

# The nurse's role in partnering with mothers to keep fluid balance records for a hospitalized child

## Background

The registered nurse is responsible for supervision over maintenance of fluid, electrolyte and acid base balance of a patient<sup>1</sup>. Accuracy and compliance with fluid balance monitoring of paediatric inpatients is typically poor<sup>2</sup>. Reasons include a lack of understanding of the importance and purpose of monitoring, and demands on nurses' time leading to missed or inaccurate recording<sup>3</sup>. Recording quality is helped by ensuring fluid balance charts are only used when there is a clinical indication rather than being ubiquitous<sup>4</sup>. Mothers play an important role in caring for hospitalised children in Africa and mothers can be a valuable resource in monitoring their child's condition<sup>5</sup> but this practice is often informal and lacks guidelines.

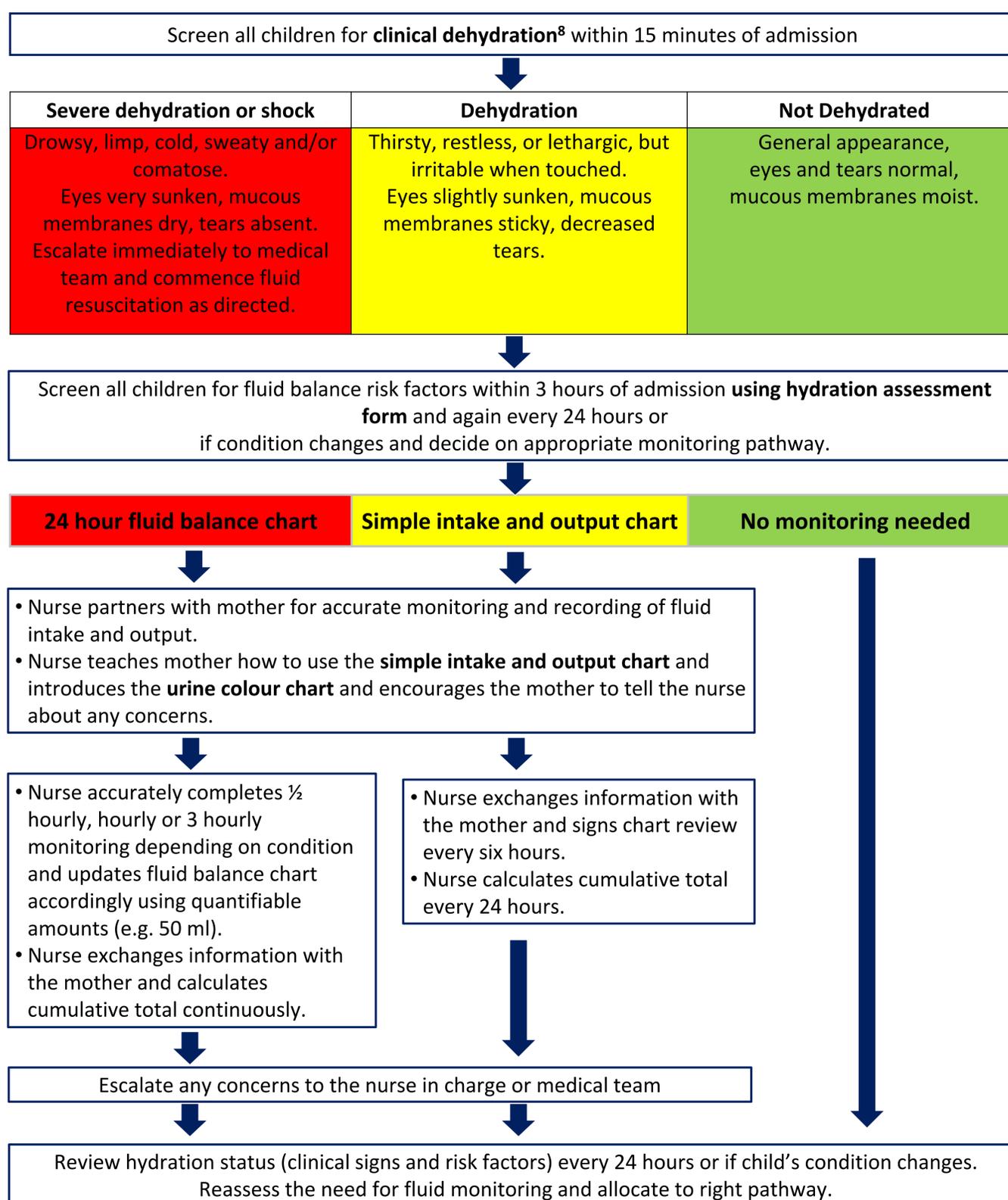
## Purpose

To identify existing protocols and guidelines from higher-resourced settings and follow a rigorous and transparent process of adaptation and contextualisation to produce a high-quality protocol suited to implementation in paediatric wards in Zambia and South Africa.

