MediSHARE Environmental Health and Safety Services

January 13, 2019
Via email: rs@dir.ca.gov

Ms. Amalia Neidhardt
Senior Safety Engineer
Division of Occupational Safety and Health
California Department of Industrial Relations
1515 Clay Street
Oakland, CA 94612

RE: Discussion Draft Regulations Occupational Exposure to Surgical Plume

Dear Ms. Neidhardt:

I am writing as an industrial hygienist who works with several hospitals and healthcare organizations, and have been a prior Chair of AIHA's Healthcare Working Group and member of the CIHC Board. Having attended the past advisory meeting, I appreciate the opportunity to comment on this discussion and draft regulations for occupational exposure to surgical plume. This is a draft of possible language in response to Occupational Safety and Health Standards Board Petition 567, and that this draft is for discussion purposes only, and is not a rulemaking proposal.

General Comments on the need for the Proposal:
As was mentioned by the NIOSH speaker, the science is not settled as to the health risks of exposure to surgical plume. Research on occupational exposure to the components of surgical plume (or smoke) has not shown levels to exceed established exposure limits and guidance levels. Therefore, it is unclear that a standard is necessary over and above what is required by a comprehensive injury and illness prevention program. Surgical plume exposures are intermittent and the plume itself is considered an intermittent irritant. The generation of a surgical plume is dependent on several factors including the surgical procedure, skill and techniques of the surgeon, the tissue being operated on, the room characteristics (including ventilation), and the proximity of individuals to the surgical site.

An employer's Injury and Illness Prevention Program (IIPP), prepared in compliance with Title 8 California Code of Regulations Section 3203 (8 CCR 3203), should address the surgical plume as a "hazard of the job" (albeit an irritant) if the employer's IIPP hazard evaluation is prepared by someone who is knowledgeable of these work environments.

We have the following specific comments for the Division's consideration:
§ 51XX (d)(1)(A) How applicable are all of the requirements of 5143 to a surgical environment?

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§ 51XX (d)(1)(B) Is 20 air changes per hour an established criterion for surgical rooms in general? If not, then what is the basis?

§ 51XX (d)(2) This seems vague. Can they offer any examples of such administrative controls?

§ 51XX (d)(3) Respiratory protective equipment in accordance with 5144 as required or voluntary? Based on the information presented in the NIOSH Health Hazard Evaluations (HHEs), selecting appropriate respiratory protection could be challenging. Unless representative plumes from different procedures can be analyzed to identify one or more toxins with established permissible exposure limits (PELs), then more likely than not, the plume would be categorized as a nuisance dust/odor, and it would be unlikely that the worker exposure would meet or exceed the current PEL for nuisance dust (10 $mg/m^3$) or respirable dust (5 $mg/m^3$). We recognize that this subsection is following the traditional hierarchy of controls; however, this may not be strictly applicable for this "exposure".

§ 51XX (d)(4) Are devices available that can provide appropriate eye protection for both a surgical environment as well as to protect against a possible eye irritation exposure?

§ 51XX (e) We understand that the list of elements is a typical list for employee hazard awareness and control training, but without better information on the contaminants in the plume, the associated health effects, and the feasibility of administrative controls, this may be requiring training that sets up an untenable situation for the employer.

We appreciate the opportunity to be involved with this Advisory Committee. Please let us know if there are any questions concerning the above-stated points. I may be reached by telephone or email at sderman@medishareehs.com

Sincerely,

Stephen Derman

Stephen Derman, FAIHA
President