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Emergency Department Planning and Resource Guidelines

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The purpose of this policy is to provide an evidence-supported outline of the resources and accommodations necessary to meet the typical emergency medical care needs for patients and the community at large.

Emergency departments (EDs)* should possess the staff and resources necessary to evaluate all individuals presenting to the ED. The ED should have the capabilities to provide or arrange treatment necessary to stabilize patients who are found to have an emergency medical condition. Because of the unscheduled and episodic nature of health emergencies and acute illnesses, experienced and qualified physician, nursing, and ancillary personnel should be continuously available to meet those needs.

The ED also provides care to individuals whose health needs could potentially be addressed in an alternate, non-emergent settings, but for whom ED may represent the only accessible or timely entry point into the broader health care system. Additionally, based on current legal standards, as provided under the Emergency Medical Treatment and Labor Act (EMTALA), the ED is mandated to provide evaluation to any person who believes they have an emergency condition. Therefore, it is imperative that the ED remains appropriately equipped to serve this purpose.

The American College of Emergency Physicians (ACEP) believes that:

- Emergency medical care should be available to all members of the public.
- Access to appropriate emergency medical care should be unrestricted.
- A smooth continuum should exist amongst prehospital, emergency, and definitive or longitudinal care (inpatient and/or outpatient).
- Evaluation, management, and treatment of patients should be appropriate and expedient.
- Resources should exist in the ED to accommodate each patient from the time of arrival through evaluation, treatment, and disposition.
- The emergency physician should serve as the leader of the ED team.

* These guidelines are intended to apply to either hospital-based or free-standing emergency departments open 24 hours a day.

- This team may consist of nurse practitioners (NPs), physician assistants (PAs), emergency nurses, ED technicians, and other ancillary staff that make up the core components of the emergency medical care system. The ED personnel should establish effective working relationships with others who provide health care, and entities with whom they interact. These may include, but are not limited to, emergency medical services (EMS) professionals, ancillary hospital staff, other physicians, as well as other health care and social service resources.

I. Resources and Planning

A. Responsibilities and Public Expectations

1. The ED should be emergency physician led and staffed by qualified personnel with knowledge and skills sufficient to evaluate and manage those who seek emergency care. The EDs should be designed and equipped to facilitate this work.
2. Timely emergency care provided by an emergency physician and ED staff should be continuously available 24 hours per day, seven days per week, 365 days per year.
3. Patient evaluation and stabilization in the ED should be provided to everyone who presents for emergency care, consistent with EMTALA guidelines.
4. Consistent with applicable standards and regulations, the patient or applicable guarantor is financially responsible for the charges incurred in the course of emergency care.
5. The EDs should participate in an active public education program that details the intended scope of services provided at the facility.
6. The EDs should support existing EMS systems and provide medical direction where appropriate.

B. Minimum Standards

This section of the guidelines outlines elements of administration, staffing, design, and materials needed for the delivery of emergency care.

1. Leadership and Administration

- a. The ED should be organized and administered to meet the health care needs of its patient population.
- b. Operation of the ED should be guided by written policies and procedures.
- c. The ED should have a designated medical director. The ED medical director[†], in collaboration with the director of emergency nursing and with appropriate integration of other ancillary services, should ensure that quality, safety, and appropriateness of emergency care are continuously monitored and evaluated. The ED medical director should have oversight over all aspects of the practice of emergency medicine in the ED.
- d. All staff members working in the ED should receive a formal orientation that addresses the mission of the institution, ED standard policy and operating procedures, and the responsibilities of each member of the ED staff. The duties and responsibilities of the ED physician and staff should be defined in writing.
- e. ED physicians, NPs and PAs should maintain and enhance their professional knowledge and skills, with the goal of providing optimal care to patients.
- f. An ED quality assurance program should provide for the evaluation and monitoring of each member of the ED team at regular intervals
- g. In accordance with applicable laws, regulations, and standards, the triage and screening of each patient who enters the ED seeking medical care should be performed by a physician,

or by a specially trained registered nurse, NP, or PA. Policy guidelines should be developed collaboratively by the medical director of emergency services and the director of emergency nursing.

