

LETTER TO THE EDITORS

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Adequately assessing dehydration: A holy grail of paediatric emergency medicine

Damian Roland^{1*}, Colin Clarke², Meredith Borland^{3,5} and Elaine Pascoe^{4,5}

We read the work by Pringle et al. [1] with interest. One of the holy grails of Paediatric Emergency Medicine has been the rapid and reliable identification of the child with serious dehydration, and the converse, the ability to know when to safely discharge a child with a history of gastroenteritis. Recently there has been an external validation of a previously derived clinical dehydration scale by Bailey et al. [2]. It is encouraging to see this type of study as too often scoring systems are created without further testing. However we wondered about the generalisability of this result to routine Paediatric Emergency Care. Specifically we noted that in that study participating nurses undertook an additional training programme prior to study commencement. Is the score still valid if used by Paediatric Emergency Care staff who have not had this additional training? Our previous work has shown that experience and training in assessment may be vital in correctly assigning dehydration categories in children [3]. We found significant variability between junior doctors' assessments of dehydration compared to their seniors. We concluded previous studies on dehydration scoring systems may have benefited from well-trained staff and the introduction of these systems to naive health care professionals may not replicate initial results. The Pringle et al. study, while containing only a small number of subjects, challenges this conclusion again as it appears the care setting may influence the utility of the tool. The holy grail has yet to be found!

Author details

¹Paediatric Emergency Medicine Leicester Academic (PEMLA) Group, Emergency Department Secretaries c/o Elizabeth Cadman-Moore, Leicester Royal Infirmary, Leicester, LE1 5WW, UK ²Emergency Department, Royal Perth Hospital, Perth Western Australia ³Princess Margaret Hospital for Children, Perth, Western Australia ⁴Division of Clinical Research and Education, Princess Margaret Hospital for Children, Perth, Western Australia ⁵School of

* Correspondence: dr98@le.ac.uk

¹Paediatric Emergency Medicine Leicester Academic (PEMLA) Group, Emergency Department Secretaries c/o Elizabeth Cadman-Moore, Leicester Royal Infirmary, Leicester, LE1 5WW, UK

Full list of author information is available at the end of the article

Paediatrics and Child Health, University of Western Australia, Perth, Western Australia

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References

1. Pringle, et al: Comparing the accuracy of the three popular clinical dehydration scales in children with diarrhea. *Int J Emerg Med* 2011, **4**:58.
2. Bailey B, Gravel J, Goldman R, Friedman J, Parkin P: External validation of the clinical dehydration scale for children with acute gastroenteritis. *Acad Emerg Med* 2010, **17**:583-588.
3. Roland D, Clarke C, Borland M, Pascoe E: Does a standardised scoring system of clinical signs reduce variability between doctors' assessments of the potentially dehydrated child? *J Paediatr Child Health* 2010, **46**(3):103-107.

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