Daily Fluid Balance & Prescription Chart

Write in CAPITAL LETTERS or use addressograph

Surname: _____

First names: _____

Consultant: _____ Ward: _____

Hospital no: _____ DOB: _____

Health and Care no: _____

Check identity

Hospital _____

Ward _____

Date _____

June 2014

Special Instructions:

For Hourly, Cumulative fluid recording today **Yes** ☐

Adult

From their 16th birthday

FLUID INPUT (ml)

FLUID OUTPUT (ml)

	ORAL FLUID				INTRAVENOUS FLUID & MEDICINES* *Include volume of infused medicines									
	ORAL		ENTERAL		No.1 Site		No.2 Site		No.3 Site		No.4 Site		Hourly Amount IN	Grand Total IN
	Fluid Type		Fluid Type		Fluid Type		Fluid Type		Fluid Type		Fluid Type			
	Amount	Total	Amount	Total	Amount	Total	Amount	Total	Amount	Total	Amount	Total		
08.00														
09.00														
10.00														
11.00														
12.00														
13.00														
14.00														
15.00														
16.00														
17.00														
18.00														
19.00														
20.00														
21.00														
22.00														
23.00														
24.00														
01.00														
02.00														
03.00														
04.00														
05.00														
06.00														
07.00														

URINE		BOWEL						COMMENTS		Hourly Amount OUT	Grand Total OUT	**Overall Balance**	Initials
Amount	Total	Amount	Total	Amount	Total	Amount	Total	Amount	Total				

ADULT

Write in CAPITAL LETTERS or use addressograph

Surname: _____

First names: _____

Consultant: _____ Ward: _____

Hospital no: _____ DOB: _____

Health and Care no: _____ Check identity

Recent Weight _____ kg

Weighed ☐ __/__/__

Estimated ☐

Yesterday's Date	Grand total in	Grand total out	Balance

Solution	Composition of common intravenous solutions (mmol/L)				
	[Na^+]	[Cl^-]	[Glucose]	[Lactate]	[K^+]
5% Glucose (Dextrose)	0	0	278	-	-
0.45% Sodium Chloride	77	77	0	-	-
0.45% Sodium Chloride + 5% Glucose (Dextrose)	77	77	278	-	-
0.9% Sodium Chloride	154	154	0	-	-
Compound Sodium Lactate - Hartmann's solution	131	111	0	29	5
Plasma substitutes: gelatins, etherified starches	140 - 154	118 - 154	0	0 - 30	0 - 5
Plasma	135 - 145	95 - 108	3.5 - 7.0	0.4 - 2.2	3.5 - 5.0

FLUID PRESCRIPTION ADVICE FOR ADULTS*

Fluid therapy should involve the consideration of:-

- **RESUSCITATION = B** Fluid bolus volume for hypovolaemic shock.
- **ROUTINE MAINTENANCE = M** Varies with clinical state.
- **REPLACEMENT** - Correction of any obvious fluid deficit **= D** and ongoing losses **= O** (e.g. vomiting, drainage, insensible, diarrhoea).
- **REDISTRIBUTION** - Patients with sepsis, severe renal, liver or cardiac disease, malnutrition, refeeding issues or post-operative.
- **REASSESSMENT** - include clinical assessments & glucose and U&E at least 24 hourly.
- Use the **oral** or **enteral** route whenever possible for giving fluids.
- Daily insensible loss = 500 - 800 ml.

Types of Fluid

Sodium chloride 0.9% provides the most important extracellular ions. It is indicated when **RESUSCITATION** by a fluid bolus is needed for shock and in sodium depletion. The administration of large volumes may give rise to sodium accumulation, oedema, and hyperchloraemic acidosis. *Compound sodium lactate (Hartmann's solution:* contains 5 mmol/L of potassium) can be used instead of isotonic sodium chloride solution during or after surgery, or in the initial management of the injured or wounded; it may reduce the risk of hyperchloraemic acidosis. *5% glucose (dextrose)* is an important source of free water for maintenance, but should be used with caution as excessive amounts may cause dangerous hyponatraemia, especially in the elderly.

ROUTINE MAINTENANCE fluids replace the normal fluid content of oral food intake, insensible loss & urinary output and are prescribed to provide optimal hydration in patients unable to fully use the oral or enteral route. Maintenance fluids should take into account the volume of fluid to deliver IV medications (antibiotics, analgesics). The total (oral, IV drugs and prescribed fluids) volume prescribed in healthy adults (without excess fluid losses) should be of the order of 30 ml/kg/day up to a maximum of 2.5L. Consider prescribing less fluid (e.g. 20-25 ml/kg/day) for patients who are older, frail, have renal impairment or cardiac failure. Consider using ideal body weight for obese patients.

Sodium requirement - 1 to 2 mmol/kg/day, so it is rarely necessary to give more than 1 litre of sodium chloride 0.9% or Hartmann's solution per day for maintenance IV fluids. Antibiotic and analgesic infusions may already provide some of this.
Potassium requirement - 1 mmol/kg/day, adjusted according to the serum potassium.
Phosphate, Magnesium - monitor & correct.

Many patients have specific needs to cover **REPLACEMENT** and/or **REDISTRIBUTION** of fluid and electrolytes.

REPLACEMENT of deficits & on-going losses - prescription should reflect the electrolyte composition of the fluid being lost.
Gastric losses - replace volume for volume with sodium chloride 0.9% with added potassium as required.
Lower Gastrointestinal losses - replace with Hartmann's solution or, if extra potassium is needed, sodium chloride 0.9% with added potassium.

Infusion Rates		
mls	hrs	ml/hr
500	4	125
500	6	83
1000	4	250
1000	6	167
1000	8	125
1000	12	83
1000	24	42
2000	24	83

Some patients have problems of internal **REDISTRIBUTION** and may develop sodium and water excess (leading to oedema and weight gain) which frequently can occur in the context of a low intravascular volume (and associated low urine output). Prescribing appropriate IV fluids for patients with redistributive type problems is particularly difficult since too little leads to intravascular hypovolaemia, low blood pressure, poor urine output and poor tissue perfusion, whilst too much may promote more oedema. In these patient groups, formulae-based equations should be used with caution. Fluid restriction may be needed and should be guided by senior input and regular **REASSESSMENT.**

Senior help should always be sought for complex on-going fluid losses, when the balance between fluid overload and deficit is unclear, for complex redisribution issues and especially when patients have diminished organ reserve.

*Based on NICE CG174

Indications - all that apply: Fluid **B**olus volume, **D**eficit, **O**n-going loss volume, **M**aintenance, Drug **P**rescription

* Medicines must be recorded in Drug Kardex

** **Model name, Serial number.**

	Date	Time	Volume	Infusion Fluid/Type	Additives *	Rate ml/hour Range	Prescriber's Signature	Administered By	Checked By	Batch/Lot No. & Expiry Date	Pump Details **	Start Time	Finish Time	Volume given
				ⓐ										
				ⓑ										
				ⓒ										
				ⓓ										
				ⓔ										
				ⓕ										
				ⓖ										
				ⓗ										
				ⓘ										
				ⓙ										