WOMEN'S HEALTH AND PAEDIATRICS

PAEDIATRIC DEPT

DEHYDRATION GUIDELINE

Amendments			
Date	Page(s)	Comments	Approved by
October 2013	New Guideline		
March 2018		Whole document review – no changes	Paediatric Guideline Group

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In Consultation with:

Ratified by: Paediatric Guidelines Group

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Target Audience: Doctors, nurses and support staff working in Paediatrics

Impact Assessment Carried Out By:

Comment on this Document to: Dr. Shailini Bahl, Consultant Paediatrician

Primary cause of dehydration diarrhoea +/- vomiting.

Approximately 10%Children < 5yrs present with gastroenteritis each year

Diagnosis

History - sudden change in stool consistency to loose or watery stools and/or sudden onset of vomiting

- History of contact
- Exposure to known source of infection (contaminated food or water)
- Recent travel abroad

Consider alternative diagnoses if following are present

- Fever (38° or more in children less than 3 months/ 39° c or more in children > 3 months)
- Shortness of breath / tachypnoea
- Altered consciousness state
- Neck stiffness
- Bulging fontanelle in infants
- Non blanching rash
- Blood and/or mucus in stool
- Severe or localized abdominal pain
- Abdominal distension or rebound tenderness.
- Bilious vomit

Assessment of Dehydration (Fig 1)

Suspect hypernatraemic dehydration if child has

- Jittery movements
- Increased muscle tone
- Hyperreflexia
- Convulsions
- Drowsiness or coma.

Figure 1

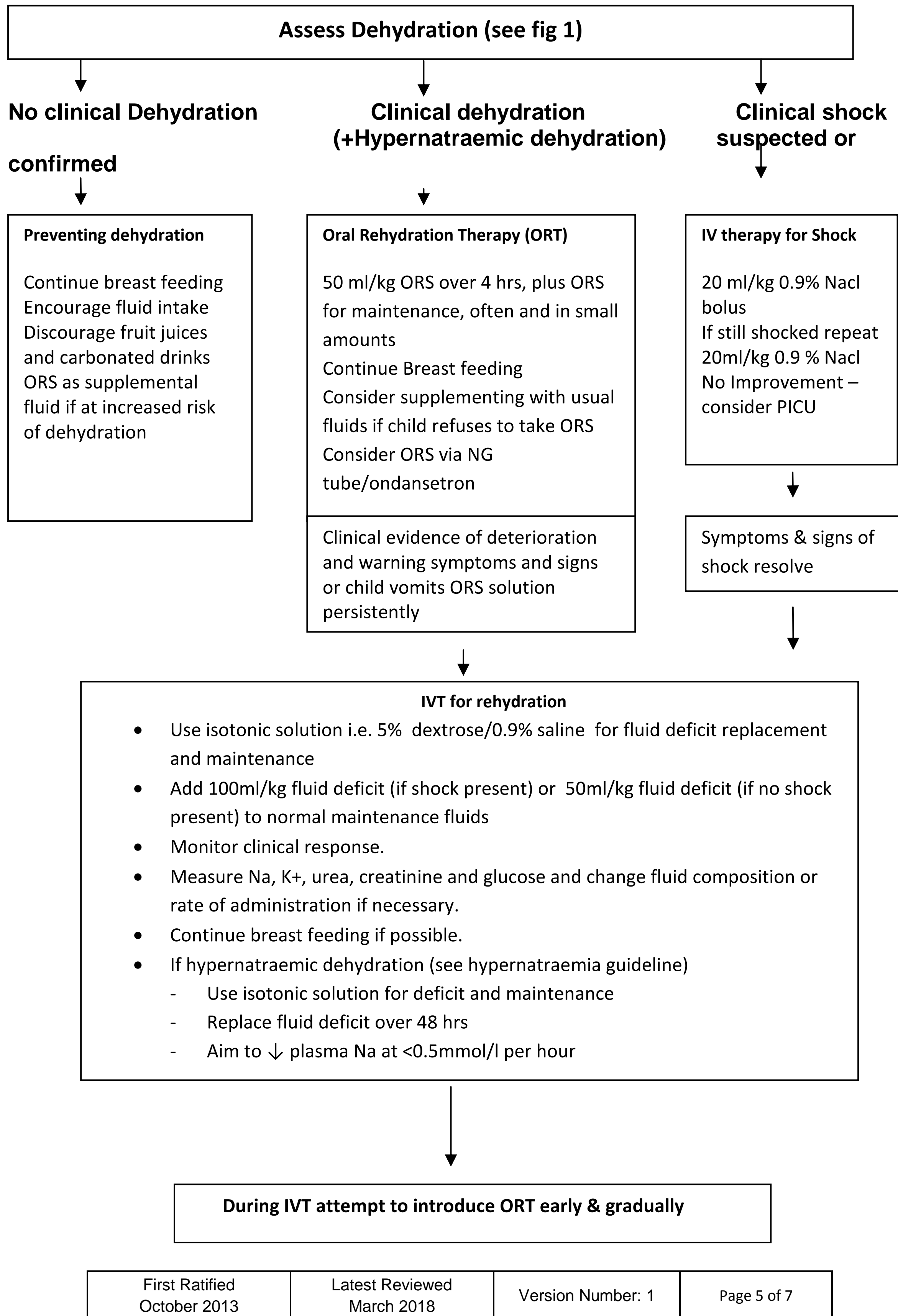
Severity of dehydration			
	No dehydration	**Clinical dehydration**	**Clinical Shock**
Symptoms	Appears Well	Unwell or deteriorating *	-
	Alert & Responsive	Altered responsiveness (irritable, lethargic) *	↓ consciousness
	Normal urine output	↓Urine output	-
	Skin colour unchanged	Skin colour unchanged	Pale/mottled skin
	Warm extremities	Warm extremities	Cold extremities
Signs	Alert & responsive	Altered responsiveness *	↓Consciousness
	Skin colour unchanged	Skin colour unchanged	Pale/mottled skin
	Warm extremities	Warm extremities	Cold extremities
	Moist mucus membrane	Dry mucus membranes	-
	Eyes not sunken	Sunken eyes *	-
	Normal Heart rate	Tachycardia *	Tachycardia
	Normal breathing pattern	Tachypnoea *	Tachypnoea
	Normal peripheral pulses	Normal peripheral pulses	Weak peripheral pulses
	Normal CRT	Normal CRT	↑CRT
	Normal Skin turgor	↓ Skin turgor *	
	Normal B.P	Normal B.P	Hypotension

