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| **Abstract Title:** | **Playing NICE in the Burn Intensive Care Unit: Optimizing Glycemic Control through Implementation of an Algorithm-cased Intravenous Insulin Protocol** |
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| **Objective:** | Upon completion of the lecture, attendees should be better prepared to:<br>▪ Compare and contrast an algorithm-based intravenous insulin protocol to a glycemic control with sliding scale insulin alone or in combination with basal insulin.<br>▪ Determine which insulin protocol results in less hypoglycemic events. |
| **Abstract:** | **Introduction:** Hyperglycemia is common in critical illness due to the body's stress response and results in insulin resistance. The mortality rate in critically ill patients with new onset hyperglycemia is three times higher than those with a known history of diabetes. The morbidity benefits achieved with glycemic control are well documented (i.e. reduction in rate of acute kidney injury, duration of mechanical ventilation, and length of intensive care and hospital stay). Intravenous insulin infusions provide optimal control in the dynamic critically ill patient over oral and subcutaneous agents. The goal of our current IV insulin protocol is to improve glycemic control in the burn intensive care unit while limiting hypoglycemic events (< 70 mg/dL) and glycemic variability (both linked to poor patient outcomes). The Markovitz Insulin protocol (an algorithm-based approach) has been well studied, effectively used in both medical & surgical critical care patient populations, and shown to be more effective than physician directed insulin titration. This study seeks to evaluate the effectiveness and safety of an algorithm-based intravenous insulin protocol versus glycemic control with sliding scale insulin alone or in combination with basal insulin within the burn intensive care unit.<br><br>**Methods:** Hyperglycemic patients located within the burn intensive care unit were reviewed. Appropriate statistical methods post implementation of Markovitz insulin protocol was done and compared to pre-implementation of an algorithm- based insulin protocol.<br><br>**Results:** Post implementation glycemic control groups were compared to pre-implementation glycemic control and found to have lower hypoglycemic events. |

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| | **Conclusions:** Anecdotally, glycemic control has trended toward more stability and less hypoglycemic events with an algorithm-based protocol in place. Total numbers and comparisons will be made and shared as study results.<br><br>**References and Resources:**<br>Wagan, P., Paz-Pacheco, E., Aligui, G. Efficacy and safety of insulin protocol among medical and surgical patients admitted in the Medical City Hospital. Journal of the ASEAN Federation of Endocrine Societies, Vol. 29: 2, 179-186, 2014. |
| **Disclosure:** | Robert F. Mullins – No Relevant Financial Relationships to Disclose<br>Shawn Fagan – No Relevant Financial Relationships to Disclose<br>Mary Taylor – No Relevant Financial Relationships to Disclose<br>Kimberly Linticum – No Relevant Financial Relationships to Disclose<br>Lisa Smth – No Relevant Financial Relationships to Disclose |