


Operation Clean Air: Implementing a Surgical Smoke Evacuation Program 1.4 www.aornjournal.org/content/cme

MARY K. DOBBIE, MPA, MSN, RN, CNOR, CURN;

MARIA FEZZA, MPA, MSN, RN, CNOR; MARTHA KENT, EdD, RN, NEA-BC, CPAN;

JANE LU, BSN, RN; MARK L. SARACENI, MBA; SUSAN TITONE, MSN, RN, CNOR

Continuing Education Contact Hours

 indicates that continuing education (CE) contact hours are available for this activity. Earn the CE contact hours by reading this article, reviewing the purpose/goal and objectives, and completing the online Examination and Learner Evaluation at <http://www.aornjournal.org/content/cme>. A score of 70% correct on the examination is required for credit. Participants receive feedback on incorrect answers. Each applicant who successfully completes this program can immediately print a certificate of completion.

Event: #17539

Session: #0001

Fee: Free for AORN members. For non-member pricing, please visit <http://www.aornjournal.org/content/cme>.

The contact hours for this article expire December 31, 2020. Non-member pricing is subject to change.

Purpose/Goal

To provide the learner with knowledge of best practices related to surgical smoke evacuation.

Objectives

1. Identify the hazardous components of surgical smoke.
2. Describe the health hazards of exposure to surgical smoke.
3. Discuss recommendations for evacuating surgical smoke.
4. Discuss the patients' risks of exposure to surgical smoke.

Accreditation

AORN is accredited with distinction as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Approvals

This program meets criteria for CNOR and CRNFA recertification, as well as other CE requirements.

AORN is provider-approved by the California Board of Registered Nursing, Provider Number CEP 13019. Check with your state board of nursing for acceptance of this activity for relicensure.

Conflict-of-Interest Disclosures

Mary K. Dobbie, MPA, MSN, RN, CNOR, CURN; Maria Fezza, MPA, MSN, RN, CNOR; Martha Kent, EdD, RN, NEA-BC, CPAN; Jane Lu, BSN, RN; Mark L. Saraceni, MBA; and Susan Titone, MSN, RN, CNOR, have no declared affiliations that could be perceived as posing potential conflicts of interest in the publication of this article.

The behavioral objectives for this program were created by Kristi Van Anderson, BSN, RN, CNOR, clinical editor, with consultation from Susan Bakewell, MS, RN-BC, director, Perioperative Education. Ms Van Anderson and Ms Bakewell have no declared affiliations that could be perceived as posing potential conflicts of interest in the publication of this article.

Sponsorship or Commercial Support

No sponsorship or commercial support was received for this article.

Disclaimer

AORN recognizes these activities as CE for RNs. This recognition does not imply that AORN or the American Nurses Credentialing Center approves or endorses products mentioned in the activity.

<https://doi.org/10.1016/j.aorn.2017.09.011>

© AORN, Inc, 2017

Operation Clean Air: Implementing a Surgical Smoke Evacuation Program 1.4



www.aornjournal.org/content/cme

MARY K. DOBBIE, MPA, MSN, RN, CNOR, CURN;
MARIA FEZZA, MPA, MSN, RN, CNOR; MARTHA KENT, EdD, RN, NEA-BC, CPAN;
JANE LU, BSN, RN; MARK L. SARACENI, MBA; SUSAN TITONE, MSN, RN, CNOR

ABSTRACT

Surgical smoke is a hazardous byproduct of any surgery involving a laser or an electrosurgical unit. Although research and professional organizations identified surgical smoke as harmful many years ago, this byproduct continues to be a safety hazard in the OR. An interdisciplinary team at a large academic medical center sought to address the exposure of patients and perioperative team members to surgical smoke. The team used the nursing process to resolve the lack of smoke-evacuator equipment and surgical smoke staff member knowledge. To increase awareness of the hazards of surgical smoke, we gave presentations to nursing staff members and surgeons, who then completed educational modules. We conducted audits in all ORs to monitor compliance. The use of smoke evacuation supplies has more than quadrupled since education began. Additional unit-based education continues every day and is a constant reminder that safety is the responsibility of all perioperative team members. *AORN J* 106 (December 2017) 502-512. © AORN, Inc, 2017. <https://doi.org/10.1016/j.aorn.2017.09.011>

Key words: *surgical smoke, plume, smoke evacuation, staff education, smoke free.*

Professional organizations have recognized the hazards of surgical smoke for many years. A 1996 publication from the National Institute for Occupational Safety and Health reported that a smoke byproduct is created during surgical procedures that destroy tissue using a laser or an electrosurgical unit, and that the smoke byproduct (ie, plume) created “can contain toxic gases and vapors such as benzene, hydrogen cyanide, and formaldehyde, bioaerosols, dead and live cellular material (including blood fragments), and viruses.”¹ These are still recognized as components of surgical smoke today, in addition to several other components, including carbon monoxide, bacteria, nitriles, and polycyclic aromatic hydrocarbons. Surgical smoke contains an estimated 150 different chemicals, many of which are recognized as

health hazards.² Despite knowledge of the hazardous components of surgical smoke and evidence-based practices to control surgical smoke, health care workers continue to be exposed.³ This article shares one hospital staff’s journey to provide smoke-free ORs for their patients and perioperative team members.

DESCRIPTION OF THE PROBLEM

It is widely accepted that cigarette smoke and smoke generated by manufacturing facilities are hazardous to a person’s health.⁴ A seminal study on surgical smoke found that using a carbon dioxide laser on 1 g of tissue is similar to inhaling the smoke from three unfiltered cigarettes in 15 minutes; if operating

<https://doi.org/10.1016/j.aorn.2017.09.011>

© AORN, Inc, 2017

Download English Version:

<https://daneshyari.com/en/article/8567271>

Download Persian Version:

<https://daneshyari.com/article/8567271>

[Daneshyari.com](https://daneshyari.com)