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## Performance of STAR virtual trials for diabetic and non-diabetic in HTAA intensive care unit (Conference Paper)

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### Abstract

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Critically ill patients are commonly linked to stress-induced hyperglycaemia which relates to insulin resistance and the risk of per-diagnosed with diabetes and other metabolic illnesses. Thus, it is essential to choose the best practice of blood glucose management in order to reduce morbidity and mortality rates in intensive care unit. This study is focusing on clinical data of 210 critically ill patients in Hospital Tengku Ampuan Afzan (HTAA), Kuantan who underwent Intensive Insulin Therapy which utilized a sliding scale method. Patients were identified in two main groups of diabetic (123) and non-diabetic (87) where stochastic model is generated to observe 90% confidence interval of insulin sensitivity. Blood glucose levels comparison between these two cohorts is conducted to observe the percentage of blood glucose levels within targeted band of 4.4-10.0 mmol/L. It is found that 82% of BG levels are within targeted band for non-diabetes cohort under stochastic targeted (STAR) glycaemic control protocol. However, only 59.6% and 70.6% BG levels are within targeted band for diabetes cohort for insulin infusion therapy used in HTAA and STAR protocols. Thus, further investigation on blood glucose control protocol for diabetes patients is required to increase the reliability and efficacy of current practice despite of patient safety. © 2016 IEEE.

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