- h. Immediate evaluation, treatment, and stabilization, to the degree reasonably possible, should be available for each patient who presents to the ED with an emergency medical condition.
- i. The emergency physician is responsible for the medical care provided in the ED. This includes the medical evaluation, diagnosis, and recommended treatment and disposition of the emergency patient, as well as the direction and coordination of all other care provided to the patient. Medical care responsibility for a particular patient in the ED may be transferred to another physician if said responsibility has been assumed unambiguously. A registered nurse is responsible for the nursing care of each emergency patient to include assessment, planning, and evaluation of response to interventions.
- j. The ED should maintain a control register or “log” identifying each individual who presents to the facility seeking emergency care. A legible and appropriate medical record should be established for every individual who present for emergency care. This record should be retained as required by law and should remain promptly available to the emergency staff when needed. An electronic health/medical record that captures and records this data is encouraged.

[†]Where appropriate in this document, the term “chair, or chief, of the department of emergency medicine” may be substituted for the title “medical director of the emergency department.”

2. Staffing

- a. Appropriately educated and qualified emergency physicians, NPs, PAs, registered nurses and ancillary staff should staff the ED during all hours of operation.
- b. The ED director should direct the medical care provided in the ED. The medical director of the ED should:
 - Be certified by the American Board of Emergency Medicine (ABEM), the American Osteopathic Board of Emergency Medicine (AOBEM) or should possess comparable qualifications as established through the privilege delineation policy.
 - Possess competence in management and administration of the clinical services available in the ED.
 - Be a voting member of the executive committee of the hospital’s medical staff.
 - Be knowledgeable about EMS operations and the regional EMS network.
 - Be responsible for assessing and making recommendations to the hospital’s credentialing body related to the qualifications of emergency physicians with respect to the clinical privileges granted to them.
 - Ensure that the emergency staff is appropriately qualified and credentialed.
- c. All physicians who staff the ED, including the medical director, should be subject to the hospital’s customary credentialing process and should be members of the hospital medical staff with clinical privileges applicable to emergency medicine. Emergency physicians should have the same rights and privileges as other members of the medical staff.
- d. Each physician should be individually credentialed by the hospital medical staff department in accordance with criteria contained in ACEP’s policy on physician credentialing. All emergency physicians who practice in the ED should possess training, experience, and competence in emergency medicine sufficient to evaluate and manage and treat patients who seek emergency medical care, consistent with the physician’s delineated clinical

privileges. patients who seek emergency care, consistent with the physician's delineated clinical privileges.

- e. The nursing care provided in the ED shall be directed by a registered nurse. The director of emergency nursing services should:
 - Demonstrate evidence of substantial education, experience, and competence in emergency nursing. The Certified Emergency Nurse (CEN) credential is an excellent benchmark.
 - Show evidence of competence in management and administration of the clinical services in an ED.
 - Ensure that the nursing and support staff are appropriately educated and qualified.
- f. Each nurse working in the ED should:
 - Provide evidence of adequate previous ED or critical care experience or have completed an emergency care education program. The CEN credential is an excellent benchmark.
 - Demonstrate evidence of the knowledge and skills necessary to deliver nursing care in accordance with the Standards of Emergency Nursing Practice.
- g. The medical director of the ED and the director of emergency nursing should assess staffing needs on a regular basis. Patient census, injury/illness severity, arrival time, and availability of ancillary services and support staff are factors to be considered in the evaluation of emergency scheduling and staffing needs. Staffing patterns should accommodate the potential for the unexpected arrival of additional critically ill or injured patients. A plan should exist for the provision of additional nursing, physician assistant, advanced practice registered nurse, and physician support in times of disaster, natural or man-made.

3. Facility

- a. The ED should be designed to provide a safe environment in which to render care and should enable convenient access for all individuals who present for care. Adequate provisions for the safety of the ED staff, patients, and visitors should be designed and implemented.
- b. The ED should be designed to protect, to the maximum extent reasonably possible consistent with medical necessity, the right of the patient to visual and auditory privacy.
- c. Radiological, imaging, and other diagnostic services such as those outlined in Appendix A should be available within a reasonable period of time for individuals who require these services.
- d. Laboratory services such as those outlined in Appendix D should be available within a reasonable period of time for the provision of appropriate diagnostic tests for patients who require these services.
- e. Signage consistent with the federal and/or state regulations should indicate the direction of the ED from major thoroughfares and whether the facility is designated as a specialized emergency care center.
- f. In accordance with regulations, translation and communication capabilities should exist for foreign languages and for the vision and/or hearing impaired.

