GASTROENTERITIS: ACUTE MANAGEMENT

PRACTICE GUIDELINE ©

DOCUMENT SUMMARY/KEY POINTS

NSW Paediatric Improvement Collaborative (PIC) guideline

Gastroenteritis

https://www.rch.org.au/clinicalguide/guideline_index/Gastroenteritis/

- *The above linked document is Paediatric Improvement Collaborative (PIC) guideline.*
- The Guideline reflects what is currently regarded as a safe and appropriate approach to the management of acute gastroenteritis in infants and children. This document should be used as a guide, rather than as a complete authoritative statement of procedures to be followed: It does not replace the need for the application of clinical judgement to each individual presentation.

Related Information

- **SCHN Guidelines:**
  - Between the Flags - Clinical Emergency Response System (CERS) Procedure
  - Infection Prevention and Control - Isolation and Transmission Based Precautions Guideline
  - Enteral Feeding Tubes and the administration of Enteral Nutrition
  - Hypoglycaemia Management for Non-Diabetic Patients
  - Intravenous Fluid and Electrolyte Therapy

SCHN Contact: Department Head, Emergency Department SCH or CHW.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
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Team Leader:	Staff Specialist	**Area/Dept:** Emergency Dept SCH & CHW

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Gastroenteritis Algorithm

Red Flag Features

- Age under 6 months
- Bilious vomiting
- Past GI / Surgical history (eg short gut, Hirschprung's, ileostomy)
- Complex medical history (eg renal, cardiac disease)
- Pallor, irritability, altered conscious state, decreased activity level
- Signs of shock
- Focal abdominal tenderness, guarding, distension, absent or high pitched bowel sounds
- Significant headache
- Prolonged illness

REVIEW BY ED SENIOR DOCTOR

Provisional diagnosis of gastroenteritis and no red flag features

(Although vomiting may precede diarrhoea in the first 24-48hrs of gastroenteritis, in a vomiting child without diarrhoea other causes must be considered)

Consider Sepsis in any child with shock

Sepsis pathway and early antibiotics

Severe Dehydration? Child Shocked?

YES

Oxygen
Vascular access
EUC, BGL* (+/- VBG, bedside ketones)
IV Fluid bolus
Frequent reassessment for ongoing signs of shock (repeat bolus if necessary)
Ongoing IV fluid management
ICU consult if ongoing shock and not improving
Admission under General Paediatrics

NO

Mild to Moderate dehydration Child not shocked

YES

Options:

1. If mild dehydration and tolerating oral fluids then suitable for discharge with education, fact sheet and follow up plan
2. Consider Ondansetron
3. Bedside BGL* (+/- ketones)
4. Diligent trial of oral fluid (10mL/kg/hr of oral rehydration solution)
5. Rapid nasogastric rehydration (Appendix 1)
6. Rapid intravenous rehydration (Appendix 2)
7. Standard intravenous rehydration
8. Standard NG rehydration

Discuss with ED senior. Admit under General Paediatrics (or Emergency Department Short Stay Unit - EDSSU at CHW) if not tolerating oral fluids and/or ongoing hydration concerns

*BGL
Hypoglycaemia = BGL < 3.0 if symptomatic or BGL < 2.6

Refer to Hypoglycaemia Management for Non-Diabetic

Discharge criteria

1. Diagnosis of gastroenteritis
2. Child is rehydrated or only mildly dehydrated
3. Gastrointestinal losses are not profuse
4. Child has passed urine in ED or within the last 4 hours
5. Child taking adequate amounts of oral fluid
6. Adequate plan for safety netting and follow up
7. Gastroenteritis fact sheet given

If a child does not meet these criteria then consider admission under General Paediatrics for ongoing management or if at CHW ED then consider admission to the ED SSU and use of criteria led discharge.

Appendix 1: Rapid Nasogastric (NG) Rehydration

- Refer to Enteral Feeding Tubes and the administration of Enteral Nutrition for NG insertion
- Oral rehydration solution (ORS) administered via NG can be as effective as IV rehydration.
- Ideally chose an ORS with a sodium concentration of 60mmol/L and appropriate carbohydrate content as this is the optimal concentration. Practically, Gastrolyte™ is no longer available and Hydralyte™ will be the main ORS used in the ED.
- Observations: ***(If abnormal escalate as per normal CERS process)***
    - Prior to commencing undertake and document a full set of observations including RR, HR, CRT, BP, temperature, mental state assessment.
    - During administration undertake and document observations hourly (1/24) including RR, HR, CRT and BP
- Taste is not an issue when using an NG tube
- Administer using a Kangaroo pump at 10mL/kg/hr for 4 hours
- Do not use NG rapid rehydration if:
    - The child has an ileus (check for bowel sounds)
    - There is reduced level of consciousness
    - The child is younger than 6 months old
    - There is a medical condition which increases the risk of fluid overload
- Laboratory blood tests are not required for rapid NG rehydration unless there is another clinical indication
- If the child does not tolerate NG rehydration then they will require IV rehydration

Appendix 2: Rapid Intravenous Rehydration

- Use **0.9% Sodium Chloride + 5% Glucose at 10mL/kg/hr for 4 hours**
- Check EUC and BGL (manage hypoglycaemia < 2.6 mmol/L or < 3.0 mmol/L if symptomatic as per Hypoglycaemia Management for Non-Diabetic Patients policy)
- Observations: ***(If abnormal escalate as per normal CERS process)***
    - Prior to commencing undertake and document a full set of observations including RR, HR, CRT, BP, temperature, mental state assessment.
    - During administration undertake and document observations hourly (1/24) including RR, HR, CRT and BP
- IV fluids must not be continued beyond the rapid rate beyond 4 hours
- Commence trial of oral fluids after 2 hours of IV rapid rehydration
- This advice on rapid rehydration only applies to those children with gastroenteritis and use of rapid rehydration in other populations must be discussed with the in charge ED Senior Medical Officer
- Do not use IV rapid rehydration if:
    - The child is younger than 6 months old
    - The child is severely dehydrated (10%) or shocked
    - The child has an altered level of consciousness
    - Serum sodium < 130 mmol/L or > 149 mmol/L

CHANGE SUMMARY

- Algorithm and links to other guidelines updated.
- Addition of appendix 1 and appendix 2.

READ ACKNOWLEDGEMENT

- All clinical staff in SCHN Emergency Departments should read and acknowledge they understand the contents of the Guideline.