## Process of Development

Existing guidelines suitable for modification were identified through structured bibliographic database searching and consultation with international expert nurse practitioners. Guidelines were appraised using the AGREE II tool<sup>6</sup>. The process of adaptation and modification followed the approach recommended by the MRC South African Guidelines Excellence Project (SAGE)<sup>7</sup>. The resulting 12 recommendations (with levels of evidence and grades of recommendations) are contextualised for an African paediatric population, explicitly recognising that mothers/caregivers accompanying a child will play an active role in taking care of their hospitalised child including taking note of the child's fluid intake and output. Tools and resources to support implementation have been developed and are available from the authors.

## Flow chart for the nurse's role in partnering with mothers to keep fluid balance records for a hospitalized child

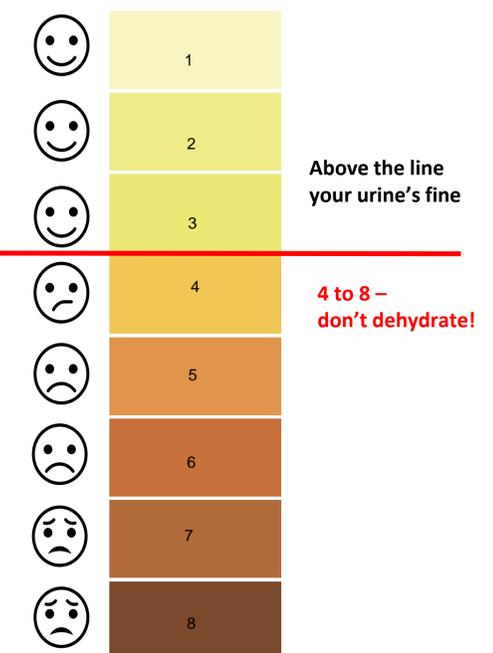


The mother is involved and plays a valuable role in keeping accurate fluid balance records and supporting optimal hydration.

### Teach mothers and children about:

- Colour and quantity of urine – using **urine colour chart**
- Types of stools
- The importance of washing hands well with soap and water after handling urine or stools

### Urine Colour chart



### Teach mothers to look out for signs of dehydration:

- Is the child drinking regularly?
- Reduced urine output?
- Sunken eyes?
- Sunken fontanelle?
- Drowsy, tired, cold, restless, irritable?
- Mouth dry or sticky?
- Few or no tears?

All resources in **bold** available to download from

[https://vula.uct.ac.za/access/content/group/9c29ba04-b1ee-49b9-8c85-9a468b556ce2/MNCN/MNCN\\_1\\_.html](https://vula.uct.ac.za/access/content/group/9c29ba04-b1ee-49b9-8c85-9a468b556ce2/MNCN/MNCN_1_.html)

### References:

- South African Nursing Council (SANC) Regulatory Requirement/Legislature Requirement SANCR2598(RR/LR).
- National Institute for Health and Care Excellence. (2015). Intravenous fluid therapy in children and young people in hospital. NG29.
- Pinnington, S., Ingleby, S., Hanumapura, P. and Waring, D. (2016). Assessing and documenting fluid balance. *Nursing Standard*, 31(15). Available from <https://journals.rcni.com/doi/pdf/10.7748/ns.2016.e10432>
- Reid J, Robb E, Stone D et al (2004) Improving the monitoring and assessment of fluid balance. *Nursing Times*. 100, 20, 36-39.
- Power, N., & Franck L. (2008) Parent participation in the care of hospitalized children: a systematic review. *Journal of Advanced Nursing* 62(6), 622-641. doi: 10.1111/j.1365-2648.2008.04643.x
- Brouwers, M.C., Kerkvliet, K., Spithoff, K. (2016). AGREE Next Steps Consortium. The AGREE Reporting Checklist: a tool to improve reporting of clinical practice guidelines. *BMJ*. 2016 Mar 8;352:i1152. doi: 10.1136/bmj.i1152
- Dizon, J. M., Machingaidze, S., & Karen Grimmer, K. (2016). To adopt, to adapt, or to contextualise? The big question in clinical practice guideline development. *BMC Res Notes* 9:442. DOI 10.1186/s13104-016-2244-7
- Friedman JN, Goldman RD, Srivastava R, Parkin PC (2004) Development of a clinical dehydration scale for use in children between 1 and 36 months of age. *J Pediatr* 145: 201-207.
- Bristol stool chart available from [https://en.wikipedia.org/wiki/Bristol\\_stool\\_scale](https://en.wikipedia.org/wiki/Bristol_stool_scale)

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