

# Intensive Care Units

**I**ntensive care units (ICUs) are sections in hospitals that contain specialized equipment and highly trained staff to treat patients who have a serious illness or injury. Patients may be admitted to the ICU from an emergency department or other hospital section, after surgery, or after transfer from another health care facility. The June 26, 2002, issue of *JAMA* includes an article about patients in intensive care units receiving mechanical ventilation.

## EQUIPMENT COMMONLY USED IN THE ICU

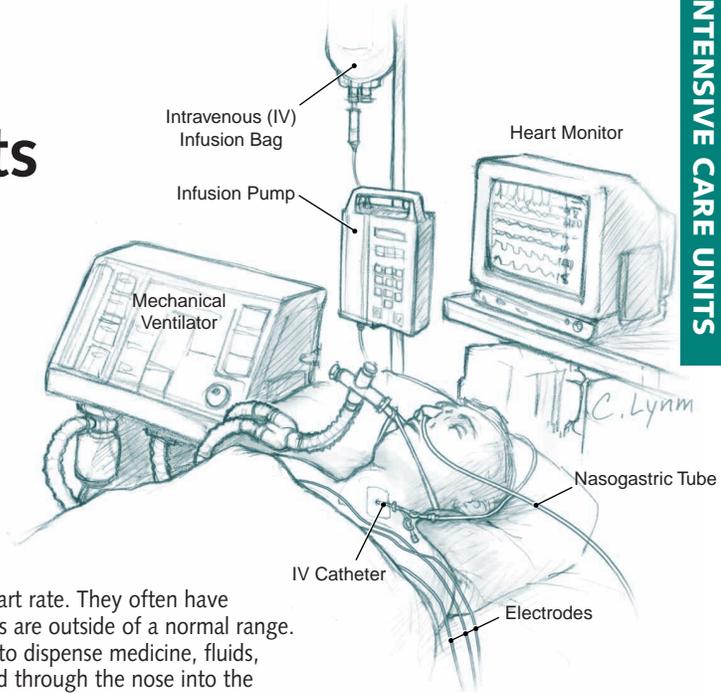
- **Monitors** measure body functions such as breathing and heart rate. They often have alarms that sound to alert the ICU staff when such functions are outside of a normal range.
- **Intravenous catheters** (tubes) are inserted in patients' veins to dispense medicine, fluids, and nutrition as needed. A **nasogastric tube** may be inserted through the nose into the stomach. **Urinary catheters** are used to drain urine from the bladder.
- **Mechanical ventilators** (also called **respirators**) are machines that help patients breathe through a tube that is inserted through the mouth or nose into the **trachea** (windpipe) and is connected to the ventilator.

## DISORDERS THAT MAY BE TREATED IN THE ICU

- **Acute respiratory distress syndrome (ARDS)** is sudden lung failure that often requires use of a ventilator. It is caused by other illnesses such as infections or serious injuries.
- **Asthma** involves obstruction of the airways that causes difficulty breathing, wheezing, chest tightness, and coughing.
- **Chronic obstructive pulmonary disease (COPD)** makes exhaling difficult. It is usually caused by smoking-related lung disorders such as emphysema and chronic bronchitis.
- **Pneumonia** is an infection of the lungs that may interfere with breathing.
- **Respiratory distress syndrome** can occur in infants whose lungs are underdeveloped, causing difficulty breathing.
- **Sepsis** is a very serious infection in the blood or tissues.
- **Trauma** involves injuries, such as from motor vehicle crashes, that often require surgery.

## STAFF IN THE ICU

- **Physicians:** Critical care doctors are trained in all aspects of the care of critically ill patients.
- **Nurses:** ICU nurses have specialized training in caring for critically ill patients and provide around-the-clock bedside care and monitoring.
- **Respiratory therapists:** Monitor patients' respiration (breathing) and use equipment, such as respirators, required to improve breathing.
- **Physical therapists:** Help patients maintain flexibility and muscle strength to prevent disability and speed recovery.
- **Nutritionists:** Assess the food and fluid needs of patients.
- **Social workers:** Help patients and families deal with various aspects of critical illness, including psychological and financial issues, and help with recovery after discharge from the hospital.
- **Pastoral care staff:** Provide spiritual and emotional support for patients and family members.



## FOR MORE INFORMATION

- American Lung Association  
212/315-8700  
[www.lungusa.org](http://www.lungusa.org)
- National Heart, Lung, and Blood Institute  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on *JAMA*'s Web site at [www.jama.com](http://www.jama.com). A Patient Page on mechanical ventilation was published in the November 8, 2000, issue.

Sources: American College of Chest Physicians, American Lung Association, National Heart, Lung, and Blood Institute

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