

# PAEDIATRIC PARENTERAL FLUID THERAPY ( 1 month – 16 yrs )

## Initial management guideline

Sept 2007

### Monitoring & observations essential

#### ALL CHILDREN

Admission Weight, U&E (unless child is well & for elective surgery)

**12 Hourly** – Assess In / Output, plasma glucose

**Daily** – Clinical reassessment. U&E (more often if abnormal; 4-6 hourly if  $\text{Na}^+ < 130$  mmol/L).

#### ILL CHILDREN

May need:

**Hourly** – HR, RR, BP, GCS. Fluid In/ Output (urine osmolarity if volume cannot be assessed)

**2-4 hourly** – glucose, U&E, +/- blood gas.

**Daily** – weight if possible

#### Each shift

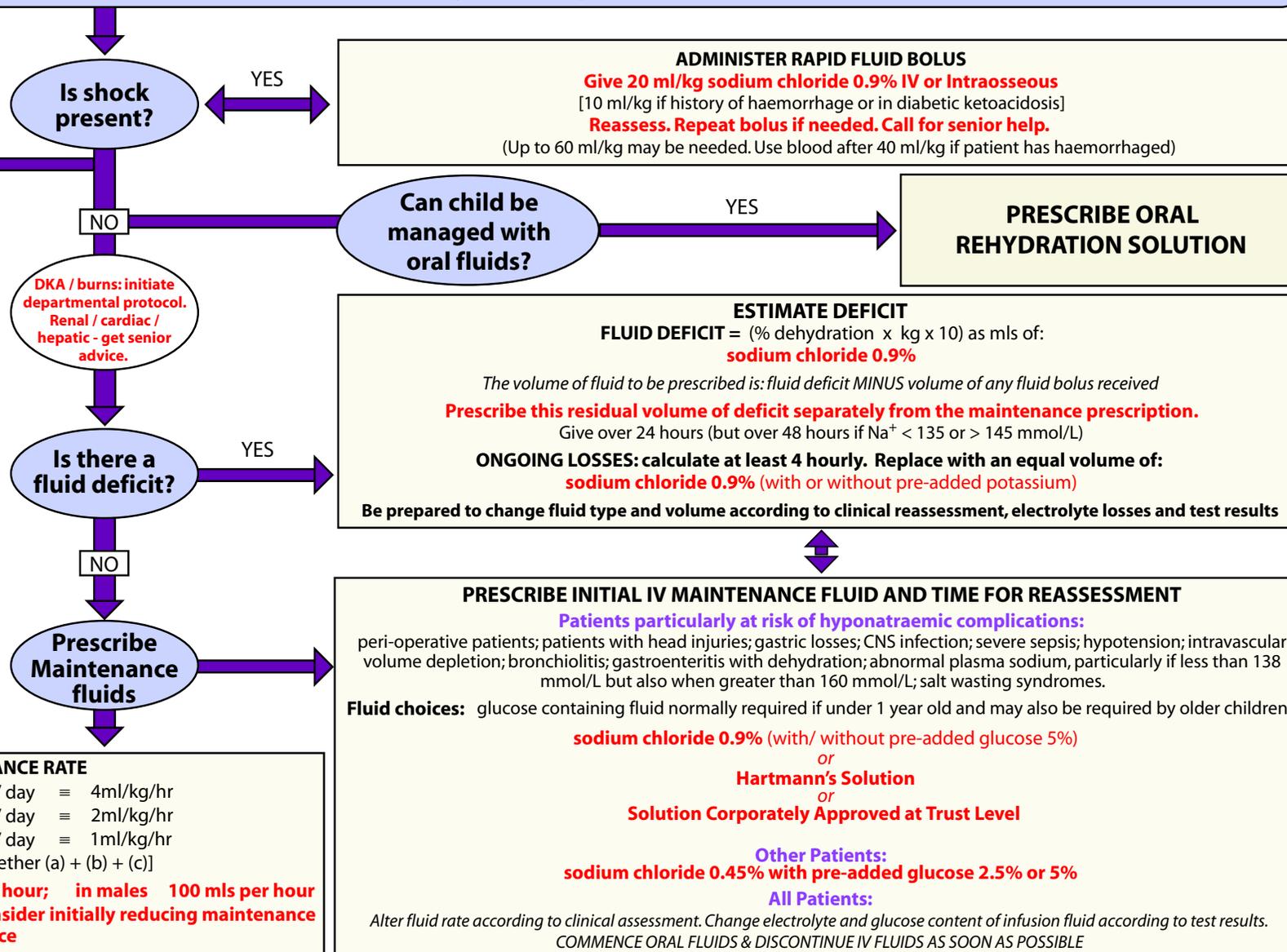
Handover and review of fluid management plan.

**If plasma  $\text{Na}^+ < 130$  mmol/L or  $> 160$  mmol/L or plasma  $\text{Na}^+$  changes  $> 5$  mmol/L in 24 hours ask for senior advice**

#### CALCULATION OF 100% MAINTENANCE RATE

- (a) for first 10 kg: 100 ml/kg/ day  $\equiv$  4ml/kg/hr
  - (b) for second 10 kg: 50 ml/kg/ day  $\equiv$  2ml/kg/hr
  - (c) for each kg over 20 kg: 20 ml/kg/ day  $\equiv$  1ml/kg/hr
- [for 100% daily maintenance add together (a) + (b) + (c)]

**MAXIMUM: in females 80 mls per hour; in males 100 mls per hour**  
**If risk of hyponatraemia is high consider initially reducing maintenance volume to two thirds of maintenance**



**Hypokalaemia (< 3.5 mmol/L):** Check for initial deficit. Maintenance up to 40 mmol/L IV potassium usually needed after 24 hrs using pre-prepared potassium infusions as far as possible. Consult Trust Policy on IV strong potassium.

**Oral intake and Medications:** volumes of intake, medications & drug infusions must be considered in the fluid prescription.

**Hypoglycaemia (< 3 mmol/L).** **Medical Emergency: give 5 ml/kg bolus of glucose 10%.** Review maintenance fluid, consult with senior and recheck level after 15-30 mins. **INTRA-OPERATIVE PATIENTS:** consider monitoring plasma glucose.

**Symptomatic Hyponatraemia:** check U&E if patient develops nausea, vomiting, headache, irritability, altered level of consciousness, seizures or apnoea. **This is a Medical Emergency and must be corrected.**

**Commence infusion of sodium chloride 2.7% at 2 ml/kg/hour initially and get senior advice immediately.**