4. Equipment and Supplies

- a. Equipment and supplies should be of high quality and should be appropriate to the reasonable needs of all patients presenting to the ED.
- b. Equipment and supplies such as those outlined in Appendix A should be immediately available in the facility at all times.

- c. Evidence of the proper functioning of all reusable direct patient care medical equipment should be documented at regular intervals.
- d. The ED should be furnished with the equipment, materials, and technology required for the functioning of a modern office. The work environment should meet standards put forth by the Occupational Safety and Health Administration (OSHA).

5. Pharmacologic/Therapeutic Drugs and Agents

Necessary drugs and agents such as those outlined in Appendix 2 should be immediately available. A mechanism should exist to identify and replace all drugs before their expiration dates.

6. Ancillary Services*

- a. Laboratory
- b. Radiology
- c. Anesthesia
- d. Respiratory therapy
- e. Electrocardiography
- f. Pharmacy
- g. Patient transport
- h. Patient advocate services
- i. Physical therapy
- j. Social work chaplain
- k. Phlebotomy
- l. Security

*Some of these services may not be applicable to freestanding EDs

C. Relationships and Responsibilities

Emergency care begins in the prehospital setting, continues in the ED, and concludes when responsibility for the patient is transferred to another physician or care team, or the patient is discharged. To promote optimal care of emergency patients, this transfer of responsibility should be accomplished in an effective, orderly, and predictable manner. This section describes the relationships that should exist between facilities and those who provide health care for proper continuity of care.

1. Prehospital Setting

- a. Prehospital emergency care should be provided consistent with the ACEP policy, "The Role of the Physician Medical Director in Emergency Medical Services Leadership."
- b. The ED should be a designated part of the EMS and community disaster plans and should have roles defined by the local EMS/disaster coordinating body. Protocols and procedures should be in place that define the ED's interface with the EMS system.
- c. Patients should be transported to the nearest appropriate ED in accordance with applicable laws, regulations, and guidelines.
- d. When ambulance services are used to transport patients to the ED, a communication system such as a two-way radio, cellular phone, or other appropriate means should be available to provide notice of arrival or advance information concerning critically ill or injured patients.
- e. Transport personnel should provide complete written or electronic clinical documentation of all prehospital care provided to the patient. A copy of the document should be

immediately available on transfer of care to the ED staff and should be included in the patient's permanent medical record.

2. Emergency Facility

- a. ED personnel should be familiar with medical care protocols used by those providing prehospital care-in their community.
- b. All individuals with potentially lethal or disabling illnesses or injuries or other potential emergency medical conditions who present or are brought to the facility should be evaluated promptly. Appropriate measures should be initiated to stabilize and manage these patients.

3. Patient Disposition

- a. Appropriately qualified physicians who will accept responsibility for the care of patients should be identified in advance by the hospital and its medical staff for patients requiring admission or transfer to an inpatient bed or observation/holding unit. Consistent with applicable laws and regulations, the hospital and its medical staff should provide to the ED a list of appropriate "on-call" specialists who are required to respond to assist in the care of emergency patients within reasonable established time limits.
- b. Patients admitted or transferred to an observation/holding unit should be managed in a manner consistent with guidelines specified in ACEP's related policies.
- c. Transfer of care should be coordinated by the ED physician and the ED nurse, whether the patient is to be admitted to the hospital, transferred to a higher level of care, or discharged. If admitted or transferred there should exist policies and procedures to facilitate safe transfer of care between physicians and care teams. Appropriately qualified physicians or other appropriate and qualified health care who will accept follow-up responsibility for patients discharged from the ED should be identified in advance by the hospital and its medical staff. The hospital and its medical staff should provide the ED with a list of appropriate on-call specialists or other appropriate referral services who will render follow-up services to ED patients within a reasonable period of time after discharge.
- d. All patients discharged or transferred from an ED should have specific, printed, or legibly written aftercare instructions. It should also be confirmed that the patient is reasonably able to read and understand these instructions.

