Fluid warming across care areas:
Emergency care

Patients coming into the emergency department present a broad spectrum of illnesses and injuries. The ability to assess symptoms quickly and make lightning-fast decisions is critical. One area of particular focus should be the prevention of accidental hypothermia in the compromised patient.

Fighting hypothermia
U.S. emergency departments are exceedingly busy. The average time that patients spend in a hospital emergency department—from arrival to discharge—rose to four hours and seven minutes in 2009, an increase of 31 minutes since 2002. For states with small populations, that time escalates fast: Utah patients, for example, spend more than eight hours in the hospital for ED treatment.

Potential adverse effects of unwarmed blood
In the ED, more is not always better, especially when it comes to wait time. Research has shown that time spent waiting means more time for patients’ bodies to lose heat due to environmental exposure, drugs and substances in their systems, opening of body cavities, extreme age, impaired thermoregulatory control from illnesses, and injuries.

The human body seeks to maintain an average core body temperature near 37 °C. Without that constant temperature, metabolic functions can deteriorate quickly and often have especially negative repercussions for emergency patients—as their systems are already compromised.

Prevention of hypothermia in the compromised patient may lead to improved outcomes including:
- Less patient discomfort
- Reduced cardiac morbidity
- Improved wound healing and shorter hospital stays
- Lower tendency to bleed due to platelet dysfunction

Cold fluids lead to cold patients
Many patients in the ED will be administered cold intravenous fluids/blood as a part of their treatment, to reverse dehydration or compensate for massive blood loss. The administration of IV fluids is a major contributor to patient hypothermia in the ED. Just one liter of room-temperature fluid administered to a patient—whether under anesthesia or receiving fluids for a condition such as dehydration—would use at a minimum 17 kcal or

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24 percent of an adult’s normal heat-producing energy. This translates to colder patients at a time when patients are already at risk.7

**Foundation for effective patient recovery**

In the United States, 13 percent of ED visits result in hospital admission.8 Given that a significant percentage of patients will be assessed in the ED and then admitted to another care area of the hospital, it’s essential that patient warming precautions be taken early to prevent the emergence of hypothermia and other negative patient outcomes in the ED—and beyond. Additionally, ensuring that a patient feels warm from the beginning of a care experience can have an important impact on patient comfort and overall satisfaction with their hospital visit.3

**How enFlow® works**

The enFlow® is an IV fluid and blood warmer with accuracy, mobility, and speed. This makes it ideal for the ED. The warmer’s single-patient-use cartridge actually moves with the patient—providing a cost effective way to start the warming process early, increasing the likelihood of maintaining normothermia in the emergency setting and beyond.

With enFlow, the disposable cartridge attaches in-line to standard IV fluid/blood delivery sets at the start of an ED case. When it’s time to move the patient to the next area, the clinician simply removes the cartridge from the enFlow warming unit stationed by the patient’s bed in the ED, allowing the IV set in its entirety to be moved with the patient during transport.

Once the patient arrives at the next area of the hospital—be it the OR, ICU, or another department—the cartridge is simply inserted into a new warming unit in that area and the patient is back to receiving warmed fluids. Each enFlow cartridge can be used for up to 24 hours or to hospital time-limit protocols before change-out, which minimizes set-up and ongoing maintenance.

Continuous warming across your hospital—starting in the ED—can mean fewer hypothermia cases and patient complications.9

**Contact us**

To learn more about the enFlow IV fluid/blood warming system in the emergency department please contact Customer Service at 800.323.9088 or visit carefusion.com/VitalSigns.

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**References**