**Defining glycaemic treatment intensification in the hospital setting: A review of current approaches and future directions**

**Aim:**

Hospitalisation provides an opportunity to identify suboptimal pre-admission glycaemia and implement timely, appropriate adjustments to glycaemic therapy, thus reducing morbidity and mortality. However, no standard definition exists for what constitutes treatment intensification, limiting comparability between studies, and precluding evidence-based changes to practices. This review aims to evaluate current methodologies used to classify glycaemic medication intensification in inpatient settings and identify key limitations and opportunities for standardisation.

**Methods:**

We conducted a review of literature published from January 2008 to February 2025 using the OVID Medline database. The search strategy sought published papers that examined how glycaemic medication intensification was defined, measured, or classified in inpatient settings. Relevant English-language studies were identified using MeSH and free-text terms related to diabetes, hospitalisation, and treatment intensification. Studies were included based on their relevance to inpatient glycaemic medication changes and description of classification methods.

**Results:**

Among 220 included studies, definitions of inpatient glycaemic treatment intensification varied substantially. Some studies defined intensification as quantitative increases in insulin or non-insulin agent doses, while others focused on the initiation or discontinuation of specific drug classes. Several studies concentrated exclusively on insulin-specific changes, such as the commencement of basal-bolus regimens or dose titration, whereas others compared pre- and post-hospitalisation regimens. While these approaches provided clarity on treatment changes, few accounted for key clinical considerations such as drug potency, multiple concurrent medication changes, patient-specific factors, or the clinical rationale behind changes.

**Conclusion:**

Current definitions of inpatient glycaemic treatment intensification are heterogeneous and often fail to reflect the complexity of therapeutic decision-making. The absence of a standardised framework limits comparability across studies and reduces relevance to clinical practice. Our findings highlight the need for a more comprehensive and nuanced classification system to guide inpatient diabetes management and inform future research.