*** Warning symptoms/signs for increased risk of progression to shock**

Laboratory investigations

- Do not routinely perform blood tests
- Measure plasma Na,K+, urea, creatinine, blood gas, and glucose if
  - IV fluid therapy is needed
  - Symptoms and /or signs that suggest hypernatraemia.
- Send stool for MCS
  - Suspected septicaemia
  - Blood and or/mucus in stool
  - Child is immunocompromised
- Consider sending stool for MCS
  - History of recent travel abroad
  - Diarrhoea not improved by 7 days
  - Diagnosis in doubt

Fluid Management



Fluid management after rehydration

- encourage breastfeeding and other milk feeds
- encourage fluid intake
- ***In children at increased risk of dehydration recurring, consider giving 5 ml/kg of ORS solution after each large watery stool. Restart oral rehydration therapy if dehydration recurs after rehydration.***

Nutritional Management

During rehydration therapy:

- continue breastfeeding
- do not give solid foods
- In children use ORS solution; however, consider supplementation with the child's usual fluids if they consistently refuse ORS solution and are not severely dehydrated.

After rehydration:

- give full-strength milk straight away
- reintroduce the child's usual solid food
- Avoid giving fruit juices and carbonated drinks until the diarrhoea has stopped.

Maintenance fluids

100ml/kg/24hrs for 1st 10kg body weight

50ml/kg/24hrs for 2nd 10kg body weight

20 ml/kg/24hr for remaining kg of body weight

Consider iv Potassium supplementation when plasma Potassium is known

(150ml/kg/24hrs if < 28 days old) – follow neonatal guideline

<28 days old use 10% dextrose with Sodium and Potassium added

Antibiotic therapy

Do not routinely give antibiotics to children with gastroenteritis.

Give antibiotic treatment to all children:

- with suspected or confirmed septicaemia
- with extra-intestinal spread of bacterial infection

- with salmonella gastroenteritis (younger than 6 months, malnourished, immunocompromised)
- with *Clostridium difficile*-associated pseudomembranous enterocolitis, giardiasis, dysenteric shigellosis, dysenteric amoebiasis or cholera.

Antiemetics

Consider giving ondansetron 4 mg PO (age 1-12 yrs)

Information and advice for parents and carers

See information leaflet

NICE Clinical guideline – Diarrhoea and Vomiting in children (2009)

APLS 2012

Archives of Disease in Childhood Aug 2001