1. Guiding Principles

Surgical plume presents a potential hazard to all staff who are present within the operating room when energy-based devices are operating and releasing plume into the environment.

2. Procedure

All theatre staff must be familiar with the smoke evacuation equipment; Smoke collection devices and high filtration masks for high risk procedures.

- The circulating nurse is, at the commencement of the surgical procedure, to ensure the capture devices are attached to the evacuation unit and that the settings adjusted according to the surgical procedure being performed i.e. laparoscopic, closed procedures.
- Surgical smoke is to be removed using a smoke evacuation system during open and laparoscopic procedures.
- A smoke evacuation unit is to be used; a corrugated evacuation tubing is to be attached to the filter of the evacuator.
- The sensor is to be attached to the diathermy cord and set to 'high' for general work, and 'low' for laparoscopic surgery. The evacuator will automatically turn off and on with the diathermy.
- Surgical smoke is to be evacuated throughout the laparoscopic procedure by using a laparoscopic smoke evacuation device.
- Standard precautions are to be used when disposing of used smoke filters, tubing and wands.
- Respiratory masks are also to be used during procedures that generate plume from high-risk procedures such as diathermy of warts.

3. Definitions

| Surgical Plume | Surgical plume contains smoke, tissue, viral, bacterial particles and a range of hazardous chemicals released into the environment during the use of energy based devices e.g. electrosurgery (diathermy), LASER. The only safe way to manage surgical plume is by the use of evacuation units which capture the plume at its source and transfer it to the evacuation unit. |
4. **Roles And Responsibilities**

The surgical team members are responsible for ensuring that the evacuation machine is used when electrosurgical devices are being used.

5. **Compliance**

All perioperative staff are to:

- comply with procedures related to the use of evacuation units and capture devices during surgical procedures when energy devices e.g. diathermy is being used
- communicate with the Occupational Safety and Health (OSH) representative and line manager when evacuation units are not be utilised when required.

Failure to comply with this policy may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the Employment Policy Framework issued pursuant to section 26 of the *Health Services Act 2016* (HSA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies is mandatory.

6. **Evaluation**

Monitoring of compliance with this document is to be carried out by the Occupational Safety Health (OSH) representative for the perioperative department using completed hazard or risk forms.

7. **Standards**

- National Safety and Quality Health Care Standards 1.1.7, 3.3.7
- EQuIPNational Standards 11.5.1

8. **References**

ACORN Management of Surgical Smoke Toolkit

Buffalo Filter: Education and Articles
Buffalo Filter: About Surgical Smoke

This document can be made available in alternative formats on request for a person with a disability

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