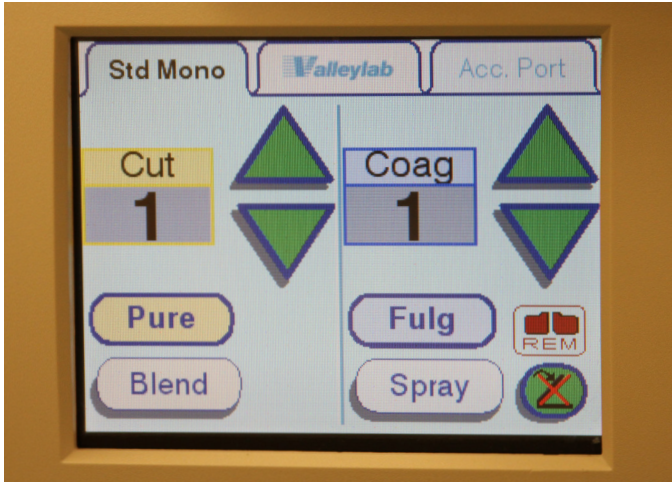


GUIDELINE ESSENTIALS

QUICK VIEW

Environment of Care



CLINICAL AND ALERT ALARMS

- As part of an interdisciplinary team, help develop and implement a perioperative clinical and alert alarm management plan that includes:
 - clinical alarm policy and procedures
 - an updated inventory of the alarms
 - processes for responding to alarms
 - criteria for who can change default alarms
 - criteria for who can disable or turn off alarms
 - processes for communicating changes to alarm settings
 - the frequency of and processes for testing and maintaining alarms
 - processes for reducing alarm fatigue
 - processes for reporting malfunctions, near misses, and adverse events
 - education and competency verification
 - processes for monitoring adherence to use of alarms
- Test clinical and alert alarms:
 - before use and on initial setup
 - according to the equipment manufacturer's instructions for use (IFU)
 - before using the equipment after repairs or maintenance
 - at established intervals according to the clinical alert alarm management plan
- Verify that clinical and alert alarms are loud enough to make them distinguishable from competing noises.

- Collaborate with biomedical and facility engineering personnel to establish and implement a process for responding to alert alarms when personnel are not present.

★ *A clinical and alert alarm management plan helps to define processes to keep personnel and patients safe.*



OCCUPATIONAL SLIP, TRIP, AND FALL PREVENTION

- Develop, implement, and maintain an occupational slip, trip, and fall prevention program specific to the perioperative department that includes:
 - regular assessment of environmental hazards
 - collection and review of occupational slip, trip, and fall incident data
 - implementation of slip, trip, and fall prevention strategies such as:
 - » providing unobstructed pathways
 - » cleaning spills or debris immediately
 - » repairing floor abnormalities
 - » covering electrical cords with facility-approved floor cord coverings
 - » reducing the number of electrical cables on the floor
 - » providing adequate lighting
 - » displaying wet floor signs
 - » wearing slip-resistant shoes

- implementation checklists
- procedures for:
 - » routine floor cleaning
 - » spill management
 - » reporting injuries
- communication of trends to perioperative team members
- evaluation of program performance

★ *Occupational slips, trips, and falls contribute to a significant number of injuries experienced by RNs and can affect their ability to care for patients. The National Institute for Occupational Safety and Health recommends implementing a slip, trip, and fall prevention program.*



FIRE PREVENTION PLANNING

- Develop a fire safety plan specific to the perioperative area that includes:
 - a review of the NFPA 99 Health Care Facilities Code and the NFPA 101 Life Safety Code
 - perioperative team members' roles
 - communication procedures
 - fire prevention strategies
 - processes for safely managing different fire scenarios
 - fire alarm activation procedures and methods to contain and extinguish a fire
 - procedures for evacuation
 - processes for assessing fire risk
 - cognitive aids for fire prevention
 - procedures for reporting fires or near misses
 - fire safety education and drills
- Choose fire extinguishers according to the National Fire Protection Association (NFPA) standards and the authority having jurisdiction.

