ORAL REHYDRATION: VOMITING AND/OR DIARRHOEA - EMERGENCY DEPARTMENT

PRACTICE GUIDELINE

DOCUMENT SUMMARY/KEY POINTS

- This document describes the requirements for nurse initiated oral rehydration within the extended skills Scope of Practice for the accredited Clinical Initiative Nurse in the SCHN Emergency Departments.
- Children with vomiting and dehydration can often be successfully managed with oral fluids. Using appropriate oral solutions, clinical assessment, monitoring and evaluation this method can be effective for children with vomiting and diarrhoea in the Emergency Department.
- Parent/Carer Administration of Oral Fluid (Paediatric) Form (SMR120015) is to be used to document fluid intake and output, as part of the patient record.
- This document is to be read in conjunction with the following:
- Clinical Initiatives Nurse. Emergency Care Institute NSW https://aci.health.nsw.gov.au/networks/eci/administration/models-of-care/cin
- Hand Hygiene – SCHN
- Topical Anaesthetic - Lignocaine 4% Cream (LMX 4) NIM http://webapps.schn.health.nsw.gov.au/epolicy/policy/5054
- Gastroenteritis: Acute Management Practice Guideline - SCHN

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st August 2021	**Review Period:** 3 years
Team Leader:	Nurse Educator	**Area/Dept:** ED SCH & CHW

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CHANGE SUMMARY

- Document due for mandatory review
- New Joint Emergency Departments document; replaces SCH version with the same title.
- Brief period of rest and recovery recommended post vomit prior to commencement of oral rehydration

READ ACKNOWLEDGEMENT

- All relevant SCHN Emergency Department nurses must ensure they have read and understand the contents of this guideline
- This guideline provides scope for the ED Clinical Initiatives Nurse (CIN) and is a component of the CIN Resource manual/package
- All accredited Clinical Initiatives Nurses must practice within this scope

TABLE OF CONTENTS

1 Introduction

Children with vomiting and dehydration can often be successfully managed with oral fluids. Utilising appropriate oral rehydration solution (ORS), clinical assessment, monitoring and re-evaluation, this method can be effective for children with vomiting in the Emergency Department (ED). It may potentially reduce length of stay, improve ED efficiency [(4)] and enhance patient and family experience while in the ED. [(5)]

Purpose/Scope

This document provides guidance for the ED Clinical Initiatives Nurse (CIN) and/or Triage nurse to initiate oral rehydration for appropriate children within the extended skills Scope of Practice for the Clinical Initiative Nurse (CIN). The CIN will have undertaken specific education and supervision to be accredited for this extended skill.

This guideline aims to:

- Ensure children who present to the ED with vomiting, +/- diarrhoea and who meet inclusion criteria, are considered for a trial of oral fluids prior to medical assessment.
- Utilise waiting times effectively and commence oral rehydration treatment where appropriate in those children with vomiting, with or without diarrhoea, at the time of triage or whilst waiting to be seen.
- Educate and demonstrate to parents/carers the purpose and technique of commencing oral rehydration in the waiting room prior to medical assessment and to facilitate documentation of their child's progress
- Maintain ongoing observation and assessment of those children receiving oral rehydration
- Decrease the number of children receiving nasogastric or intravenous fluid therapy resulting in a decreased need for admission and unnecessary intervention.

Criteria

The RN must undertake and document a physical assessment including baseline weight and observations. Urinary output and recent fluid intake should be reviewed including volume and type compared to usual.

Only patients triaged as a category **4** or **5** are suitable candidates for this intervention and allocated to a waiting zone. Inclusion criteria also include:-

- The patient has vomiting - with or without diarrhoea
- The child has some signs of dehydration consistent with mild dehydration (see table below)
- 6 months of age or older

Exclusion Criteria

Although vomiting may precede diarrhoea in the first 24-48 hours of gastroenteritis, other signs and symptoms must be considered in a vomiting child, including but not limited to:-

- abdominal distension
- bilious (green) vomiting
- blood in vomitus or stool
- severe abdominal pain or guarding
- previous history of gastro-intestinal pathology or surgery
- complex medical history (e.g. renal or cardiac disease)
- moderate to severe headache
- < 6 months old
- poor growth
- respiratory distress (pneumonia, bronchiolitis, asthma)
- moderate tachycardia or hypotension

In addition to gastroenteritis there may be other causes of vomiting including but not limited to:-

- Obstruction e.g. intussusception, volvulus
- Infection e.g. pneumonia, appendicitis, meningitis, urinary tract infection
- Raised intracranial pressure e.g. brain tumour
- Metabolic disease e.g. diabetes.

Children presenting with exclusion criteria are likely to be triaged for urgent medical assessment as a category 3 or higher.

