

Incorporate ICU Fluid Stewardship Into Your Practice

This complimentary article from Hospital Pharmacist's Letter is being provided to readers of Prescriber's Letter, who may find its content relevant to their practice.

You can **improve fluid safety in the ICU**...since fluids are used inappropriately in up to 20% of patients.

Fluid stewardship aims to reduce harm by promoting judicious use during the “ROSE” phases...resuscitation or rescue, **o**ptimization, **s**tabilization, and **e**vacuation.

Review fluids as you do other meds...right fluid, patient, amount, etc.

Consider focusing first on the stabilization, or “maintenance fluid,” phase...a majority of interventions seem to occur here.

Try to stop fluids once patients are in this phase. Keep in mind, patients who are eating usually don't need maintenance fluids. And a patient's parenteral or enteral nutrition may meet fluid needs.

If you're continuing maintenance fluids, individualize goals...and give IV or enterally.

Think of 25 to 30 mL/kg/day as a starting point. But consider when needs may be lower...such as kidney disease or heart failure.

Also identify patients with significant “hidden” fluid intake, especially infusions...or piggybacks with at least 250 mL or given frequently (Q8H, Q6H, etc).

Add up hidden fluids and subtract them from maintenance needs.

For instance, a patient on vancomycin 1,500 mg every 8 hours may get 1,500 mL/day from vancomycin alone. If their fluid needs are 2 L/day, ensure other sources don't exceed 500 mL/day.

If hidden fluids exceed the patient's needs, stop IV fluids and enteral water...and adjust meds. For example, try to change an amiodarone drip to oral...or IV heparin to subcutaneous enoxaparin.

If appropriate, consider concentrating infusions (pressors, parenteral nutrition, etc)...or switching from piggyback to IV push for certain antibiotics, such as cefazolin or meropenem.

Reassess needs often. Follow trends in daily weights and fluid balance to help guide when to adjust or stop fluids.

When choosing a fluid, debate continues about whether balanced fluids (lactated Ringer's, etc) reduce kidney injury compared to normal saline. Weigh patient factors into your choice.

For example, if lactated Ringer's is your default, consider using normal saline instead to replace chloride from GI losses...or for its higher sodium content in traumatic brain injury.

See our IV Fluid Safety resource to compare products and for guidance on appropriate use of hypotonic and hypertonic fluids.

Key References:

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- J Pharm Pract. 2020 Dec;33(6):863-873
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- Ann Pharmacother. 2022 Apr 7. doi: 10.1177/10600280221084380

Cite this document as follows: Article, Incorporate ICU Fluid Stewardship Into Your Practice, Prescriber's Letter, August 2022

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-<https://rx.uga.edu/departments/academic/clinical-administrative-pharmacy/critical-care-collaborative/fluid-stewardship/> (8-1-22)

Prescriber's Letter. August 2022 No. 380816

Cite this document as follows: Article, Incorporate ICU Fluid Stewardship Into Your Practice, Prescriber's Letter, August 2022

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