

EVALUATION OF INSULIN NOMOGRAM FOR INTRAVENOUS INSULIN MANAGEMENT

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Topic

Hyperglycemia is a common complication among critically ill patients, even in individuals who are typically normoglycemic. Recent research has indicated that continuous infusions of insulin, known as intensive insulin therapy, reduce mortality and morbidity in Intensive Care Unit (ICU) patients. After extensive review of the literature and a desire to contribute to evidence based practice, the ICU team, led by its medical director, developed a research-based nomogram to guide critical care nurses in adjusting continuous insulin infusions.

Purpose

The purpose of this study was to test the newly developed nomogram and determine if it was more accurate, efficient, and nurse-friendly than an existing table found in the literature. Results from the study will be used to establish which tool is to be included in the facility's intensive insulin protocol.

Method

The nomogram was tested in two phases. Information about the study was posted throughout the critical care units. A research assistant for each unit explained the research, conducted an educational program, and asked for volunteers to participate in the study. During Phase One, each participant was asked to calculate insulin drip adjustments for ten hypothetical problems, five using the nomogram and five using the table. The participants recorded their answers and start and stop times on the answer sheet. Evaluative comments regarding the use of the tools and preferred method were also gathered. During Phase Two, a revised nomogram, developed from the findings of the first phase of the research, was examined for speed and accuracy of problem completion.

Findings

The preferred method of calculating insulin infusion adjustments, speed of calculations, accuracy of calculations and efficacy of the newly developed insulin nomogram as compared to table calculations will be reported. Recommendations for replication of the study in other settings will be made.