Do NOT attempt to orally rehydrate a child with any of the above exclusion criteria.

Signs and Symptoms of Dehydration [1]:

Description of dehydration	Dehydration (% of Body Weight)	Signs and Symptoms
No clinical signs of dehydration		Mildly reduced urine output Mild thirst No physical signs
Mild	3%	Reduced urine output Thirst Dry lips and/or mucous membranes Slightly reduced activity levels Mild tachycardia
Moderate	5%	Dry mucous membranes Tachycardia Abnormal respiratory pattern Lethargy Reduced skin turgor Sunken eyes
Severe	10%	Above signs Poor Perfusion -,*mottled, cool limbs/slow capillary refill/altered consciousness* Shock - *thready peripheral pulses with marked tachycardia and other signs of poor perfusion stated above*

Responsibilities

Children commenced on a trial of oral fluids are to have ongoing observations and assessment at least hourly. Assessment must be documented in the clinical record.

The Clinical Initiative Nurse is responsible for the care and ongoing assessment of the child in the waiting room. If a CIN is not available, an identified RN should be assigned to this role.

2 Procedure

1. **Note: prior to initiation of oral rehydration**. If a child has recently vomited in transit or upon arrival they may benefit from a brief period of rest and recovery (15 to 30 minutes) prior to commencing a trial of oral rehydration.
2. Explain to parents/carers the reason for a trial of oral fluids
3. Supply the parent/carer with an appropriate solution/fluid, medicine cup and/or syringe, vomit bag, 'Parent/Carer Administration of Oral Fluid (Paediatric)' form (SMR120015), pen, as well as instructions on completion of the form. The importance of documenting the child's progress should be discussed with the parent/carer. This form should be filed in the patient record.
4. The child should be offered 0.5ml/kg every 5 minutes [(1)] and documented on the form. Although the child may be thirsty, explain that giving frequent small amounts of fluid is often more successful than larger amounts taken less often.
5. Inform parent/carer that the CIN will review their child and the progress of the trial of fluids. Achieving successful rehydration demands constant attention and persistence usually by the parents/carers.
6. Instruct parents to ask a nurse to review their child if more unwell, refusing fluids or continuing to vomit.
7. Topical anaesthetic cream where relevant to age and product recommendations for use (e.g. LMX4®, EMLA®, AnGel ®) may be applied to those children with vomiting and/or diarrhoea attempting oral rehydration in the waiting room if:
    - signs of dehydration are present i.e. mild or mild-moderate dehydration
    - repeated vomiting and/or frequent diarrhoea

8. Parents/carers should be provided with a SCHN factsheet on gastroenteritis if applicable.

Breastfed infants should continue to be offered small frequent breastfeeds

If at any time the CIN feels the patient needs urgent medical review they should be up-triage or escalate care as per local protocols.

3 Documentation

Oral rehydration is an ED Nurse Protocol in the Electronic Medical Record. If oral rehydration is initiated by the CIN/Triage nurse it must be documented by firing the ED "Approved Protocol" icon. Ongoing assessment of the child, including vital signs, and care should be documented on the BTF form in the patient's electronic medical record at least hourly.

Other documentation includes completion of the Trial of Fluids form by the parents/carers.

4 Oral Rehydration Fluids (ORS)

- Babies who are breastfed should receive small frequent breast feeds, to ensure they are slowly rehydrated. This may also be supplemented with ORS as required.[1]
- ORS such as Hydralyte®, Gastrolyte® or Pedialyte® should be used within the ED. They can be used in liquid or frozen form. If a child is refusing the above options or ORS is unavailable the nurse may give the child a dilution of one part lemonade or apple juice in 4 parts water [1, 2]. These should only be used if there are no clinical signs of dehydration. [1]
- Sports drinks, Lucozade ®, low calorie and diet drinks should not be used as a rehydration fluid as they do not contain the recommended levels of electrolytes [1]

5 Medication

- Anti-motility and anti-diarrhoeal medications should not be used in infants and children with gastroenteritis [1]
- Ondansetron may be considered to reduce nausea and vomiting in children and infants over 6 months who are undergoing a trial of fluid. [1, 3] However these must only be prescribed by an authorised prescriber (Medical Officer/Nurse Practitioner) after medical assessment.

6 Outcomes

Children with vomiting +/- diarrhoea who are mildly dehydrated will commence a trial of oral rehydration in a timely manner.

