Scoring Hospitals Using Written Respiratory Protection Programs and interview Responses Based on the OSHA Respiratory Protection Standard

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Objectives

•Evaluate overall respiratory protection programs in Illinois hospitals
  - •Score written respiratory protection programs and interview responses relative to the OSHA respiratory protection standard (1910.134)
  - •Compare hospital manager scores to unit manager scores to healthcare worker scores
  - •To compare hospital policies (written program) to their implementation (interview responses)

Introduction

•The impact of a pandemic influenza outbreak would be fast and deadly, as we have seen in previous years. Many patients will go to healthcare facilities to be treated. It is important that the healthcare facilities that they attend are adequately prepared to deal with these patients.

•The Center for Disease Control and Prevention (CDC) currently recommends healthcare workers use a disposable facemask when caring for patients with influenza and an N95 respirator when performing aerosol generating procedures on patients with influenza.

•The REACH (Respiratory Evaluation in Acute Care Hospitals) studies have been developed to better understand how hospitals implement, evaluate, and relay information to the staff regarding their respiratory protection policies. REACH I was conducted in California during the 2009-2010 influenza season. REACH II was conducted in 6 states across the United States (NY, NC, MI, CA, IL, MN) throughout 2011.

•This presentation examines the data from REACH II in Illinois hospitals.

Acknowledgements

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Written Respiratory Protection Score:

•Each hospital's written respiratory protection program was scored based on 11 elements of OSHA's respiratory protection standard. These elements are: written program, program administrator, risk assessment / respirator selection, information, maintenance and use, medical evaluation, fit testing, training, program evaluation, recordkeeping, and availability.

•Each of these elements was scored from 0-2 (present and complete – 2/2, present and incomplete - 1/2, not present - 0/2) giving each hospital a total possible score on their written program out of 22.

Figure 1: Written Program Score by Hospital

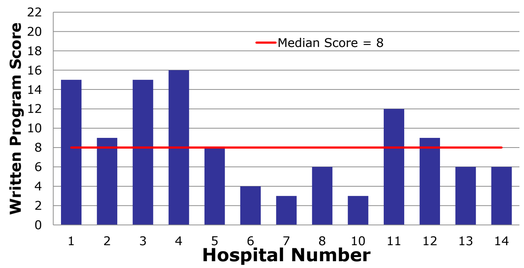


Figure 2: Written Program Score by Hospital All Hospital Averages by Element

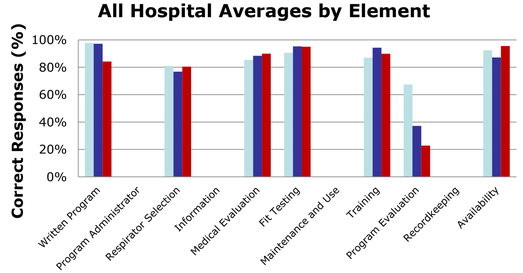
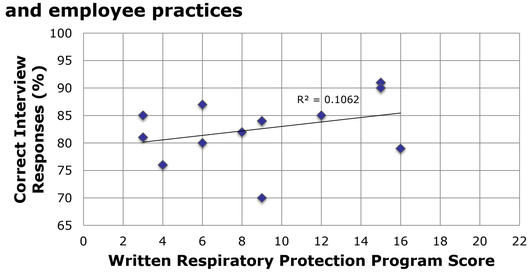


Figure 4: Association between hospital policies and employee practices



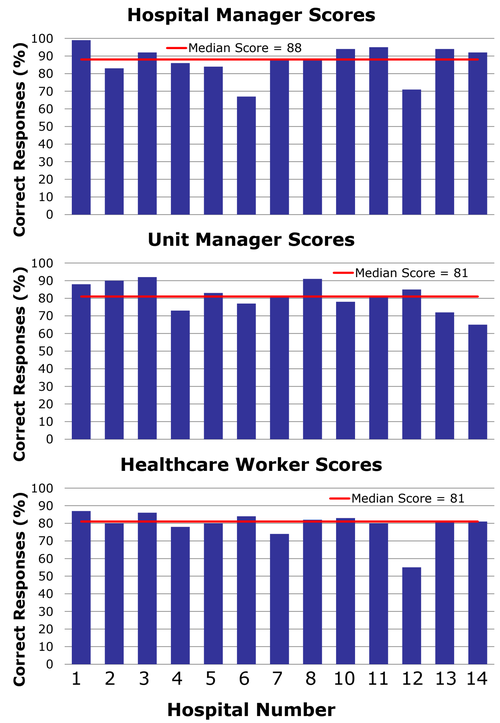
Interview Score:

•In-person interview questions were sorted into the same OSHA standard elements. For four elements (program administrator, information, maintenance and use, and recordkeeping) there were no applicable interview questions.

•For each of the other 7 elements, question responses were deemed correct or incorrect.

•The score is calculated as a percent of the number of correct answers for each interview question included in that program element.

Figure 3: Survey Response Scores by Hospital and Employee Type



Discussion

•None of the hospitals had a written program that included all of the elements required by the OSHA standard. The scores given to the written programs ranged from 3/22 to 16/22 with a median of 8/22 (Figure 1).

•Across the board, hospitals scored worst in Program Evaluation and Risk Assessment/Respirator Selection indicating clear areas to target improvements in Illinois hospitals (Figure 2).

•A model program for a hospital respiratory protection standard would be useful to help hospitals develop their policies. This has been developed and is given to each hospital.

•In general, hospital managers answered the most questions correctly compared to the OSHA standard and unit managers and healthcare workers answered the fewest questions correctly . This would indicate gaps in communication of policies to people on the floors.

•Hospital 12 scored the lowest for all employees for all areas of the respiratory protection standard. This hospital would be a good choice for a future respiratory protection intervention study.

•In general, a big difference was not observed between hospital management and healthcare workers (Figure 3).

•There is no correlation between written respiratory protection policies, based on the review of hospital written programs, and the implementation in hospitals, based on interview responses. In some cases, the in-person interview data suggest that despite unclear policies, interview respondents appear to know the requirements of the OSHA standard. In other cases, the written program scored well but interview respondents did not know the policy, indicating a possible gap in communication of policy to healthcare workers (Figure 4).

Limitations

•Interview questions were not designed to specifically judge compliance with the OSHA Respiratory Protection Program; no questions were included to evaluate program administrator, information, maintenance and use, and recordkeeping.

•Although measures were taken to limit subjectivity, it is possible that different evaluators scored written programs differently.

•Attempts were made to ensure the interviewed hospitals were representative of all hospitals in Illinois, but the final sample included more large, urban hospitals than in the underlying group of hospitals in Illinois.

•In some cases interviewees selected multiple answers resulting in difficulties in creating a consistent scoring protocol.

References

Centers for Disease Control and Prevention (2010). "Prevention Strategies for Seasonal Influenza in Healthcare Settings" http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm.