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Qualitative evaluation of Rhode Island's healthcare worker influenza vaccination regulations

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ABSTRACT

Objective: To evaluate Rhode Island's revised vaccination regulations requiring healthcare workers (HCWs) to receive annual influenza vaccination or wear a mask during patient care when influenza is widespread.
Design: Semi-structured telephone interviews conducted in a random sample of healthcare facilities.
Setting: Rhode Island healthcare facilities covered by the HCW regulations, including hospitals, nursing homes, community health centers, nursing service agencies, and home nursing care providers.
Participants Staff responsible for collecting and/or reporting facility-level HCW influenza vaccination data to comply with Rhode Island HCW regulations.
Methods: Interviews were transcribed and individually coded by interviewers to identify themes; consensus on coding differences was reached through discussion. Common themes and illustrative quotes are presented.
Results: Many facilities perceived the revised regulations as extending their existing influenza vaccination policies and practices. Despite variations in implementation, nearly all facilities implemented policies that complied with the minimum requirements of the regulations. The primary barrier to implementing the HCW regulations was enforcement of masking among unvaccinated HCWs, which required timely tracking of vaccination status and additional time and effort by supervisors. Factors facilitating implementation included early and regular communication from the state health department and facilities' ability to adapt existing influenza vaccination programs to incorporate provisions of the revised regulations.
Conclusions: Overall, facilities successfully implemented the revised HCW regulations during the 2012–2013 influenza season. Continued maintenance of the regulations is likely to reduce transmission of influenza and resulting morbidity and mortality in Rhode Island's healthcare facilities.
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1. Introduction

For over two decades, the Advisory Committee on Immunization Practices (ACIP) has recommended healthcare workers (HCWs) receive seasonal influenza vaccination annually [1,2]. Influenza vaccination reduces influenza-like illness [3–5] and absenteeism [6,7] in HCWs. Since many HCWs work during respiratory illnesses [3,4], HCW influenza vaccination also reduces illness and death among patients [5,7,8]. Despite debate about whether evidence justifies healthcare facilities requiring HCW vaccination to protect patients [9], a recent systematic review showed good evidence that HCW influenza vaccination reduces patient mortality [10].

Nationally, over 200 healthcare facilities and systems have implemented HCW influenza vaccination requirements [11]. Sixteen states have HCW influenza vaccination requirements, although the facilities covered and requirements' scopes vary: some require employers to offer influenza vaccination to HCWs, others require signed declinations from unvaccinated HCWs [12]. Only recently have state-level requirements incorporated stricter provisions for HCWs who remain unvaccinated, such as requiring them to wear procedure masks during patient care [13–15]. County-level masking requirements have also been implemented

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in some places: for example, 23 local health jurisdictions in California require unvaccinated HCWs to wear masks although there is no state-level requirement [16]. State and county-level masking policies have yet to be evaluated, but individual healthcare systems and facilities have reported requiring unvaccinated HCWs to wear masks is highly effective in increasing influenza vaccination coverage [17–19].

In 2007, the Rhode Island Department of Health ("HEALTH") promulgated regulations requiring facilities licensed by HEALTH to provide influenza education and offer influenza vaccination to HCWs with direct patient contact, record vaccine declinations, and report HCW influenza vaccination coverage to HEALTH [20]. In support of these requirements, Rhode Island provides influenza vaccine at no cost to healthcare facilities for HCW vaccination. Despite these efforts, HCW influenza vaccination coverage in Rhode Island increased slowly, reaching 74% in hospitals, 55% in home healthcare agencies, and 60% in nursing homes during the 2011–2012 season [21]. In response, HEALTH's Director convened a Flu Task Force (FTF) to identify barriers to increasing Rhode Islanders' influenza vaccination, focusing particularly on HCWs. The FTF included representatives from health systems, individual healthcare facilities and providers, healthcare payers, state chapters of provider or facility membership groups, advocacy organizations, and offices within HEALTH. After consulting with the FTF and conducting public hearings, HEALTH's Director issued a revision to Rhode Island's HCW vaccination regulations.

