

**ACUTE MANAGEMENT OF YOUNG CHILDREN AND INFANTS  
WITH GASTROENTERITIS**

*This PCP relates to*

**NSW Health PD**

***NSW PD2005\_238: Children and Infants with Gastroenteritis in Hospitals - Managing***

**PCP number**

***NSW PD2005\_238: PCP 3 Acute management of young children and infants with gastroenteritis***

Sites where PCP applies

Manning Hospital Emergency Department (ED)

Target audience

Clinicians in ED where infants and children present with vomiting and diarrhoea

Description

Provides evidence based practice guidelines for the treatment of infants and children with gastroenteritis

Subject

Management of gastroenteritis in children

Keywords

Management, gastroenteritis, children, infants

Replaces existing PCP

Document number and/or name of superseded document/s

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Hunter Area Emergency Services Policy 2/05 Acute Management of Young Children and Infants with Gastroenteritis

Related Legislation (including OHS legislation), Australian Standards, NSW Health Policy or Circular, other HNEH Documents, Professional Guidelines, Codes of Practice or Ethics:  
NSW Health Paediatric Clinical Practice Guidelines

Portfolio Executive Director Nigel Lyons responsible for Policy and PCP

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**Summary**

- This PCP is a clinical pathway in the assessment of the severity and management of gastroenteritis in infants and children.
- It advises that the treatment of children and infants with moderate and severe dehydration must be discussed with a paediatrician.
- Transfer to a level 5-6 paediatric unit must be considered for all presentations with severe dehydration
- PCP includes: Trial oral fluids form and fact sheet on gastroenteritis for parents

**Distribution:**

General Manager, DON, Paediatrician, NUM ED, ED Physician, Director of Medical Services CYP&FCN Stream Leaders

**Date PCP authorised:**

May 2007

**PCP authorised by:**

Professor Trish Davidson Clinical Leader CYP&FCN

**Date of Issue:**

May 2007

**PCP Review Due Date:**

May 2009

**TRIM Number:**

Pending

Hunter New England Area Health Service

**Manning Hospital**

**PAEDIATRIC GASTROENTERITIS MANAGEMENT**

Surname \_\_\_\_\_ Sex \_\_\_\_\_

Given Names \_\_\_\_\_

DOB \_\_\_\_\_ MRN \_\_\_\_\_

AFFIX PT LABEL HERE

**INITIAL ASSESSMENT:**

| Symptoms     | MILD                                      | MODERATE                                                        | SEVERE                                                            |
|--------------|-------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------|
| Thirst       | <input type="checkbox"/> Increased        | <input type="checkbox"/> Marked – may be too lethargic to drink | <input type="checkbox"/> Marked – may be too lethargic to drink   |
| Urine Output | <input type="checkbox"/> Reduced          | <input type="checkbox"/> Markedly reduced or absent             | <input type="checkbox"/> Markedly reduced or Absent               |
| Mucous       | <input type="checkbox"/> Dry              | <input type="checkbox"/> Dry                                    | <input type="checkbox"/> Dry                                      |
| Heart Rate   | <input type="checkbox"/> Mild tachycardia | <input type="checkbox"/> Tachycardia                            | <input type="checkbox"/> Tachycardia, Shock                       |
| Skin         | <input type="checkbox"/> Normal           | <input type="checkbox"/> Reduced turgor                         | <input type="checkbox"/> Reduced turgor, Poor perfusion, mottling |
| Eyes         | <input type="checkbox"/> Normal           | <input type="checkbox"/> Sunken                                 | <input type="checkbox"/> Sunken                                   |

|                |                               |                                   |                                 |
|----------------|-------------------------------|-----------------------------------|---------------------------------|
| Severity Score | <input type="checkbox"/> Mild | <input type="checkbox"/> Moderate | <input type="checkbox"/> Severe |
|----------------|-------------------------------|-----------------------------------|---------------------------------|

**NOTE: Consider alternative diagnosis if diarrhoea absent or minimal**

**MANAGEMENT** \*(See paediatric fluid regime over page)

| TREATMENT                        | MILD <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                     | MODERATE <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                           | SEVERE <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fluids</b>                    | <p><b>Oral</b><br/>1ml/kg every 10min of ORT eg Gastrolyte</p> <p>If <b>not</b> tolerating gastrolyte – 1 part apple juice to 4 parts water<br/>*Oral rehydration should be attempted for at least 1-2 hours.<br/>*Small vomits <b>do not</b> imply failure but persistent profuse vomiting or worsening dehydration does.<br/>*If not tolerating oral consider nasogastric rehydration (NG) NG Feeds use ORT</p> | <p><b>Oral if tolerated</b></p> <p>If oral not tolerated: Consider NG rehydration:<br/>For slow NG rehydration refer to calculation over page.<br/>* Rapid NG rehydration may be considered but <b>MUST</b> be discussed with the paediatrician prior to implementation. - Strict criteria applies – See over</p> <p><b>Paediatrician must be contacted prior to considering cannulation</b><br/>Pathology not required (unless pt commenced on IV therapy- (see below)</p> | <p><b>CONTACT PAEDIATRICIAN</b></p> <p><b>IV / Intraosseous resuscitation with initial 0.9% Sodium chloride 20 mL/kg over 10-20min. Rpt bolus 10-20 mL/kg until signs of shock reversed then:</b></p> <p><b>Consult with Paediatrician regarding ongoing fluid management</b></p>                                                                                                                                                                                      |
| <b>Blood + Urine Tests</b>       | Blood sugar level (dextrostix), U/A-specific gravity                                                                                                                                                                                                                                                                                                                                                              | Blood sugar level (dextrostix), U/A specific gravity.<br><br>Only if commencing IV therapy: formal BSL, UEC, +/- FBC Blood Culture and CRP if T>38.5°C                                                                                                                                                                                                                                                                                                                      | Blood sugar level (dextrostix), U/A specific gravity. Formal BSL, UEC, FBC, Blood Cultures and CRP if T > 38.5°C                                                                                                                                                                                                                                                                                                                                                       |
| <b>Weight</b>                    | Document @ Triage                                                                                                                                                                                                                                                                                                                                                                                                 | Daily weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Daily weight                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Observations</b>              | Hourly                                                                                                                                                                                                                                                                                                                                                                                                            | 30-60min                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Continuous                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Paediatrician Disposition</b> | <b>If not tolerating oral fluids</b><br>Parent Fact Sheet<br>Discharge if tolerating oral fluids<br>R/V advice-GP or return to ED if condition deteriorates                                                                                                                                                                                                                                                       | <b>To be notified promptly</b><br>Admit to ward if slow NG or IV.<br><b>Any child on fluid replacement therapy must be reviewed either by the Paediatrician or on call RMO within six (6) hours of commencing treatment.</b><br>Formal review must include physical + mental state, repeat electrolytes if IV therapy insitu and reassessment of fluid regime.<br><b>Onset of new symptoms eg drowsiness, headache, abdo pain demand urgent review</b><br>Parent fact sheet | <b>Notify immediately</b><br>Admit. Continue with monitoring<br><b>Any child on fluid replacement therapy must be reviewed either by the Paediatrician or on call RMO within six (6) hours of commencing treatment.</b><br>Formal review must include physical + mental state, repeat electrolytes if IV therapy insitu and reassessment of fluid regime.<br><b>Onset of new symptoms eg drowsiness, headache, abdo pain demand urgent review</b><br>Parent fact sheet |

