



Glucose Changes in Ontario Acute Stroke Protocol

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STROKE STRATEGY of Southeastern Ontario

What We Learned

Recent proposed changes to the Ontario Paramedic acute stroke protocol to reduce the inclusion criteria of blood sugar levels from 4.0mmol/L to 3.0mmol/L raised concern that there would be an increase in workload for Paramedic services. Data showed that this was not the case.

Background

A joint provincial task group was established in 2009 to recommend changes to the Paramedic prompt card used in the Ontario Paramedic Acute Stroke Protocol. Changes were being considered given recent evidence from stroke research. This study looked at the proposed changes in blood glucose level and what effect that would have on Paramedic services.

Purpose

The purpose of this study was to determine if a decrease in blood glucose levels from 4mmol/L to 3mmol/L would increase workload for Paramedic services by including more patients in the acute stroke protocol.

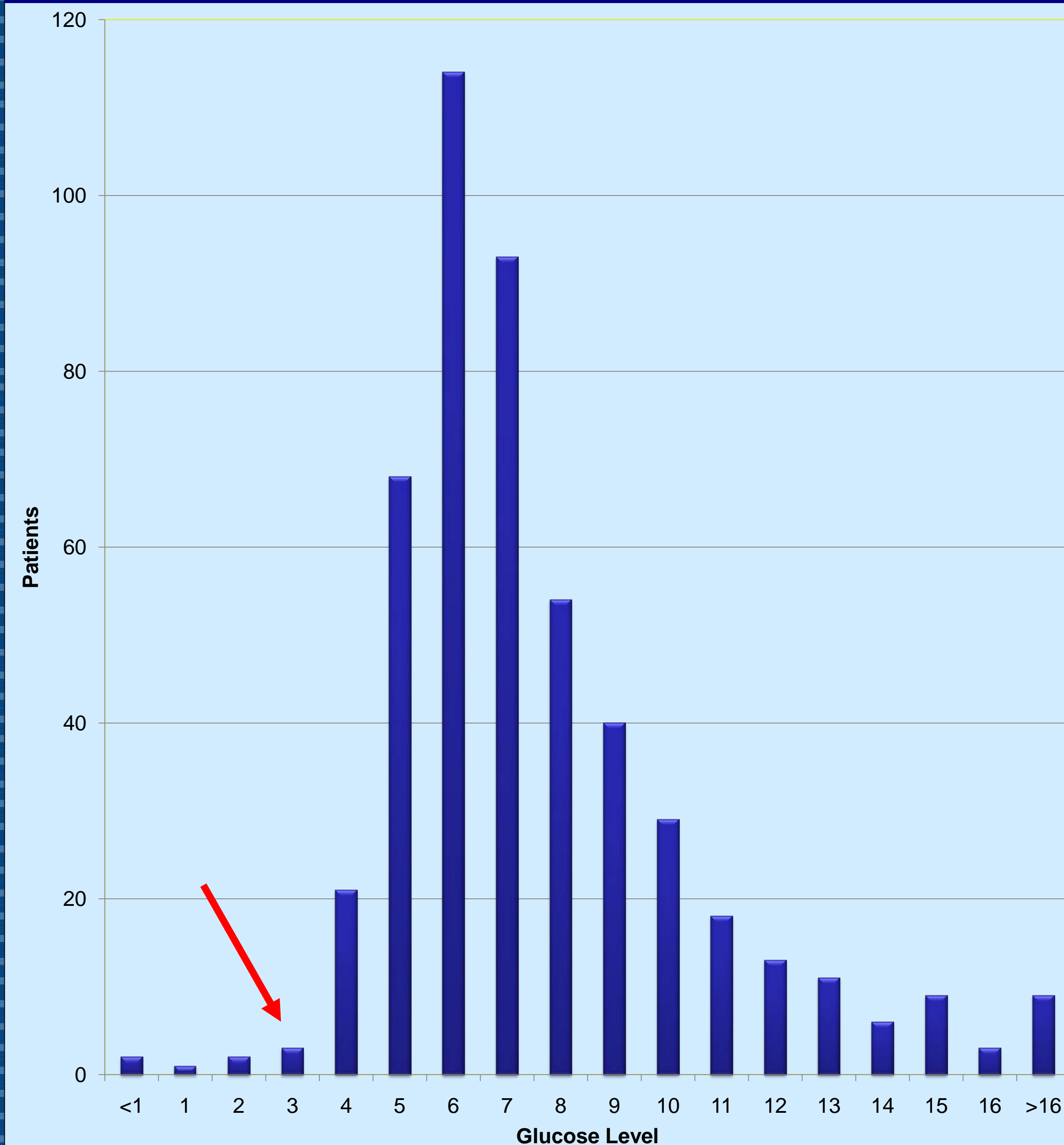
Methods

Retrospective data taken from the Ambulance Call Reports from January 2008 to August 2009 from Hastings-Quinte EMS, Leeds-Grenville EMS, Lennox & Addington EMS, Prescott-Russell EMS, and Renfrew Paramedic Services in Eastern Ontario were evaluated (N=26,198).

Filtering using Stoke/TIA in either the primary, secondary, or final problem code, dispatch priority code of 3 or 4, and a recorded blood glucose value, showed a total of 497 for the timeframe identified.

All patients included in this dataset had a blood glucose value recorded. These were consolidated as whole numbers and graphed in the results section.

Results



Discussion

Stroke research needs to be incorporated into the Paramedic setting. Possible paramedic prompt card changes included the new evidence for an increased time window for tPA administration along with other considerations such as reducing the exclusion limits for the Glasgow Coma Scale and blood glucose levels. Paramedic services successfully provided evidence to assist the decision-making for protocol changes related to blood glucose.

Limitations

Sample size included only data from Eastern Ontario. Some of the Paramedic Services did not have all electronic data for the 2008 year limiting the total patients in that year.

Conclusions

Reducing the blood sugar level from 4mmol/L to 3mmol/L in the Acute Stroke Protocol should not result in an increased workload for Paramedic services. Out of 497 calls, by making the change to 3mmol/L there would have been only 3 additional patients included in the protocol.

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