4. Transfer

- a. When patient transfer is indicated, the emergency facility should have a written plan for transferring patients in a vehicle with appropriate patient care capabilities including life support (eg, ambulance, advanced life support, basic life support, fixed-wing, and rotor). When necessary, means should be available to provide nursing or physician staffing of transfer vehicles. In the appropriate clinical setting, family may provide transport for patients in private vehicles. Medical records necessary for ongoing care should accompany the patient; if these are not available at the time of transfer, they should be expeditiously provided to the receiving facility (eg, by fax transmission or other electronic transmission) in accordance with EMTALA.
- b. Patients with potentially lethal or disabling conditions or other emergency medical conditions should not be transferred from an emergency facility unless appropriate evaluation and stabilization procedures have been initiated within the capability of the facility. Transfer of patients to a facility with greater capability and resources should be arranged as necessary.
- c. All transfers should comply with local, state, and federal laws and be consistent with ACEP policies related to patient transfer.

Appendix A - SUGGESTED EQUIPMENT AND SUPPLIES FOR EDs

Each of the items should be located in or immediately available to the area noted. This list does not include routine medical/surgical supplies such as adhesive bandages, gauze pads, and suture material. Nor does it include routine office items such as paper, desks, paper clips, and chairs.

Entire Department

- Central station monitoring capability
- Appropriate physiological monitors, including but not limited to temperature, blood pressure, heart rate, blood oxygen saturation
- Defibrillator with monitor and power source
- Nurse-call system for patient use
- Supplies for venipuncture and blood cultures
- Supplies for administration of IV therapies
- Portable suction regulator
- Infusion pumps including blood infusion pumps
- IV poles
- Bag-valve-mask respiratory and adult and pediatric size mask
- Portable oxygen tanks and oxygen supply
- Blood/fluid warmer and tubing
- Nasogastric suction supplies
- Nebulizer
- Gastric lavage supplies, including large-lumen tubes and bite blocks
- Urinary catheters, including but not limited to straight catheters, Foley catheters, Coude catheters, filiforms and followers, and appropriate means for urine sample collection
- Intraosseous needles and placement equipment
- Lumbar puncture sets
- Blanket warmer
- Tonometer
- Slit lamp
- Wheelchairs and other appropriate mobility devices and transfer-assist devices
- Medication dispensing system with locking capabilities
- Sterile separately wrapped instruments (specifics will vary by department)
- Weight scales (adult and infant)
- Pediatric treatment and dosing table (pediatric emergency tape)
- Ear irrigation and cerumen removal equipment
- Vascular Doppler
- Anoscope
- Adult and pediatric “code” cart
- Suture or minor surgical procedure sets (generic)
- Portable sonogram equipment
- EKG machine
- Point of care testing
- Influenza swabs
- Other necessary infection-related swabs or assays
- X-ray viewing capabilities

- Secure, modern and reliable computer system with access to electronic health/medical record
- High-speed, reliable and secure internet connection
- Patient tracking system
- Radio or other means for reliable communication with prehospital care providers
- Patient discharge instruction system
- Patient registration system/information services
- Inter- and intradepartmental staff communication system - pagers, mobile phones
- ED charting system for physician, nursing, and attending physician documentation equipment
- Reference materials including toxicology resource information
- Appropriate personal protective equipment based on recommendations from the Centers for Disease Control and Prevention or other infectious disease authorities.
- Linen (eg. pillows, towels, wash cloths, gowns, blankets)
- Patient belongings or clothing bag with secure means of temporary storage
- Security needs including, but not limited to, personal restraints, wand-type or free-standing metal detectors as indicated
- Equipment for adequate housekeeping

General Examination Rooms

- Examination tables or stretchers appropriate to the area (for any area in which seriously ill patients are managed, a stretcher with capability for changes in position, attached IV poles, and a holder for portable oxygen tank should be used). Equipment to perform pelvic exams.
- Step stool
- Chair/stool for emergency staff
- Seating for family members or visitors
- Adequate lighting, including procedure lights as indicated
- Adequate sinks for hand-washing, including dispensers for germicidal soap and paper towels
- Wall mounted oxygen supplies and equipment, including nasal cannulas, face masks, and venturi masks.
- Wall mounted suction capability, including both tracheal cannulas and larger cannulas
- Wall-mounted or portable otoscope/ophthalmoscope
- Sphygmomanometer/stethoscope
- Biohazard-disposal receptacles, including for sharps
- Garbage receptacles for non-contaminated materials

Resuscitation Room

All items listed for general examination rooms plus:

- Access to adult and pediatric “code cart” to include appropriate medication charts
- Capability for direct communication with nursing station, preferably hands free
- Radiography equipment
- Portable ultrasound
- Radiographic viewing capabilities
- Airways needs
 - Bag-valve-mask respirator (adult, pediatric, and infant)
 - Cricothyroidotomy instruments and supplies
 - Endotracheal tubes, size 2.5 to 8.5 mm

- Fiberoptic laryngoscope, video laryngoscope or alternative rescue intubation equipment
- Laryngoscopes, straight and curved blades and stylets
- Laryngoscopic mirror and supplies
- Laryngeal Mask Airway (LMA)
- Oral and nasal airways
- Tracheostomy instrument and supplies
- Breathing
 - Noninvasive Ventilation System (BIPAP/CPAP)
 - Closed-chest drainage device
 - Chest tube instruments and supplies
 - Emergency thoracotomy instruments and supplies
 - End-tidal CO₂ monitor
 - Nebulizer
 - Peak flow meter
 - Pulse oximetry
 - Volume cycle ventilator
- Circulation
 - Automatic physiological monitor, noninvasive
 - Blood/fluid infusion pumps and tubing
 - Cardiac compression board
 - Central venous catheter setups/kits
 - Central venous pressure monitoring equipment
 - Cutdown instruments and supplies
 - Intraosseous needles
 - IV catheters, sets, tubing, poles
 - Monitor/defibrillator with pediatric paddles, internal paddles, appropriate pads and other supplies
 - Pericardiocentesis instruments
 - Rapid infusion equipment
 - Temporary external pacemaker
 - Transvenous and/or transthoracic pacemaker setup and supplies
 - 12-Lead ECG machine

Trauma and Miscellaneous Resuscitation

- Blood salvage/autotransfusion device
- Emergency obstetric instruments and supplies
- Hypothermia thermometer
- Infant warming equipment
- Peritoneal lavage instruments and supplies
- Spine stabilization equipment to include cervical collars, short and long boards
- Therapeutic hypothermia modalities
- Warming/cooling blanket

Other Special Rooms

All items listed for general examination rooms plus:

- Orthopedic
 - Cast cutter
 - Cast and splint application supplies and equipment

- Crutches
- Extremity splinting and stabilization devices
- Radiographic viewing capabilities
- Traction equipment, including hanging weights and finger traps
- Eye/ENT
 - Eye chart
 - Ophthalmic tonometry device (applanation, Schiottz, or other)
 - Other ophthalmic supplies as indicated, including eye spud, rust ring remover, cobalt blue light
 - Slit lamp
 - Ear irrigation and cerumen removal equipment
 - Epistaxis instrument and supplies, including balloon posterior packs
 - Frazier suction tips
 - Headlight
 - Laryngoscopic mirror
 - Plastic suture instruments and supplies
- OB-GYN
 - Fetal Doppler and ultrasound equipment
 - Obstetrics/gynecology examination light
 - Vaginal specula in various sizes
 - Sexual assault evidence-collection kits (as appropriate)
 - Access to baby warmer

Appendix B - SUGGESTED PHARMACOLOGICAL/THERAPEUTIC DRUGS FOR EDs

These classes of drugs and agents are only suggested and will evolve as new therapies become available. The medical director of the ED and a pharmacy representative should develop a formulary of specific agents for use in an individual hospital's ED. These items should be readily available, or arrangements should be in place to access them if not available in the ED.

Analgesics	Systemic
Narcotic and non-narcotic	Topical
Anesthetics	Plasma expanders/ extenders
Topical, infiltrative, general	Burn Preparations
Anticonvulsants	Cardiovascular agents
Antidiabetic agents	ACE inhibitors
Antidotes	Adrenergic blockers
Antivenins	Adrenergic stimulants
Antihistamines	Alpha/Beta blockers
Anti-infective agents	Antiarrhythmia agents
Systemic/topical/post-exposure prophylaxis	Calcium channel blockers
Anti-inflammatories	Digoxin antagonist
Steroidal/non-steroidal	Diuretics
Antipyretics	Vasodilators
	Vasopressors
Bicarbonates	Cholinesterase Inhibitors
Blood Modifiers	
Anticoagulants, including thrombolytics	Diagnostic agents
Hemostatics	Blood contents