- Antidiarrhoeal medication is **CONTRAINDICATED** in paediatric gastro enteritis
- In cases of severe vomiting consider a one off dose of Ondansetron 0.2mg/kg

DOCTOR: \_\_\_\_\_ SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

Hunter New England Area Health Service

Manning Hospital

**PAEDIATRIC FLUID MANAGEMENT**

Surname \_\_\_\_\_ Sex \_\_\_\_\_

Given Names \_\_\_\_\_

DOB \_\_\_\_\_ MRN \_\_\_\_\_

AFFIX PT LABEL HERE

Child's weight \_\_\_\_\_ kgs

**HOURLY FLUID REGIME ( NG, IV, IO )**

Note: For TKVO fluids use maintenance calculation only

**1. Maintenance requirements**

|               |            |                    |        |                       |
|---------------|------------|--------------------|--------|-----------------------|
| First 0-10 kg | 4mLs/kg/hr | kgs X 4 mLs/hr =   | mLs/hr | 1. Total = ____ mLs/h |
| Next 11-20 kg | 2mLs/kg/hr | + kgs X 2 mLs/hr = | mLs/hr |                       |
| Next >20kg    | 1mL/kg/hr  | + kgs X 1 mLs/hr = | mLs/hr |                       |

**2. Replacement fluids – If dehydrated**

|                                      |                       |
|--------------------------------------|-----------------------|
| Child's weight (in kg/s) _____ x 2 = | 2. Total = ____ mLs/h |
|--------------------------------------|-----------------------|

**3. Total replacement required**

|                    |                             |
|--------------------|-----------------------------|
| Add 1 & 2 together | 3. Total 1 + 2 = ____ mLs/h |
|--------------------|-----------------------------|

**Recommended fluids**

|                      |                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Oral</b>          | Gastrolyte, hydralyte, diluted apple juice (1:4): Continue breastfeeding – small frequent feeds                                                                                            |
| <b>Nasogastric</b>   | Use oral rehydration fluid- gastrolyte preferred                                                                                                                                           |
| <b>Intravenous</b>   | <u>Maintenance and Replacement fluids</u><br>0.9% Sodium chloride + 2.5% Glucose OR<br>0.45% Sodium chloride+ 2.5% Glucose<br>*Note- Preference is for 0.9% Sodium chloride + 2.5% Glucose |
| <b>Resuscitation</b> | 0.9% Sodium chloride 20 mL/kg bolus repeat as necessary                                                                                                                                    |

- **KCL added only after serum K+ known and the child has passed urine (give 3 mmol/kg/day)**  
*Hyper/Hyponatraemia (Na>150 or <132mmol/L) Hyper/Hypokalaemia (K>5.5 or <3.3mmol/L)*
- *Discuss with Consultant*
- **Tolerating oral or nasogastric fluid** is defined as the majority of fluid staying down. Small vomits **do not** = failure, but persistent profuse vomiting does.
- **Oral rehydration** should be attempted for at least 1-2 hrs before considering other methods, unless there is rapid clinical deterioration.
- **Medications:** Anti-diarrhoeal medication is **CONTRAINDICATED** in children, however a one off dose of Ondansetron 0.2mg/kg may be considered in cases of severe vomiting

**CRITERIA FOR RAPID NASOGASTRIC REHYDRATION**

Rapid Nasogastric tube rehydration must be discussed with the Paediatrician prior to commencement. The following criteria must be met.

**ALERT:** Do not use rapid NG rehydration in the following situations

- < 6 mths
- Severely dehydrated or shocked
- Altered level of consciousness
- The serum sodium if known < 130 mmol or > 149 mmol

**Regime:**

Give 10 mL/kg/h of gastrolyte over 4 hours via a kangaroo pump **then cease infusion.**

After 4 hours of therapy the child must be re-examined by a medical officer and a trial of oral fluids commenced.

**Please circle**

Oral/nasogastric/IV therapy commenced at: \_\_\_\_\_ Infusion rate \_\_\_\_\_ mLs/h

Medical review required at \_\_\_\_\_