★ *Perioperative personnel can become prepared to prevent and manage a surgical fire by reviewing elements of the fire safety plan and participating in education and drills.*



FIRE PREVENTION PRACTICES

- Perform a fire risk assessment as part of the preprocedural briefing process, to include ignition, fuel, and oxidizer sources present in the OR.
- Include cognitive aids (eg, algorithms, checklists).
- Collaborate on and implement interventions based on the fire risk assessment.
- Document the fire risks and the actions taken to address them.
- Prevent contact between fuel sources (eg, drapes, skin antiseptics agents) and ignition sources (eg, electrosurgical devices).
- Prevent pooling of flammable skin antiseptic agents under, on, or near the patient by:
 - placing sterile or clean towels near the surgical preparation site to absorb excess solution from pooling
 - using sterile towels to absorb excess solution from the prepped site
 - removing materials (eg, sterile or clean towels) that become wet with the skin preparation solution before draping
 - moving flammable antiseptic soaked materials away from ignition sources and outside of the patient care vicinity (ie, at least 6 ft away)
- Allow the skin antiseptic agent to dry before applying surgical drapes. Follow the manufacturer's IFU for dry time.
- Use a water-soluble gel for the patient's head and hair when performing procedures that involve the head or neck.

- Use moistened radiopaque sponges near oxidizer and ignition sources during airway procedures.

★ *The operating room contains several elements of the fire triangle, including oxygen (oxidizer), lasers and electrosurgical devices (ignition sources), and alcohol-based skin antiseptics and surgical drapes (fuel). The perioperative team can help reduce the risk of fire by performing a fire risk assessment and implementing interventions (eg, preventing contact between fuel sources and ignition sources) based on that assessment.*



FIRE MANAGEMENT

- If a fire is suspected or present, immediately notify the rest of the perioperative team.
- Implement interventions (eg, saline, water, smothering) to extinguish a fire as identified in the fire safety plan.
- Understand that in the event of an airway fire, the anesthesia professional should stop the flow of oxygen, remove the endotracheal tube, remove flammable materials away from the airway, and pour saline into the patient's airway.
- Understand that in the event of a non-airway fire, the anesthesia professional should stop the flow of airway gases, and the drapes and burning materials should be removed and extinguished.
- Report the fire as defined in the fire safety plan.
- Keep all items that were involved in the surgical fire for investigation.
- Do not use fire blankets in the OR.

★ *A fire should be extinguished as soon as possible to decrease the risk of injury to the patient and personnel. Fires can be extinguished with saline, water, and by smothering.*



ELECTRICAL EQUIPMENT

- When using electrical equipment with power cords:
 - use power cords specific to that device
 - if a replacement power cord is required, verify that it meets the electrical characteristics of the device (eg, grounding resistance)
 - do not plug an extension cord into another extension cord; plug it directly into a power source
 - inspect the physical integrity of the cord
 - remove damaged equipment and power cords from use
 - secure cords to prevent trips and falls

★ *Implementing safe practices when using equipment with power cords may prevent damage to the equipment and prevent injury to patients and personnel.*



WARMING CABINETS

- Review the manufacturer's IFU and perform a risk assessment when deciding on the maximum temperature limits for blanket warming cabinets.
- Review the manufacturer's IFU when deciding on the maximum temperature limits for solutions and the length of time solutions can stay in the warming cabinet.

- Store solutions and linen in separate cabinets or in cabinets with separate compartments.
- Label the warming cabinets with what can be placed in the cabinet (eg, linen, solutions) and the maximum permissible temperature setting.
- Label solutions placed in the warming cabinet with either the date of placement or the date they should be removed according to the facility's policy.
- Verify the temperature of the warming cabinet before administering or dispensing the warmed solution.
- Do not warm skin antiseptic solutions in warming cabinets unless this is allowed according to the manufacturer's IFU.

★ *Patients are at an increased risk for burns from heated solutions, blankets, or linens because patients are often unconscious or sedated during procedures. It is important that linens and solutions be stored separately and at different temperatures because fluids attain a higher temperature and retain the temperature longer.*



MEDICAL GAS CYLINDERS

- Store medical gas cylinders:
 - in a room with a fire-resistant rating and according to the NFPA 99

- securely in a holder or storage rack with a chain-like securing device
- away from heat sources
- Separate empty cylinders from full cylinders.
- Store medical gases separate from industrial gases and not in an egress hallway.
- Transport cylinders in holders or carriers to prevent tipping, dropping, or damage.
- Store, handle, fill, and transport liquid oxygen cylinders according to state and federal regulations and the manufacturer's IFU.

★ *Medical gas cylinders that are not transported in holders or carriers could become damaged and possibly rupture or become projectiles, which may lead to serious injury.*



WASTE ANESTHETIC GASES

- Establish and implement a waste anesthetic gas (WAG) management program that describes engineering controls, administrative controls, work practice controls, and personal protective equipment (PPE) used to reduce WAG exposure.
- The WAG management plan should also include:
 - anesthesia delivery and WAG disposal systems
 - procedures to verify functionality and maintenance of anesthesia delivery and WAG disposal systems

★ *The Occupational Safety and Health Administration recommends that anesthesia machines be inspected at least every 4 months by qualified personnel.*



LATEX-SAFE ENVIRONMENT

- Implement a latex safety program that includes:
 - policies and procedures for managing patients and personnel who have allergies or sensitivities to latex
 - a protocol for establishing a latex-free environment
 - assessment of patient risk
 - initial and ongoing education, training, and competency verification
- Provide PPE alternatives for personnel with a latex allergy or sensitivity.
- Assess patients for latex sensitization risk factors, including:
 - food allergies (eg, avocado, banana, kiwi, chestnuts, raw potato)
 - spina bifida, spinal cord trauma, and urogenital abnormalities
 - occupational exposure to latex
 - symptoms of:
 - » asthma
 - » eczema
 - » contact dermatitis
 - » contact urticaria
 - » hay fever
 - » rhinitis
- Establish a latex free environment by:
 - removing all products containing natural latex from the room the evening before the procedure
 - avoiding use of products that contain natural latex when cleaning the room
 - restricting traffic and movement of equipment through the OR before and during the procedure
 - posting "latex allergy" signs on the procedure room doors
 - communicating the patient's latex sensitivity or allergy during hand off

- Place a wristband or bracelet to identify patients who have a latex allergy or sensitivity.
- Document this information in the patient's health record.

★ *Maintaining a list of products that contain natural rubber latex and their latex-free alternatives may help minimize exposure to latex allergens.*



HAZARDOUS CHEMICALS

- Store chemicals according to:
 - the safety data sheet (SDS) information
 - the manufacturer's IFU
 - flammability and combustibility
- Provide PPE for personnel who handle chemicals.
- Provide eyewash stations that deliver warm water (ie, 60° F to 100° F [16° C to 38° C]) at a rate of 1.5 L/minute where chemicals hazardous to the eyes are located.
- Flush plumbed eyewash stations weekly.
- Follow methyl methacrylate (MMA) safety practices as required by federal, state, and local regulations.
- Do not leave discarded bone cement in contact with the patient's skin.
- Select less hazardous alternatives to glutaraldehyde for disinfection if any are listed on the device manufacturer's IFU.
- Include the following where formaldehyde is used most:
 - warning signs of formaldehyde use and
 - ventilation systems that are able to maintain levels below the permissible exposure limits (ie, 8-hour time-weighted average of 0.75 ppm; 15-minute, short-term exposure limit of 2 ppm)

- Do not store formaldehyde in the OR unless there is adequate ventilation.
- Provide education to perioperative personnel who work with chemicals or other potentially hazardous agents that includes:
 - a description of potential chemical hazards and associated health risks
 - safe handling practices
 - PPE practices
 - hazard communication (eg, labels, signage)
 - procedures for reporting exposures
 - procedures for reporting and managing spills

★ *Exposure to chemicals can cause injury to patients and personnel. To reduce exposure risk when handling, storing, disposing of, or using chemicals, it is important to follow regulatory requirements along with the manufacturer's IFU and SDS information.*

WASTE MANAGEMENT

- Follow federal, state, or local regulations that govern the handling and disposal of hazardous and nonhazardous waste.
- Label hazardous waste containers as "hazardous waste" with the applicable waste characteristics (eg, ignitable, corrosive), and protect personnel who handle the containers against exposure to the contents.
- Contain flammable substances such as alcohol, benzoin, formalin, and MMA monomer, and place these into a hazardous waste receptacle for disposal.
- Dispose of batteries according to federal, state, and local regulations.

★ *Waste management regulations vary by state and local jurisdictions. The US Environmental Protection Agency specifies the precautions to take when handling these wastes.*