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Grace Delizo
Senior Safety Engineer
Cal/OSHA Research & Standards Health Unit

RE: Cal/OSHA Surgical Plume Discussion Draft Comments

Dear Ms. Delizo,

On behalf of our 700,000 members, including 35,000 registered nurses, the California State Council of the Service Employees International Union (SEIU California) appreciates the opportunity to comment on the Cal/OSHA Surgical Plume discussion draft.

In doing research with our members employed in operating rooms, ambulatory surgical centers and other operations where plumes are generated from around the state, we have determined that while many hospitals may have the appropriate smoke evacuators, they are not routinely used, maintained, or tested. In conversations with our membership, it is often up to the surgeon or MD what equipment is used during surgeries. Unfortunately, our membership reports that safety equipment, that would remove surgical plumes from the room, is often not used. We also found that many employers do not have the appropriate ventilation systems in place. Staff also informed the union that their employers either have not trained staff on the safe use of this safety equipment or that it is so rarely used that many employees do not feel competent using the equipment.

After conducting these interviews with our members and reviewing the studies on the effects of surgical plumes, we believe that the exposure to surgical smoke to healthcare workers is a health hazard and would recommend that Cal/OSHA implement an effective and enforceable standard. Given that many hospitals do not comply with the current voluntary guidelines, workers are not trained on how to use equipment in the OR, and professional organizations (AORN) and health and safety agencies (NIOSH) understand the adverse effects of exposure to surgical plumes, it is imperative that Cal/OSHA creates and enforces a mandatory standard.

Specific comments on the Cal/OSHA draft language:

1. SEIU believes that, within the regulatory language, there should be a hazard assessment performed to determine workers risk of exposure to surgical smoke. This hazard assessment should occur with participation and input from workers

(healthcare workers who work where smoke is generated, infection control experts, technical experts, and clinicians) and their union representative or other designated representative, especially considering exposure and symptoms of exposure are often cumulative and occur over time. This risk assessment should include, but not be limited to, the type of equipment used, space, ventilation, positive or negative pressure ventilation, manufacturers specifications, and volume of plume.

2. Control measures, using OSHA's hierarchy of controls (elimination, substitution, engineering, administrative, and personal protective equipment(PPE)), should be part of the standard so that there will be no confusion that employers should be using the highest level of control at all times. The employer must ensure that all control equipment is maintained, serviced, tested, and documented according to manufacturer specifications.
3. When using engineering controls, equipment should be chosen with input from frontline workers, especially registered nurses, surgeons, infection control and biomed workers, materials management, occupational health and safety professionals, and other workers who may be expected to use the equipment. These safety controls, including filters, smoke evacuation, and room ventilation, should be activated at all times when surgical smoke is being generated. Other engineering control parameters that should be considered are site-of-origin, suction flow rate, distance to site, tubing size, exchanges per hour, etc. Smoke should also be considered a biohazardous waste and disposed of using Universal Precautions. Whether safety equipment is used or not, this decision should not be made by the surgeon, other MD, or the facility. (These controls must be mandatory and the employer must be held responsible that it is used correctly, as is with OSHA's successful Blood-borne Pathogen Standard.)
4. Respiratory protective equipment should also be used, such as a fit-tested N95 respirator or other NIOSH approved respirator since regular surgical masks do not provide adequate protections.
5. Under Definitions section, the following changes/additions should be made:
 - a) (b)(4): Energy-based device should remove the term "medical" before "device", as it could limit the scope of devices covered by this standard.
 - b) A definition of "hazard of surgical plume" should be included so that there is no confusion on the adverse effects of the plumes.
 - c) (b)(6): Filters should be added to the description for systems.
 - d) (b)(7): "Energy-based device" should be part of the definition.
 - e) (b)(9): The word contagion, should be included in the examples of airborne contaminants for surgical plume.

- f) Adding the definition of “employee” to include anyone present during plume generating procedures (contracted staff, temporary staff, or any other employees in the room).
6. Under the “Written Procedures” section of subsection (c), we would recommend replacing the word “Procedures” with the stronger “Program or Plan” language to mirror existing health and safety language. The verbiage is more specific and requires a more detailed plan. Thus, the Program/Plan should include the following:
- a) Procedures that evacuate all smoke generated.
 - b) Equipment that is readily available and in working condition.
 - c) The person responsible for implementing and overseeing the Plan should be identified in the regulations.
 - d) The development of a control plan for minimally invasive procedures. Many of these procedures are not done in the OR, but still generate plumes.
 - e) Procedures for reporting exposure, presumption of exposure, symptoms of exposure, treatment of symptoms, and medical screening for workers exposure to plumes. With this in mind, all of these procedures should be allowed without fear of retaliation. Moreover, ongoing oversight and assessment of the Plan should be in place to ensure that the Plan remains effective and that employers are complying with the regulation.
7. (d) (1) (B): This general ventilation requirement should not only apply in the hospital setting, but should be expanded to apply to all sites where plume is generated. In other words, the language should not be restricted to just the OR.
8. For section (d), subsection (4), the word “visible” needs to be deleted, as plume generated may not be visible.
9. In regards to subsection (e), the training should include a mechanism for documenting and determining whether or not workers understand the hazards of plumes, evacuation methods, proper equipment usage, and disposal of used tubing and filters. Language should include needs for refresher training requests, new equipment, and any in-services as needed.

SEIU California represents hundreds of thousands of healthcare workers who are committed to ensuring the safety of all workers. The comments outlined above will help develop a comprehensive regulation that will protect workers, across industries, from exposure to surgical plumes. For questions or comments please contact: Katherine Hughes, RN at hughesk@seiunaca.org or (619) 548-1811 or Mark Mendoza, Legislative Advocate for SEIU California State Council, at mmendoza@seiucal.org or 310-984-0746.

Thank you so much, and we look forward to working with you on protecting both workers and patients.

Sincerely,

Katherine Hughes, RN
Executive Director SEIU Nurse Alliance of California