Re: S1332/H2192 An Act protecting patients and health care workers from exposure to surgical smoke

Dear Chair Cyr, Chair Decker, and members of the Joint Committee on Public Health:

The American Nurses Association Massachusetts (ANAMASS), on behalf of the nurses of the Commonwealth, thanks the Committee for their hard work and wishes to express our support for surgical smoke plume evacuation in hospitals and ambulatory surgical centers.

Surgical smoke is a significant contaminant for indoor air quality in the operating room. Surgical smoke contains over 150 hazardous chemicals and carcinogenic and mutagenic cells. It contains toxic gases and vapors such as benzene, hydrogen cyanide, formaldehyde, bioaerosols, dead and live cellular material, blood fragments, and viruses. In reviewing the scientific literature and facts about surgical smoke, several key findings are concerning for the health of our patients, colleagues, and nurses. During surgery, there is a significant increase in Total Volatile Organic Compounds; Benzene concentrations remain constantly high, exceeding the limit values. The physical symptoms of the surgical team increase during operations, and they experienced increased complaints of tearing, burning in the eyes, hair odor, nausea, and cough compared to those working in other areas of practice.¹ There has been identification of histopathological changes in the nasal mucosa of healthcare professionals and the presence of toxic substances from smoke identified in the urine of patients and healthcare professionals.²

In addition, surgical smoke contains live viruses like HPV. There are documented cases of HPV transmission from patients to providers via surgical smoke inhalation. Upper airway mucosa is a more common anatomical site for warts in CO2 laser users compared to controls.³ Simple safety measures greatly reduce HPV contamination and transmission risk. Surgical smoke can cause cancer cells to metastasize in the incision site of patients having cancer removal surgery. Babies born by C-section breathe in their mother’s surgical smoke at birth. A single day in the operating room can be the equivalent of inhaling the smoke of 27-30 unfiltered cigarettes.⁴
Did you know that there are a wide variety of products that solve this problem which are inexpensive? However, many hospitals and surgical centers do not use these products, even if they have them. In fact, most surgical facilities in Massachusetts have surgical smoke evacuation equipment available. And while many of these facilities may evacuate surgical smoke during some procedures, few facilities evacuate consistently during all smoke-generating procedures.

At a time when health care workers are experiencing burnout and leaving the profession, this legislature can take an important step to protect the health and safety of OR staff and citizens of the Commonwealth.

Please support passage of S1332/H2192 An Act protecting patients and health care workers from exposure to surgical smoke

With Regards,

Silda Melo

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2 Canicoba, Adriane Reis Barletta et al. Surgical Smoke and Biological Symptoms in Healthcare Professionals and Patients: A Systematic Review Journal of PeriAnesthesia Nursing, Volume 37, Issue 1, 130 - 136
4 Surgical smoke may be impacting health of medical workers (abcactionnews.com)