

## ANZCA ASM 2006 template for abstract submission

<b>Title:</b>	Tight Glycaemic Control with a Variable Insulin and Nutrition Protocol
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<b>Abstract:</b>  Your abstract <u>must use Arial 10 font.</u>  <u>Free papers / posters</u> Your abstract <u>must not be more than 300 words.</u>  <u>Invited speakers</u> Your abstract <u>must not exceed two A4 pages including 10 references</u>	<p><b>Objective:</b> To present a recently developed model-based glycaemic management protocol to provide tight glycaemic control.</p> <p><b>Background:</b> Hyperglycaemia is prevalent in critical care. Current published protocols require significant added clinical effort and result in highly variable results. No currently published methods successfully address the practical clinical difficulties and patient variation while also providing safe, tight control.</p> <p><b>Methods:</b> We present a unique approach in Figure 1 that manages both nutritional inputs and exogenous insulin infusions. The protocol uses tables simplified from a computerised protocol and adopted as a clinical practice change. To demonstrate the approach, the first 35 cases are presented.</p> <p><b>Results:</b> Average APACHE II score was 21 (range: 11-37), average age was 63 (range: 27-86), and 63% were male. Pilot tests covering 5890 patient hours produced an average glucose of 5.9 +/- 1.0 mmol/L. Time in the 4-6.1 mmol/L band was 59%, with 85% between the 4.0-7.0 mmol/L and 94% between 4.0-7.75 mmol/L. The average feed rate was 63% of patient specific goal feed (1204 kcal/day) and the average hourly insulin dose was 2.6U. There was one hypoglycaemic measurement of 2.1 mmol/L. No departures from protocol were required at any time.</p> <p>In a nursing satisfaction survey 95% of responses rated ease of use, burden and effectiveness as satisfactory or better, with 75% rating it good or very good.</p> <p><b>Summary:</b> The overall approach of modulating insulin and nutrition challenges the current practice of using only insulin to reduce glycaemic levels, which often results in large variability and poor control. The results show extremely tight control within safe glycaemic bands, and are meet or exceed other published results, but with a more critically ill cohort. The system could be readily adopted in any typical ICU.</p> <div data-bbox="399 1512 1396 1825"> </div>

Figure 1: Feed and Insulin Wheels with instructions