Georgian Scientists
ქართველი მეცნიერები
Vol. 8 Issue 4(1), 2026
https://doi.org/10.52340/gs.2026.08.04(1).94

BEYOND GLUCOSE CONTROL: THE IMPACT OF GLP-1 RECEPTOR AGONISTS AND CONTINUOUS GLUCOSE MONITORING ON ACUTE MEDICAL CARE

Mark Sutton-Smith

Mediclinic Parkview Hospital, Mediclinic Middle East, Dubai, United Arab Emirates

Background: The rapid adoption of glucagon-like peptide-1 (GLP-1) receptor agonists and continuous glucose monitoring (CGM) technologies is transforming the management of diabetes, obesity, and cardiometabolic disease. As use of these innovations increases worldwide, acute care physicians are increasingly encountering patients receiving GLP-1 therapies and presenting with real-time glucose data from wearable devices. Understanding the opportunities and challenges associated with these technologies has become essential in modern acute medical practice.

Objective: To explore the impact of GLP-1 receptor agonists and continuous glucose monitoring systems on the assessment, management, and safety of patients presenting to acute medical services.

Methods: A contemporary review of emerging evidence, clinical guidelines, and practical experience relating to GLP-1 receptor agonists and CGM technologies within emergency departments, acute medical units, and inpatient settings was undertaken. Particular attention was given to clinical decision-making, medication-associated presentations, and digital monitoring strategies.

Results: GLP-1 receptor agonists provide substantial benefits in glycaemic control, weight management, and cardiometabolic risk reduction. However, their increasing use has introduced new challenges, including delayed gastric emptying, gastrointestinal adverse effects, dehydration, acute kidney injury, and peri-procedural management considerations. Simultaneously, CGM technologies, including Dexcom and FreeStyle Libre systems, offer continuous physiological data, enabling earlier recognition of hypoglycaemia, hyperglycaemia, and glycaemic variability. Integration of CGM data into acute care workflows has the potential to enhance clinical decision-making, improve patient safety, and support more personalised management.

Conclusion: GLP-1 receptor agonists and continuous glucose monitoring represent major advances extending beyond traditional diabetes care. Together, they are reshaping acute medical practice by providing new diagnostic insights, supporting earlier intervention, and facilitating

data-driven patient management. Acute care clinicians must become familiar with both the benefits and potential complications of these technologies as their use continues to expand.

Keywords: GLP-1 receptor agonists, continuous glucose monitoring, acute medicine, digital health, patient safety.