Stool contents	Lubricants
Urine contents	
Electrolytes	Migraine preparations
Cation exchange resin	Muscle relaxants
Electrolyte replacements, parenteral and oral	Narcotic antagonist
Fluid replacement solutions	Nasal preparation
Medications to reverse electrolyte derangements	Neuromuscular blocking agents
Gastrointestinal agents	Ophthalmologic preparations
Antacids	Otic preparations
Anti-diarrheals	Oxytocin and tocolytics
Emetics and Anti-emetics	Psychotherapeutic agents
Anti-flatulent	Respiratory agents
Anti-spasmodics	Antitussives
Bowel evacuants/laxatives	Bronchodilators
Histamine receptor antagonists	Decongestants
Proton pump inhibitors	Leukotriene antagonist
Glucose elevating agents	Rh ₀ (D) immune globulin
Hormonal agents	Salicylates
Oral contraceptives	Sedatives and Hypnotics
Steroid preparations	
Thyroid preparations	Vaccinations
Hypocalcemia and hypercalcemia management agents	Vitamins and minerals

Appendix C - RADIOLOGIC, IMAGING, AND OTHER DIAGNOSTIC SERVICES

The specific services available and the timeliness of availability of these services for emergency patients in an individual hospital's ED should be determined by the medical director of the ED in collaboration with the directors of the diagnostic services and other appropriate individuals.

The following should be readily available 24 hours a day for emergency patients:

- Standard radiologic studies of bony and soft-tissue structures
- Emergency ultrasound services for the diagnosis of obstetric/gynecologic, cardiac and hemodynamic problems and other urgent conditions.
- Cardiovascular services
 - Doppler studies
 - 12-Lead ECGs and rhythm strips
- Computed tomography
- Pulmonary services
 - Arterial blood gas determination
 - CO oximetry
 - Peak flow determination
 - Pulse oximetry

- Venous blood gasses
- Fetal monitoring (nonstress test)/uterine monitoring in applicable facilities

The following services should be available on an urgent basis, provided by staff in the hospital or by staff to be called in to respond within a reasonable period of time:

- Nuclear medicine
- Radiographic
 - Arteriography/venography
 - Dye-contrast studies (intravenous pyelography, gastrointestinal contrast, etc.)
 - Magnetic resonance imaging services or the ability to arrange for urgent MRI
- Vascular/flow studies including impedance plethysmography

Appendix D - SUGGESTED LABORATORY CAPABILITIES

The medical director of the ED and the director of laboratory services should develop guidelines for availability and timeliness of services for an individual hospital's ED. The following laboratory capabilities are suggested for hospitals with 24-hour EDs. This list may not be comprehensive or complete. Point-of-care testing may be available for many of the below listed tests and may facilitate timely results.

Blood Bank

- Bank products availability
- Type and cross-matching capabilities

Chemistry

- Ammonia
- Amylase
- Anticonvulsant and other therapeutic drug levels
- Arterial blood gases
- Bilirubin (total and direct)
- B-type natriuretic peptide (BNP)
- Calcium
- Carboxyhemoglobin
- Cardiac enzymes
- Creatinine
- Electrolytes (blood, CSF, and urine)
- Ethanol
- Glucose (blood and CSF)
- Lactate
- Lipase
- Liver-function enzymes (ALT, AST, alkaline phosphatase)
- Methemoglobin
- Osmolality
- Protein (CSF)
- Serum magnesium
- Urea nitrogen

Hematology

- Cell count and differential (blood, CSF, joint and other body fluid analysis)
- Coagulation studies
- Erythrocyte sedimentation rate
- Platelet count
- Reticulocyte count
- Sickle cell prep

Microbiology

- Acid fast smear/staining
- Chlamydia and gonorrhea testing
- Counterimmune electrophoresis for bacterial identification
- Gram staining and culture/sensitivities
- Herpes testing
- Rapid viral testing (COVID, Influenza, etc.)
- Strep screening
- Viral culture
- Wright stain

Other

- Hepatitis screening
- HIV screening
- CSF, joint and other body fluid analysis
- Mononucleosis spot
- Serology (syphilis, recombinant immunoassay)
- Pregnancy testing (qualitative and quantitative)
- Toxicology screening and drug levels
- Urinalysis