Recent International Guidelines

In 2016, the WHO published recommendations for SSI prevention[4] and concluded: "laminar flow ventilation should not be used in patients receiving arthroplasty." The quality of the recommendation was "conditional" and the level of evidence "low to low enough." In 2017, the Centers for Disease Control and Prevention (CDC)[5] and the American College of Surgeons and Surgical Infection Society[9] published respectively new guidelines for SSI prevention without a specific recommendation on that topic (ie, "no recommendation" or "unresolved issue").

Discussion

Since the publication by Lidwell et al[10] in 1987, no new randomized clinical trial was published on this topic until the latest randomized study assessing the air quality in the operating room published by Oguz et al[8] in 2017. However, the endpoint was microbiological, and patients were not randomized according to the type of flow. Bischoff et al's meta-analysis[2] or the recent World Health Organization (WHO) guidelines[4] synthesized disparate and heterogeneous studies but relied on solid methods (grading of recommendations, assessment, development and evaluations, GRADE). However, the GRADE method is not always suitable and was not performed in 2015 to grade the French recommendations. With the current state of knowledge, the French Society of Hospital Hygiene highlights the importance of initiating a global risk analysis beyond on the air performance class in the operating room. The new French guidelines oublished in 2018 recommend the possible use of UAF only in prosthetic orthopedic surgery to reduce aerobiocontamination (with no SSI reduction evidence) and with a low level of recommendation. But this measure needs to be included in a bundle of prevention measures, including personal behavior and antibiotic prophylaxis, which remains the major preventive factor. This French opinion and new recommendations aim to help international hospitals in their choice of appropriated airflow, especially when designing or renovating an operating room.

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Improving the availability, accessibility, and use of eye protection in patient care settings

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To the Editor— The International Safety Center has been collecting occupational mucocutaneous exposure incidents for blood and body fluid splashes and splatters since the early 1990s through the Exposure Prevention Information Network (EPINet). In the last 5 years, according to aggregate data submitted via the EPINet network healthcare facilities and reported publicly, eye exposures often exceed 60% of all other mucocutaneous exposures reported to employee health.[1–5]

Because EPINet is the only surveillance system in the world that captures mucocutaneous exposures from health systems and reporting them publicly, it provides the only representative data that exist, and these data clearly illustrate that eye exposures make up the largest percent of any other reported/reportable non-sharp blood and/or body fluid exposure and that small percentages of employees indicate they are wearing any form of eye protection (eg, goggles, eyeglasses with sideshields, or faceshield). Most of these exposures occur in the patient room or the exam room (28.1%–61.3%) (Table 1).[1–5]

I read with interest Dr Mermel's letter, "Eye Protection for Preventing Transmission of Respiratory Viral Infections to Healthcare Workers" (November 2018) about the serious risks of any type of infectious or bloodborne disease to the unprotected eye.[6,7] Improving eye protection availability, accessibility, and use in patient and exam rooms is crucial to protecting not only worker safety but also patient safety and clinical outcomes. There is growing support for Dr. Mermel's recommendation " . . . to wear eye protection when caring

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Table 1. All Eye Exposure Incident Reports and Eye Protection Use Reported During that Exposure by Year; Exposure Prevention Information Network (EPINet) Healthcare Surveillance Research Group Network

Year	All Mucocutaneous Exposure Incidents/100 Average Daily Census (ADC)	% Eye Exposure Incidents	% Wearing Eye Protection	% Occurring in Patient/Exam Room
2017	10.1	48.1	3	61.3
2016	12.9	64.9	5.9	49.1
2015	11.4	66.9	6.9	51.9
2014	8.9	65.7	2.8	40.4
2013	5.9	64.5	12.8	28.1

for patients with suspected or proven respiratory viral infection. This protocol would err on the side of caution in an attempt to mitigate the risk of transmission to healthcare workers and others."

The Centers for Disease Control and Prevention (CDC), the Association of periOperative Registered Nurses (AORN), the Occupational Safety and Health Administration (OSHA), and others recommend similar protective measures: to use "(m)ask and goggles or a face shield . . . Use during patient care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions." Incidence data demonstrate that guidance is neither protective nor prescriptive enough. Because most mucus membrane exposures occur to the eyes and because eye protection use is low (2.8%–12.8%), more specific guidance needs to include use not only "when splashes or sprays are likely" but also with elements of measure, control, and surveillance (occupational health, environmental health and safety, industrial hygiene, employee health, infection prevention, etc. rounds). Healthcare employers should improve availability and accessibility of protective eyewear in patient, exam, and procedure rooms, similar to including infection prevention and control caddies (gloves, gowns) for transmission- and contact-based or isolation precautions.

Given the increasing prevalence in patients with coinfection of human immunodeficiency virus (HIV) and hepatitis C virus (HCV), hepatitis B virus (HBV), tuberculosis (TB), and multidrug-resistant organisms (MDROs) such as MRSA, protecting healthcare personnel is more critical than ever.[8–10] A single eye exposure can result in transmission of 1 or more pathogenic organisms that can result in occupational illness or infection.

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Why do susceptible bacteria become resistant to infection control measures? A *Pseudomonas* biofilm example

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To the Editor—Pseudomonas aeruginosa is an opportunistic pathogen involved in a wide variety of infections among hospitalized patients; it is one of the main agents that cause pneumonia in mechanically ventilated patients.[1] After colonizing the respiratory tract, *P. aeruginosa* may lead to extensive damage to the host tissues

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