-adjusted life years (QALY)	13.735	16.008	2.272
Total direct costs, EUR	162,524	189,259	26,735
ICUR[a], EUR per QALY gained		11,765	
Total direct costs, EUR	146,930	176,244	29,314
ICUR, EUR per QALY gained		12,901	
Total direct costs, EUR	300,164	400,060	99,896
ICUR, EUR per QALY gained		43,963	

Total direct costs, EUR	110,427	185,303	74,875
ICUR, EUR per QALY gained		32,951	
Total direct costs, EUR	153,401	220,930	67,528
ICUR, EUR per QALY gained		29,718	
Total direct costs, EUR[b]	73,278	175,636	96,358
ICUR, EUR[b] per QALY gained		42,405	

[a] ICUR = incremental cost-utility ratio

[b] Conversion from SEK to EUR is based on the average exchange rate for 2022

"We already know how effective advanced hybrid closed loop therapy is in improving clinical outcomes for people with type 1 diabetes. Now we can translate it into 829 complication-free days and demonstrate the cost-effectiveness for healthcare systems. Wider technology adoption today will have a positive long-term economic impact in the future as we aim to help people with diabetes live healthier longer and stay out of hospital," said Ohad Cohen, M.D., Senior global medical affairs director, Medtronic Diabetes.

Similar results were found in Asia, where results of a separate cost-effectiveness analysis published in *Diabetes Technologies and Therapeutics*[4] found that the MiniMed™ 780G system is a cost-effective option for people with type 1 diabetes in Singapore. For people with type 1 diabetes who were not achieving glycemic targets with intermittently scanned continuous glucose monitor (isCGM) and multiple daily injections, switching to the MiniMed™ 780G system was projected to lead to an increase in quality-adjusted life year expectancy (QALY) of 1.45 and overall quality of life with an expected gain of 0.78 in life-years. Cost savings through reduction in T1D complications partially offset the higher treatment costs in the AHCL arm resulting in an estimated incremental cost-effectiveness-ratio (ICER) of SGD 33,797 per QALY gained.

	18.77	17.99	0.78
	12.72	11.27	1.45
	267,343 (196,577)	218,270 (160,494)	49,073 (36,083)
	SGD 33,797 (USD 24,850)		

[a] November 2023 exchange rates for SGD and USD were set at SGD 1.36 to 1 USD

"As the prevalence of type 1 diabetes rises across Asia, healthcare systems in the region, especially low-income and middle-income countries are not equipped to deal with the anticipated rise of costs associated with diabetes complications", said Liz Carnabuci, VP, Medtronic Diabetes APAC and Greater China. "Decision-makers in the region have a window of opportunity to consider a worthwhile investment that will widen technology access and improve the long-term health of their citizens."

Despite the growing evidence of better clinical outcomes from automated insulin delivery (AID) systems compared with MDI + CGM, perceived cost barriers remain. While AID systems entail higher upfront costs due to device procurement and training, it can offer long-term savings by potentially reducing hospital visits and complications associated with diabetes. Due to budgetary constraints on therapy adoption, economic evaluations can play a key role in helping healthcare systems and public decision-makers weigh the immediate costs against the long-term benefits. The recent decision by the National Institute for Health and Care Excellence (NICE) in the UK to issue guidance establishing hybrid closed loop therapy as standard of care for people with type 1 diabetes is considered a progressive example for other countries to follow.

This groundbreaking health economics evidence from Europe and Asia underscores global cost-effectiveness, paving the way for wider adoption across diverse geographies. An analysis of cost-effectiveness of the MiniMed™ 780G system in the U.S. will be presented at the American Diabetes Association's (ADA) 84th Scientific Sessions in June.

The quality-adjusted life-year (QALY) is a health economics metric used to quantify the impact of a medical intervention or treatment program on patient health outcomes. by assessing the health-related quality of life experienced by patients over time.

Quality of life is typically assessed using standardized instruments or surveys, capturing aspects such as physical functioning, emotional well-being, and social interactions. QALYs are a fundamental component of cost-effectiveness analyses, aiding healthcare policymakers in allocating resources efficiently to maximize population health outcomes.

Medtronic Diabetes is on a mission to alleviate the burden of diabetes by empowering individuals to live life on their terms, with the most advanced diabetes technology and always-on support when and how they need it. We've pioneered first-of-its-kind innovations for over 40 years and are committed to designing the future of diabetes management through next-generation sensors (CGM), intelligent dosing systems, and the power of data science and AI while always putting the customer experience at the forefront.

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered in Dublin, Ireland, is the leading global healthcare technology company that boldly attacks the most challenging health problems facing humanity by searching out and finding solutions. Our Mission – to alleviate pain, restore health, and extend life – unites a global team of 95,000+ passionate people across more than 150 countries. Our technologies and therapies treat 70 health conditions and include cardiac devices, surgical robotics, insulin pumps, surgical tools, patient monitoring systems, and more. Powered by our diverse knowledge, insatiable curiosity, and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day. Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. For more information on Medtronic (NYSE:MDT), visit www.Medtronic.com and follow @Medtronic on Twitter and LinkedIn.

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* Cost effectiveness results vary in countries. The potential cost-saving figures provided represent the average of the countries included in the analysis.

[1] Jendle J, Buompensiere M.I, Ozdemir Z, de Portu S, Smith-Palmer J, Pollock R, Cohen O. A European Cost-Utility Analysis of the MiniMed™ 780G Advanced Hybrid Closed-Loop System Versus Intermittently Scanned Continuous Glucose Monitoring with Multiple Daily Insulin Injections in People Living with Type 1 Diabetes. Diabetes Technologies and Therapeutics https://www.liebertpub.com/doi/10.1089/dia.2023.0297

[2] Choudhary P, Kolassa R, Keuthage W et al. on behalf of the ADAPT study Group*. Advanced hybrid closed loop therapy versus conventional treatment in adults with type 1 diabetes (ADAPT): a randomised controlled study. Lancet Diab 2022; 10:720-731.

[3] Ozdemir Z, Yu J, Buompensiere M.I, de Portu S, Cohen O. Improved Glycemic Outcomes and Associated Cost Savings with an Advanced Hybrid Closed Loop System for People with Type 1 Diabetes with Suboptimal Glycemic Control in Europe. Abstract ISPOR Vol 26, Issue 12. DOI: https://doi.org/10.1016/j.jval.2023.09.887

[4] Gardner D.S.L, Lakkad M, Qiu Z, Inoue Y, Rama Chandran S, Wherry K. The cost-effectiveness of an advanced hybrid closed loop system compared to standard management of type 1 diabetes in a Singapore setting. Diabetes Technologies and Therapeutics. 2024 Jan 12. DOI: 10.1089/dia.2023.0455