References

1. Paediatric Improvement Collaborative, Clinical Practice Guideline on Gastroenteritis, [Internet, last updated December 2020; cited 23/06/2021 Available from https://www.rch.org.au/clinicalguide/guideline_index/Gastroenteritis/
2. Freedman S, Willan A, Boutis, S, Schuh, S. Effect of Dilute Apple Juice and Preferred Fluids vs Electrolyte Maintenance Solution on Treatment Failure among Children with Mild Gastroenteritis: A randomized Clinical Trail. JAMA, 2016: 315(18)
3. Freedman S, Ali, S, Oleszczuk S, Hartling L. Treatment of acute gastroenteritis in children's: an overview of systemic reviews of interventions commonly used in developed countries. Evidence Based Child Health, 2013: 8(4)
4. Carson, RA, Mudd, SS, Madati, J. Evaluation of a Nurse-Inititated Acute Gastroenteritis Pathway in the Pediatric Emergency Department, Journal of Emergency Nursing, 2017: 43 (5)
5. Bowen, M. Gray, B. Durbin, J. Roohr, K. Orfe, T and Jones, V. A nurse-driven protocol for oral rehydration therapy in mildly dehydrated pediatric patients, Nursing Critical Care, 2018, 13 (1)

Appendix 1: Parent/carer administration of oral fluid (Paediatric) form

NSW GOVERNMENT Health

Facility:

SMR120015

PARENT / CARER ADMINISTRATION OF ORAL FLUID (PAEDIATRIC)

FAMILY NAME | MRN

GIVEN NAME | ☐ MALE ☐ FEMALE

D.O.B. _____/_____/_____ | M.O.

ADDRESS

LOCATION / WARD

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

Oral fluids for your child with dehydration (e.g. from gastroenteritis)

1. Small and frequent breastfeeds **OR**
2. Oral rehydration solution (ORS) e.g. gastrolyte or hydralyte (fluid or ice block) **OR**
3. Dilute juice (only if oral rehydration solution is refused) - 1 part apple juice to 4 parts water.

Your child's weight is: kg (nurse to complete)

Your child should drink ..... mL every 5 minutes (0.5 mL / kg) (nurse to complete)

Notes: For breastfeeding babies please write length of time spent breastfeeding (i.e. number of minutes).
For infants and children, giving frequent small amount of fluids is often more successful than larger amounts taken less often, even if the child is thirsty.

√ Use the measuring cup or orange syringe to measure the fluid (One Hydralyte® iceblock = 60 mL)

√ Give the fluid to your child to drink with an orange syringe, teaspoon, cup or bottle

Children should be reviewed by a doctor or nurse after an hour or earlier if parent/ carer is concerned (e.g. blood in stools or 'coffee ground' brown colour vomit)

Every 5 minutes write down how much your child drinks, and if they toilet or vomit

	IN	IN	OUT	OUT	OUT
Date/ Time __/__/__	**Type** of fluid your child **drinks** (e.g. breast, milk, diluted juice, hydralyte)	**Amount** your child **drinks** (mL or minutes breastfeeding)	Tick if your child **vomits**	Tick if your child passes **urine** (toilet or wet nappy)	Tick if your child has **diarrhoea**
YOUR CHILD SHOULD NOW BE REVIEWED BY A NURSE OR DOCTOR					
Totals					

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PARENT / CARER ADMINISTRATION OF ORAL FLUID (PAEDIATRIC) SMR120.015

NH700044 180215

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Page 1 of 2

Example Only

NSW GOVERNMENT Health

Facility:

FAMILY NAME	MRN
GIVEN NAME	☐ MALE ☐ FEMALE
D.O.B. _____/_____/_____	M.O.
ADDRESS	
LOCATION / WARD	
COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE	

PARENT / CARER ADMINISTRATION OF ORAL FLUID (PAEDIATRIC)

Every 5 minutes write down how much your child drinks, and if they toilet

	IN	IN	OUT	OUT	OUT
Date/ Time __/__/__	**Type** of fluid your child **drinks** (e.g. breast, milk, diluted juice, hydralyte)	**Amount** your child **drinks** (mL or minutes breastfeeding)	Tick if your child **vomits**	Tick if your child passes **urine** (toilet or wet nappy)	Tick if your child has **diarrhoea**
YOUR CHILD SHOULD NOW BE REVIEWED BY A NURSE OR DOCTOR					
Totals					

Fact sheets on common childhood conditions such as gastroenteritis, fever etc. can be accessed via the Sydney Children's Hospitals Network website under parents and carers, or the Kaleidoscope website under health fact sheets or ask your nurse.

http://www.schn.health.nsw.gov.au/parents-and-carers/fact-sheets
http://www.kaleidoscope.org.au/site/fact-sheets

References:
Gastroenteritis Factsheet (2014) The Children's Hospital at Westmead, Sydney Children's Hospital, Randwick and Kaleidoscope Children, Young People and Families. ***http://www.schn.health.nsw.gov.au/files/factsheets/gastroenteritis_in_children-en.pdf***

Infants and Children - Management of Acute Gastroenteritis - Fourth Edition (GL2014_024)

Page 2 of 2

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