

## ESICM guidance for fluid therapy: IV fluid conservation in the ICU (because of reduced availability worldwide in Q4 2024)

November 14, 2024

### **Background:**






Baxter's North Cove IV fluid production site was affected by hurricane Helene on September 29<sup>th</sup> 2024. The production site was closed till last week and American hospitals are affected by severe IV fluid shortages. Intravenous fluids (including all types of fluids in 250/500/1000ml bags) are being exported from Europe to the USA to secure acute care. This has now resulted in IV fluid shortages in Europe. According to Baxter, supplies are expected to be restored to normal levels in January 2025. Other IV fluid suppliers are unable to compensate for the shortages.

The official warning from Baxter may not have reached all countries or healthcare professionals (yet). With this document, the ESICM aims to provide guidance for fluid therapy and fluid conservation to ICU healthcare professionals. We ask for your solidarity during these challenging times.


### *General note:*

*In case of acute or threatening shortage of iv fluids in your hospital, it is everybody's responsibility to manage the existing stock and reduce usage if possible.*

### IV FLUID CONSERVATION MEASURES

<b>Fluid management</b>	
<ul style="list-style-type: none"><li>• Consider fluid-restrictive strategies (under close monitoring and daily assessment)</li><li>• Optimize fluid management protocols (including regular change of bags, selection of the right volume, avoidance of spill and waste, extending the use of bags beyond 24h if possible/permitted)</li><li>• Promote oral hydration</li></ul>	
<b>Line/catheter management</b>	
<ul style="list-style-type: none"><li>• Review the practice of 'Keep vein open (KVO)' (i.e use of continuous fluid infusion to keep catheters patent). Assess the need for KVO orders and use the lowest flow rate. Consider catheter locks where appropriate.</li></ul>	
<b>Medication management</b>	
<ul style="list-style-type: none"><li>• Administer medications as injections instead of infusions if possible.</li><li>• Dilute drugs in lowest possible volume (ask your pharmacist for advice)</li><li>• Use oral medications where appropriate</li></ul>	
<b>Stock management</b>	
<ul style="list-style-type: none"><li>• Check whether expiry date of fluids has been extended (<a href="https://www.fda.gov/drugs/updates-2024-hurricane-season/hurricane-helene-baxters-manufacturing-recovery-north-carolina">https://www.fda.gov/drugs/updates-2024-hurricane-season/hurricane-helene-baxters-manufacturing-recovery-north-carolina</a>)</li></ul>	
<b>General management</b>	
<ul style="list-style-type: none"><li>• To be as effective as possible, it is recommended to set up a 'fluid team'. The team can be responsible for implementation of IV fluid conservation measures, communication (posters, intranet messages etc), continuous review of the actual results (audits) and regular feedback to the clinical teams.</li></ul>	

NB: in some countries, compounding (e.g. preparation by a specialized pharmacy) of IV fluid is possible. Check if this is possible in your country.

 **esicm**  
European Society of Intensive Care Medicine