Peak and Range of Blood Glucose are also associated with ICU Mortality

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Hypothesis:
This study has two main hypotheses:
- Peak blood glucose is a better predictor of ICU mortality than the range of glucose values.
- The peak and range of blood glucose values are better predictors of mortality than glucose control targets (HbA1c or fructosamine).

Outlines of Study:
Main aims:
- To determine the association between peak and range of blood glucose values and mortality in a cohort of critically ill patients.

Methods:
- A retrospective cohort study of patients admitted to an ICU over a 12-month period.
- Blood glucose values were collected at 3-hour intervals and analyzed for the peak and range of values.
- Mortality was assessed at 28 days post-admission.

Results:
- The peak blood glucose value was significantly higher in patients who died compared to those who survived.
- The range of blood glucose values also showed a trend towards higher values in deceased patients.

Conclusions:
- Significant improvements in the measurement and practice of treating hyperglycaemia will need to be developed to fully realize the benefits of tight control.

References: