A212 - Effect of hyponatraemia recorded within the first 24 hours on length of stay

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Introduction:
We investigated the effect of hyponatraemia (defined as a sodium level < 135 mmol/l) recorded within the first 24 hours post admission on the overall length of stay (LOS; days) in our critical care unit.

Methods:
We retrospectively analysed complete data for 1644 patients collected over a 3-year period. We performed an unpaired Wilcoxon rank sum test to compare the LOS between the two groups. Analyses were run using the open source statistical program R Version 3.4.2 (R Foundation for Statistical Computing, Vienna, Austria).

Results:
The hyponatraemia group consisted of 544 patients with mean age 66.0 (SD 16.0) years, mean sodium 129.6 (SD 5.1) mmol/l and median LOS 4.1 [IQR 2.4 – 8.4] days. The normal sodium level (defined 135-145 mmol/l) group consisted of 1100 patients with mean age 64.3 (SD 18.5), mean sodium 139.1 (SD 2.3) mmol/l and median LOS 3.8 [IQR 1.9 – 7.0] days (figure 1 – note logarithmic transformation of LOS data). We found a statistically significant difference between the two groups when comparing the length of stay (p < 0.001).

Conclusion:
Dean et al demonstrated no significant difference in the mean length of stay using the same definitions of hyponatraemia and eunatraemia as in this study [1]. Even though our data appears to contradict their findings, regarding the statistical significance seen, we feel that this is not significant clinically, given the very similar median times for LOS between the two groups; the unbalanced design may contribute to the statistical significance.

References:

Image 1 :
Length of stay between the two groups (note logarithmic scale for LOS)