The Association for Clinical Biochemistry & Laboratory Medicine

Better Science, Better Testing, Better Care

Summary of NICE Guidelines

Title	Intravenous fluid therapy in adults in hospital (NICE CG174)
NICE Reference	QS66
Date of Review:	November 2014
Date of Publication	August 2014
Summary of Guidance (Max 250 words	This quality standard covers the assessment and management of adults' intravenous (IV) fluid needs in hospital. Many adult hospital inpatients need IV fluid therapy to prevent or correct problems with their fluid and/or electrolyte status. Errors in prescribing IV fluids and electrolytes are particularly likely in emergency departments, acute admission units, and general medical and surgical wards rather than in operating theatres and critical care units. Standards of recording and monitoring IV fluid and electrolyte therapy may also be poor in these settings. Helpful to review these NICE guidelines with CG32 (Nutrition) and CG 169 (Acute Kidney Injury) **Statement 1**. Hospitals should have an intravenous (IV) fluids lead who has overall responsibility for developing the protocols, training, clinical governance, audit and review of IV fluid prescribing, and patient outcomes. They can be supported by a multi-disciplinary team to include dietetics, pharmacists and clinical biochemists. **Statement 2**. Adults receiving IV fluid therapy in hospital are cared for by healthcare professionals competent in assessing patients' fluid and electrolyte needs, prescribing and administering IV fluids, and monitoring patient response. **Statement 3.** Adults receiving IV fluid therapy in hospital have an IV fluid management plan, determined by and reviewed by an expert multi-disciplinary team, which includes the fluid and electrolyte prescription over the next 24 hours and arrangements for assessing patients and monitoring their plan. **Statement 4**. For adults who receive IV fluid therapy in hospital, clear incidents of fluid mismanagement are reported as critical incidents. **Statement 5**. Research still required in this field and with clinical audit, can provide further evidence of the effectiveness or otherwise of IV therapy in apporpriate patient group.

Consequence of fluid mismanagement	Identifying features	Time frame of identification
Hyponatraemia	• Serum sodium less than 130 mmol/l • No other likely cause of hyponatraemia identified	During IV fluid therapy or within 24 hours of stopping IV fluids
Hypernatraemia	• Serum sodium 155 mmol/l or more • Baseline sodium normal or low	During IV fluid therapy or within 24 hours of stopping IV fluids

		• IV fluid regimen included 0.9% sodium chloride • No other likely cause of hypernatraemia identified	
	Hyperkalaemia	• Serum potassium more than 5.5 mmol/l • No other obvious cause identified	During IV fluid therapy or within 24 hours of stopping IV fluids
	Hypokalaemia	• Serum potassium less than 3.0 mmol/l likely to be due to infusion of fluids without adequate potassium provision • No other obvious cause (for example, potassium-wasting diuretics, refeeding syndrome)	During IV fluid therapy or within 24 hours of stopping IV fluids
Impact on Lab (See below)	☐ Moderate		
Lab professionals to be made aware	☐ **Chemical Pathologist** ☐ **Clinical Scientist**		
Please detail the impact of this guideline (Max 150 words)	This quality standard is mainly directed at those involved in the administration and monitoring of patients on IV fluid therapy as appropriate and effective IV fluid therapy can be beneficial to patient outcomes. **Service providers** should ensure that systems are in place for monitoring IV therapy and reporting clear incidents of fluid mismanagement as critical incidents. **Healthcare professionals** who care for adults receiving IV fluid therapy in hospital should have required competency to assess patient requirements and responses to IV fluid therapy and report clear incidents of fluid mismanagement as critical incidents. **Commissioners** should ensure that they commission services for adults receiving IV fluid therapy in hospital from providers that report clear incidents of fluid mismanagement as critical incidents. This can be achieved by ensuring that providers share lessons learned from critical incident investigations. Thye should also ensure regular audit of IV fluid therapy use in different clinical settings against NICE CG174 and any internal protocols. Impact on the laboratory as a result of these guidelines would include ensuring appropriate turnaround times for reporting urea, creatinine and electrolyte results, and Clinical Scientist / Chemical Pathologist provision of advice / reflective testing, for additional tests pertinent to the identification of the consequences and monitoring of fluid therapy, eg.serum magnesium, chloride, calcium, phosphate, osmolality (urine/serum) and urine sodium.		

Impact on Lab

- **None**: This NICE guideline has no impact on the provision of laboratory services
- **Moderate**: This NICE guideline has information that is of relevance to our pathology service and may require review of our current service provision.
- **Important:** This NICE guideline is of direct relevance to our pathology service and will have a direct impact on one or more of the services that we currently offer.

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