

#41 EFFECTIVENESS OF TECHNOLOGICAL ADVANCES IN DIABETES SELF-CARE AND MANAGEMENT: A SYSTEMATIC REVIEW

MANAR ABU ASABA^{1,2}

1Imperial Colleague London Diabetes Centre, Diabetes Educator, Abu Dhabi, United Arab Emirates,
2Imperial Colleague London diabetes centre, Abu Dhabi, United Arab Emirates

AS17. The use of Technology in the Advanced Age

Abstract Submission

Background and Aims

CGM systems have shown significant benefits in reducing hypoglycemia and optimizing insulin therapy, particularly for pregnant women and the elderly. Closed-loop systems enhance time in range and reduce user burden by automating insulin adjustments based on real-time glucose readings. Insulin pumps, especially when integrated with CGM and AI technologies, demonstrate superior adherence and patient satisfaction compared to multiple daily injections. AI applications facilitate faster optimal dosing and improve treatment adherence, with the potential to significantly boost patient engagement and clinical outcomes.

Methods

We analysed data from multiple randomized controlled trials and observational studies that evaluated the impact of these technologies on glycemic control, hypoglycaemia risk, and quality of life in individuals with Type1Diabetes and Type 2 Diabetes

Results

CGM systems have shown significant benefits in reducing hypoglycemia and optimizing insulin therapy, particularly for pregnant women and the elderly. Closed-loop systems enhance time in range and reduce user burden by automating insulin adjustments based on real-time glucose readings. Insulin pumps, especially when integrated with CGM and AI technologies, demonstrate superior adherence and patient satisfaction compared to multiple daily injections. AI applications facilitate faster optimal dosing and improve treatment adherence, with the potential to significantly boost patient engagement and clinical outcomes

Conclusions

Advanced diabetes management technologies are transforming diabetes care, improving metabolic control and quality of life by reducing daily management burdens. Ongoing innovation and research are crucial to overcome integration challenges and assess long-term benefits, ensuring these technologies cater to the diverse needs of people with diabetes.