

This study aimed to examine the variability in the preparation of intravenous medications in ICUs” Levkovich et al (2016).

Abstract:

RATIONALE, AIM AND OBJECTIVE: In Australia and New Zealand, there are no established standards for the final presentations of prepared intravenous medications in Intensive Care Units (ICUs). Variability has the potential to contribute to deficiencies in safety, efficiency and cost effectiveness. This study aimed to examine the variability in the preparation of intravenous medications in ICUs.

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METHODS: An electronic survey was distributed to critical care pharmacists in Australia and New Zealand via an established email group. The preparation of vasopressors, inotropes, sedation, analgesia, heparin, insulin and neuromuscular blockers were examined. Respondents were asked about initial presentation, final concentration prepared, who prepared and current safety practices used. Questions also addressed opinions and attitudes to safety practices and responsibility for leading change.

RESULTS: Forty responses to the survey were received, representing 17% of ICUs in Australia and New Zealand. Significant variation in final concentration was observed for all infusions except insulin and esmolol. The final volumes varied significantly for all drugs. The majority of infusions were prepared by nursing staff with only a small number of pre-prepared presentations currently in use. Labelling was usually hand-written with some colour-coding. Most respondents identified safety and efficiency but not cost effectiveness as likely to be improved by the use of pre-prepared infusions. Most respondents felt ‘government’ or peak clinical bodies should lead practice standardization.

CONCLUSION: Significant variation exists in the preparation of intravenous medications across ICUs in Australia and New Zealand. Nationally or regionally coordinated rationalization and standardization could improve safety and efficiency and potentially reduce the barrier of cost.

Reference:

Levkovich, B.J., Bui, T., Bovell, A., Watterson, J., Egan, A., Poole, S.G. and Dooley, M.J. (2016) Variability of intravenous medication preparation in Australian and New Zealand intensive care units. Journal of Evaluation in Clinical Practice. June 27th. .

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