

Hamilton Health Sciences Corporation		Surgical Operating Room Policy	
<i>Initial Issue Date:</i> 2000-08-02			
<i>Title:</i> Use of Smoke Evacuators		<i>Document Number:</i> 60-10-09	
<i>Approved By:</i> Chief of Anaesthesia	00-07-06	Page 1 of 2	
Chief of Surgery	00-07-05		
Director of Surgery	00-07-05		

1.0 Purpose:

- 1.1 To identify the standards for utilization of smoke evacuators when used in surgical procedures within the Hamilton Health Sciences Corporation.

2.0 Definitions:

Electrosurgical Units (ESU) - is a machine used to deliver a high frequency current to cut tissue and to coagulate bleeders.

Smoke Plume - is smoke produced by combustion of human tissue. Many studies have shown that the smoke plume produced by ESUs may be a health hazard if inhaled by the patients or surgical team members.

3.0 Related Policies/Procedures:

Not applicable

4.0 Policy Statement:

- 4.1 A smoke plume evacuation system must be used whenever tissue is vaporized to ensure the safety of the patients and the operating/clinic room team members.
- 4.2 The circulating nurse is responsible to inspect the smoke plume evacuation system for electrical safety and filter patency before each use.
- 4.3 The scrub person is responsible for ensuring proper use of the smoke plume evacuation system on the surgical field.
- 4.4 The smoke plume evacuation system is used for ESU smoke evacuation only. Another means of suctioning is used for body secretions.
- 4.5 Smoke plume evacuation system filters are changed according to the manufacturer's recommendations. This smoke evacuation unit contains both a charcoal and an ULPA filter to eliminate smoke and viral particles.
- 4.6 Disposable ESU hand pieces, suction tubing, prefilters (if any) and ultralow penetration air (ULPA) filters are disposed of in contaminated trash bags.
- 4.7 A wall suction device is not adequate for smoke plume evacuation.

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- 4.8 In portions of surgeries where the current smoke evacuator system interferes with the safety of surgery (and is generally accepted as such by all members of the specialty), the evacuator may be replaced by a regular electrocautery pencil for this part of the procedure. We will continue to work with the companies to develop acceptable products to be used for the entire surgical procedure.
- 4.9 Sterile smoke plume evacuation tubing is opened on the surgical field. When in use, the end of the tubing should be within 1 inch of the site generating smoke to be most effective.

5.0 References:

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Lanfranchi, J. (1997). Smoke Plume Evacuation in the OR. AORN. Vol. 65, #3.

Ulmer, B. (1998) Occupational Safety and Health Administration acts on guidelines for electrosurgical smoke. AORN Vol. 67, No. 6.

Weinwurm, D. (1997). Surgical Smoke Plume. Infection Control Newsletter. Vol. 5, No. 2.

6.0 Developed By in Consultation With:

Executive, Surgical Program
Department of Anesthesia
Clinician, OR
Occupational Health & Safety
Infection Control

REVIEW DATES: