

ABSTRACT
Adherence to Respiratory Protection Guidelines by Healthcare Workers and Hospitals: the REACH 2 Evaluation

Kristina Peterson, Ph.D.¹ Debra Novak, DSN, RN.² Joel Hampton, MS¹ Lance Couzens, BS¹ and David Wilson, Ph.D.¹

¹ RTI International (RTI); ² National Personal Protective Technology Laboratory (NPPTL), National Institute for Occupational Safety and Health (NIOSH)

The REACH II evaluation examined healthcare workers' use of respiratory protection and assessed hospitals' adherence to standards and recommendations for respiratory protection programs, including employee medical evaluations, fit testing and training; the proper selection, use, maintenance, and inspection of respirators; and regular program evaluation and risk assessments.

Data for the evaluation were collected during 2011-2012 in 98 acute care hospitals in five regions across the country (North Carolina, Minnesota/Illinois, New York, Michigan, and California). Onsite surveys were conducted with hospital managers (HMs), unit managers (UMs), and health care workers (HCWs). Observational data were also collected through demonstrations of donning and doffing respirators by 300 healthcare workers. The 1500 survey participants, drawn from convenience samples, represented a variety of clinical specialties.

The data analysis includes descriptive statistics, cross-tabulations, and multinomial logistic modeling. For the one-way and two-way tables, adherence to standards and recommendations is based on hospital-level calculated values. For the multinomial models, individual-level adherence values are used. Independent variables include hospital size, geographic area, union membership, employment status, and whether the HCW received an influenza vaccination.

The study found high hospital-level adherence to requirements for an RPP and to fit testing standards, but also found notable gaps in knowledge and adherence among each respondent group. For example, HCWs are often unaware of which type of respiratory protection is required for infection diseases and are unclear about when to use respiratory protection, what type should be used, and how to properly don and doff respirators. There are also gaps in knowledge among HMs and UMs, particularly about protection against seasonal flu, medical reevaluations, program evaluation, risk assessment, and respirator maintenance. There are also significant differences across the respondent groups and states. For example, there are regional differences in HM and UM opinions regarding aspects of program evaluation, risk assessment procedures, employee training.