

Purpose

To provide guidance to perioperative personnel for creating an environment that prevents the human exposure to surgical smoke.

Definitions

Surgical Smoke: The gaseous by-product produced by energy-generating devices (e.g., electrosurgical units, lasers, electrocautery and ultrasonic devices, powered instruments, and other heat-producing surgical tools). The term includes surgical plume, smoke plume, bio-aerosols, laser-generated airborne contaminants, or lung-damaging dust.

Surgical Smoke Evacuation System: Equipment designed to capture and neutralize surgical smoke at the point of origin and before the surgical smoke makes contact with the eyes or the respiratory tract of the occupants of a room.

Policy

It is the policy of [INSERT FACILITY NAME] to use a surgical smoke evacuation system during any planned surgical procedure that is likely to generate surgical smoke.

Procedure Interventions

- The perioperative RN will assess each planned surgical procedure that requires the use of energy-generating devices and is likely to generate surgical smoke. If the perioperative RN determines that surgical smoke is likely to be generated, he or she will select a surgical smoke evacuation system and supplies to evacuate the smoke from the OR environment.
- All surgical smoke will be removed using a surgical smoke evacuation system during planned surgical procedures that are likely to generate surgical smoke.
 - A surgical smoke evacuation system with a 0.1 µm filter (e.g., an ultra-low particulate air [ULPA] filter) will be used.
 - The smoke capture device (e.g., wand, tubing) will be positioned as close to the surgical site as necessary to effectively collect the surgical smoke.
 - The smoke evacuator will be activated at all times when surgical smoke is likely to be produced during the procedure.
 - When a medical-surgical suction system is used to evacuate smoke, a 0.1 µm in-line ULPA filter will be used.
 - The filter will be placed between the suction wall/ceiling connection and the suction canister.
 - Suction tubing with a suction tip attached will be used, or the suction tubing may be attached directly to the ESU pencil with smoke evacuator tubing.
 - Surgical smoke will be evacuated with the smoke evacuation device throughout minimally invasive procedures.

SURGICAL SMOKE

[Insert facility name or a header]

- The smoke evacuation device will have a 0.1 μm filtration capability.
- Standard precautions will be used to handle used smoke evacuator filters, tubing, and wands as potentially infectious waste and to dispose of these items as biohazardous waste.
- Respiratory protection (*i.e.*, a fit-tested N95 filtering face piece respirator) may be used as secondary protection.

Documentation

The perioperative RN will document on the intraoperative record the use of surgical smoke evacuation equipment and, if applicable, other devices used to evacuate smoke during operative or other invasive procedures.

Competency

Perioperative personnel who participate in procedures where surgical smoke is likely to be produced will receive education and will complete competency verification activities on the principles and processes for reducing surgical smoke and the care of surgical smoke evacuation equipment.

Quality

Perioperative personnel participating in planned surgical procedures where surgical smoke is likely to be produced will participate in quality assurance and performance improvement activities related to surgical smoke evacuation equipment and reducing surgical smoke.

Change Management

Date Created: _____

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Last Date Reviewed: _____

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Administrative Approval(s)

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