

## Intravenous fluid therapy for adults in hospital

### Review questions

Chapter	Review questions	Outcomes
<b>Principles and protocols of intravenous fluid therapy</b>	What is the clinical and cost effectiveness of clinical algorithms or defined protocols for the assessment, monitoring and/or management of intravenous fluid and electrolyte requirement in hospitalised adult patients?	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in Intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications</li> <li>• Pulmonary oedema</li> </ul>
<b>Assessment and monitoring on intravenous fluid therapy</b>	What aspects of clinical assessment are required to assess, monitor and re-evaluate fluid and electrolyte status?	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
	In hospitalised patients receiving intravenous fluids, what is the clinical and cost effectiveness of measuring and recording serial body weight?	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury defined as an increase of 50% or more of serum creatinine from baseline</li> <li>• Respiratory complications including pulmonary oedema, respiratory failure, chest infection, mechanical ventilation</li> <li>• Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> <li>• Total volume of fluid received (if both groups receive the same type of fluid).</li> </ul>
	In hospitalised patients receiving intravenous fluids, what is the clinical and cost effectiveness of measuring and recording urine output in addition to recording standard parameters stated in NEWS to determine the need for intravenous fluid administration?	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury defined as an increase of 50% or more of serum creatinine from baseline</li> <li>• Respiratory complications including pulmonary oedema, respiratory failure, chest infection, mechanical ventilation</li> <li>• Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> <li>• Total volume of fluid received (if both groups receive the same type of fluid).</li> </ul>
	In hospitalised patients receiving	<ul style="list-style-type: none"> <li>• All-cause mortality</li> </ul>

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	intravenous fluids, what is the incidence and clinical significance of hyperchloraemia and hypochloraemia?	<ul style="list-style-type: none"> <li>• Length of stay in hospital and/or intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury (AKI) defined as an increase of 50% or more of serum creatinine from baseline level</li> <li>• Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> <li>• Hyperchloraemia</li> <li>• Hyperchloraemic acidosis</li> <li>• Hypochloraemia.</li> </ul>
<b>Intravenous fluid therapy for resuscitation</b>	What is the most clinically and cost effective intravenous fluid for fluid resuscitation of hospitalised patients?	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury defined as an increase of 50% or more in serum creatinine level from baseline</li> <li>• Respiratory complications including pulmonary oedema, respiratory failure, chest infection and mechanical ventilation</li> <li>• Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> </ul>
	<p>What is clinical and cost effectiveness of different volumes of intravenous fluid administration for fluid resuscitation?</p> <p>What are the most clinically and cost effective timing and rate of administration of intravenous fluids for fluid resuscitation?</p>	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury defined as an increase of 50% or more in serum creatinine level from baseline</li> <li>• Respiratory complications including pulmonary oedema, respiratory failure, chest infection, mechanical ventilation</li> <li>• Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> </ul>
<b>Intravenous fluid therapy for routine maintenance</b>	What is the most clinically and cost effective intravenous fluid for routine maintenance in hospitalised patients?	<ul style="list-style-type: none"> <li>• All-cause mortality within 30 days of hospitalisation</li> <li>• Length of stay in hospital</li> <li>• Length of stay in intensive care unit</li> <li>• Quality of life</li> <li>• Renal complications/Acute Kidney Injury defined as an increase of 50% or more in</li> </ul>

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		<p>serum creatinine level from baseline</p> <ul style="list-style-type: none"> <li>● Respiratory complications including pulmonary oedema , respiratory failure, chest infection, mechanical ventilation</li> <li>● Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> </ul>
	<p>What is clinical and cost effectiveness of different volumes of intravenous fluid administration for routine maintenance?</p> <p>What is the most clinically and cost effective timing and rate of administration of intravenous fluids for routine maintenance?</p>	<ul style="list-style-type: none"> <li>● All-cause mortality within 30 days of hospitalisation</li> <li>● Length of stay in hospital</li> <li>● Length of stay in intensive care unit</li> <li>● Quality of life</li> <li>● Renal complications/Acute Kidney Injury defined as an increase of 50% or more in serum creatinine level from baseline</li> <li>● Respiratory complications including pulmonary oedema, respiratory failure, chest infection and mechanical ventilation</li> <li>● Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> </ul>
<p><b>Intravenous fluid therapy for replacement and redistribution</b></p>	<p>What is the most clinically and cost effective intravenous fluid for replacement of abnormal ongoing losses in hospitalised patients?</p> <p>What is clinical and cost effectiveness of different volumes of intravenous fluid administration for replacement of abnormal ongoing losses?</p> <p>What is the most clinically and cost effective timing and rate of administration of intravenous fluids for replacement of abnormal ongoing losses?</p>	<ul style="list-style-type: none"> <li>● All-cause mortality within 30 days of hospitalisation</li> <li>● Length of stay in hospital</li> <li>● Length of stay in intensive care unit</li> <li>● Quality of life</li> <li>● Renal complications/Acute Kidney Injury defined as an increase of 50% or more in serum creatinine level from baseline</li> <li>● Respiratory complications including pulmonary oedema, respiratory failure, chest infection and mechanical ventilation</li> <li>● Morbidity – measured by SOFA (Sequential Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).</li> </ul>

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		Organ Failure Assessment) score and Multiple Organ Dysfunction Score (MODS).
<b>Training and education for management of intravenous fluid therapy</b>	What are the barriers faced by healthcare professionals in the effective prescription and monitoring of intravenous fluids in hospital settings?	<ul style="list-style-type: none"> <li data-bbox="852 371 1299 434">• Health care professionals' views and experiences.</li> </ul>