The revised Rules and Regulations Pertaining to Immunization, Testing, and Health Screening for Health Care Workers [15] ("the HCW regulations") require HCWs in licensed healthcare facilities either to receive annual influenza vaccination or formally decline vaccination by December 15 each year. Unvaccinated workers must wear a surgical face mask during patient contact when HEALTH's Director declares widespread influenza. Unvaccinated HCWs who fail to comply with masking face a $100 fine per violation if a complaint is filed with HEALTH, investigated, and heard by the appropriate licensing board. (The regulations do not define a penalty for facilities failing to report vaccination data to HEALTH.) The HCW regulations stipulate that ensuring compliance with the regulations is the responsibility of the facility's administrative head. The regulations define HCWs as any person temporarily or permanently employed by or at, volunteering at, or having an employment contract with a healthcare facility for whom face-to-face contact with patients is or may be routinely anticipated. The HCW regulations cover a variety of facilities, including but not limited to hospitals, community health centers, nursing homes, nursing service agencies, home nursing care providers, kidney disease treatment centers, and ambulatory surgical centers.

The revised regulations became effective October 25, 2012. On December 5, 2012, ten days before the regulation deadline, HEALTH's Director declared influenza widespread in Rhode Island [22]. To examine implementation of the HCW regulations and determine the impact of early widespread influenza circulation on implementation, HEALTH conducted a mixed-methods evaluation with the assistance of the Centers for Disease Control and Prevention (CDC). Qualitative results are presented here.

2. Methods

2.1. Participants and sampling

Semi-structured interviews were conducted in a sample of healthcare facilities subject to the HCW regulations. For the 2012–2013 influenza season, the regulations covered 271 facilities, of which 160 (59%) reported HCW influenza vaccination data to HEALTH.

Five facility types comprised the interview sampling frame: acute care hospitals, nursing homes, community health centers, nursing service agencies, and home nursing care providers. These types were targeted because they represented the largest numbers of facilities covered by the regulations. Facilities were selected for interviews in two groups based on whether they reported 2012–2013 vaccination data to HEALTH. Reporting facilities were stratified by facility type, size (two strata within each facility type based on number of employees), and reported HCW vaccination rate (above or below the median for that facility type). Participants were randomly selected from these strata. Among non-reporting facilities, participants were randomly selected without stratifying as data on number of employees and vaccination rate were unavailable.

2.2. Instruments

A standardized interview guide was adapted from instruments used in a previous evaluation of California's HCW vaccination regulations [23] and an evaluation of national HCW influenza vaccination reporting (CDC, unpublished). Additional items were included based on priorities identified by HEALTH staff involved in the evaluation. The guide included 20 items about facility HCW vaccination policies, efforts to promote HCW vaccination, interpretation and implementation of the HCW regulations including challenges and facilitators, and communication on the regulations by facilities and by HEALTH. Questions were open-ended; pre-defined probes were included to further explore participants' responses.

2.3. Data collection and analysis

Participants received a letter via e-mail signed by HEALTH's Director, describing HEALTH's effort to evaluate the HCW regulations and requesting their participation. The letter included assurances that participation was voluntary, confidential, and that responses would not be linked to respondents' identities. Subsequently, participants were contacted via e-mail or telephone to schedule and complete interviews, with 2–4 attempts made to contact each participant. Letters were sent to individuals identified by HEALTH as the primary person responsible for HCW vaccination data collection or reporting at their facility; this role was verified when participants were contacted to schedule interviews. This person was most often a member of the employee health or infection control staff or a director of nursing.

Interviews were conducted by three interviewers from JSI Research and Training Institute, Inc., a nonprofit public health research organization that provides technical assistance to public and private entities. Interviews were conducted via telephone from June 5–21, 2013 and transcribed. Two interviewers developed mutually agreed-upon coding themes for each question. Responses were coded individually by both interviewers and then reviewed jointly. Consensus on coding differences was reached through discussion. Common themes and illustrative quotes are presented.

This project was determined not to require institutional review board approval by human subjects representatives from CDC and HEALTH.

3. Results

A total of 20 facilities were selected for interviews: 15 reporting and 5 non-reporting facilities. Because several evaluation questions pertained specifically to the process of reporting HCW vaccination data and may not have been applicable to non-reporting facilities, we intentionally interviewed fewer non-reporting facilities. Of the selected facilities, 18 (90%) completed an interview,