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Barriers to the use of face protection for standard precautions by health care providers

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Abstract

Health care providers sometimes choose not to use face protection even when indicated as part of standard precautions. We performed a survey of pediatric health care providers to determine barriers to the routine use of face protection. Lack of availability at the point of care and a perceived lack of need were the most commonly cited issues. Continuing education is needed regarding situations in which face protection is indicated for standard precautions.

Keywords

Standard precautions; Eye protection; Health personnel

Standard precautions are essential in preventing exposure of health care providers to potentially infectious body fluids and secretions from patients.¹ Gloves, gowns, and face protection (including masks and eye protection) are all components of standard precautions. However, providers often forget or choose not to wear face protection in situations in which it is indicated.^{2,3} In December 2013, our infection prevention and control department received several phone calls from unit staff after exposure to a patient with possible *Neisseria meningitidis*. These providers had performed open suctioning on the patient without wearing face protection, before the potential diagnosis was considered. Based on this experience, we sought to identify the barriers to the use of face protection as part of standard precautions.

MATERIAL AND METHODS

We created a survey to assess practices and attitudes regarding the use of face protection by health care providers. The 10-item survey addressed frequency of use of face protection when suctioning and barriers to use. Items were written based on expert input from infection preventionists, hospital epidemiologists, and an infectious diseases fellow. The survey was pilot tested prior to fielding, and revisions were made based on the feedback provided.

We administered the survey in December 2013 using both electronic and paper modes to designated nursing leaders in intensive care units and medical floors. The nursing leaders then e-mailed it to nursing distribution lists and provided paper copies for other clinicians working on those units. The survey was considered a quality improvement activity, and institutional review board approval was not sought.

RESULTS

The survey was sent to 606 staff, and 221 individuals (36%) responded. Registered nurses accounted for most respondents (81%); other participants included respiratory therapists (9%), physicians (3%), and other clinicians (7%). Forty-six percent had >10 years of clinical experience, 26% had between 6 and 10 years, and 28% had <6 years of clinical experience.

A minority of respondents reported always or usually wearing a mask or eye protection while suctioning a patient (Fig 1). When asked why they did not use face protection in this clinical scenario, 48% reported that in an emergency, face protection is not a priority. Of the respondents, 35% identified that face protection is not readily available in the patient's room, and 15% felt they had to walk too far to obtain face protection. One-quarter of respondents reported they did not think face protection was necessary during open suctioning. Fourteen percent reported they wore eye glasses and therefore did not require eye protection, 8% felt that eye protection impedes their vision, and 7% thought face protection was too uncomfortable to wear.

To assess the availability of face protection, we asked where on each unit it was located. Locations identified by respondents included the clean supply room (43%), precaution carts outside the patient's room (31%), and inside the patient's room (26%). More than half (52%) thought face protection supplies should be kept within the patient's room to make it more accessible, and 35% thought these supplies belonged on the precaution carts outside the room.

When asked if they had ever regretted not wearing face protection, 34% responded yes. If face protection was more accessible, 37% said they would be more likely to use it, and 14% said they would not use it.

DISCUSSION

We identified that at our hospital, clinicians are not consistently compliant with using face protection as part of standard precautions while performing open suctioning. A common barrier cited was the lack of readily accessible supplies at the point of care. In our facility,

the variability in patient room and unit design makes it difficult to identify a single standard location that providers could associate with finding goggles or face shields. Most respondents felt that equipment should be available either in the patient's room or just outside the room with other precautions supplies, such as gowns and gloves. It is important for hospital infection prevention programs to recognize that if face protection supplies are not available at every bedspace or room, a substantial proportion of providers may choose to omit using face protection in situations in which it is indicated.^{4,5} In addition, our survey revealed that face protection was perceived by many providers as unnecessary, despite our inclusion of education about standard precautions as part of our hospital's required annual computer-based training for all clinicians.

Our survey had several limitations. We did not attempt to verify self-reported responses about the use of face protection, and we do not know whether nonrespondents would have answered differently. In addition, social desirability bias may have influenced the responses. Despite these limitations, it seems clear that more detailed education is warranted for clinicians about specific situations in which standard precautions should be used. Clinicians may be making a judgment that open suctioning poses no risk of splashing or spraying; if so, it is important to elicit such opinions to initiate a meaningful discussion about the potential benefits of face protection. The choice to omit face protection may also reflect the inconvenience of wearing goggles or a face shield during clinical care, as some of our respondents noted. Offering multiple design options and including frontline staff in decisions about product selection may help ameliorate these concerns somewhat, but ultimately the decision to use face protection will be made by individuals based on their assessment of risks versus benefits. The role of the infection prevention program should be to ensure that reasonable options are easily accessible and that providers fully understand the potential risk of transmission of infection at the time they make their decision.

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Fig 1.
Percentage of respondents wearing face protection during open suctioning.