Author's response to reviews

Title: Neonatal extravasation injury: Prevention and management in Australia and New Zealand - A survey of current practice

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Version: 2 Date: 6 February 2013

Author's response to reviews: see over
Dear Editor,

Thank you for providing the opportunity to respond to the reviewers’ comments, and allowing submission of a revised manuscript. Please find the reviewer’s recommendations in Italics, our response (blue), and amendments (purple) below.

Kind regards,
Dr. Ben Wheeler

Editors comments:
Consent: Please state in the Methods section whether written informed consent for participation in the study was obtained from participants

Done – see wording below

Informed consent consisted of an explanation of the survey and its purpose given in an email to all potential participants, with consent done via an email link which connected directly to a Survey Monkey™ internet based questionnaire.

Questionnaire: please include a copy of your questionnaire as an Additional File, properly cited in the Methods section.

Done – attached as “appendix 1”

Reviewer 1: M.F.
Thank you for your comments. No revisions recommended.

Reviewer 2: K.N.
Thank you for your comments and suggestions. Please see addressed below:

Minor essential revisions
Results - prevention, line commencing ‘58% (15/26) have approached this issue by having available more concentrated TPN solutions...’. The leading sentences into this talk about the 9 units that use IV access and make qualifying statements. Therefore it is unclear who/why 15 units have approached this issue by having available more concentrated solutions for CVL use. Thus I am assuming that those that use IV will use 'less concentrated' (containing 10% dextrose) - but this is unclear, and therefore needs revision.

Thank you for noting this. We have revised see below in red, hopefully clearer now.
85% (22/26) of units permit the infusion of TPN via peripheral access. In addition, 58% (15/26) of units have concentrated TPN solutions available for exclusive central use (e.g. containing 12.5-15% dextrose, as opposed to standard 10% Dextrose bags). However nine of the units that do infuse TPN peripherally qualified their answer with specific comments such as: “used reluctantly when no other options available”, “prefer and encourage use of central / long line, but allow peripheral”, “only when swift transition to milk anticipated”, and “occasionally, for short term use when central IV access not available”.

Discretionary revisions

*I think that the article would be enhanced with a table summarising main results for easier comparsion for busy clinicians.*

Thank you for this suggestion. A summary table has been included in the results section (see paper)

Reviewer 3: N.A.

Thank you for your comments and suggestions. Please see addressed below:

In paragraph 2 of the background a paper by PH Cartlidge was quoted (ref 4). I reviewed this as what is stated does not reflect the range of types of scarring seen. 98% had needstick marks, of the 61 who were classed as EI 30 were barely perceptible, 27 easily seen and 4 were cosmetically or functionally important.

*I think the distinction between the common marks and actually scarring needs to be made more clearly*

*I think the association with extreme prematurity < 26 weeks, and length of stay could also be noted.*

This has been clarified in text including with details on the grading system used.

A number of studies have looked at rates of EI in neonatal intensive care units (NICUs). A 1985 [4] study of 100 NICU survivors 16-29 months following discharge identified 61% as having scars consistent with an EI. A grading system ranging from grade 1 (barely perceptible) to grade 4 (functionally significant) was used to indicate the severity of the scarring. While the vast majority of these cases had only minor scarring, four cases had scarring deemed cosmetically or functionally significant. A more recent study [5] from the United Kingdom found that 38/1000 neonates undergoing neonatal intensive care suffered an EI severe enough to result in skin necrosis. The majority of these injuries were at gestations 26 weeks or less (ranging from 23-35 weeks).

Minor essential revision

*In the treatment section a sentence commences with 58% - request rearrange sentence.*
Regarding the treatment of EI, 65% (17/26) of units have a written policy, with another 27% (7/26) having a standard practice. The remaining 8% (2/26) have neither. Comparing the countries, 83% (5/6) of the New Zealand units have a written policy, compared to 60% (12/26) of Australian units. To assess severity of EI, 58% (14/24) of units with a written policy or standard practice, use a staging system. One unit, without a formal staging system, uses clinical photographs to monitor severity.