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Vaccination Policies of Utah Family Practice Clinics

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ABSTRACT

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Purpose: The purpose of this study was to collect information regarding healthcare worker (HCW) vaccination policies in Utah family practice clinics.

Data sources: The study was conducted in Utah family practice clinics in the most densely populated counties in the state and was a cross-sectional descriptive design. Data were collected from 155 family practice clinic managers. Analyses included frequencies and percentages for quantitative items and a content analysis for open-ended items.

Conclusions: HCWs are employed in environments where infectious diseases can be easily spread from person to person, thus, vaccinations can be instrumental in protecting the health of HCWs and patients alike. In Utah, 56.8% of family practice clinics had either no vaccination policy for HCWs or had a policy with no consequences for noncompliance. Utah family practice clinics need to implement changes to create and maintain HCW vaccination policies.

Implications for practice: Nurse practitioners can be leaders and change agents by working with their county and state health departments to create state-wide policies that mirror the position statements from the American Nurses Association and the American Association of Nurse Practitioners.

Keywords: immunization, vaccination, heath care workers, family practice

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Vaccination Policies of Utah Family Practice Clinics

Vaccine-preventable diseases such as influenza, measles, and pertussis are on the rise in the United States (Lea, 2011), an issue that can be attributed to waning vaccination rates in American communities (Constable, Blank, & Caplan, 2014). As a result, every year more than 200,000 Americans are hospitalized for complications related to influenza (United States Department of Health and Human Services, 2014). Similarly, even though a safe and effective measles vaccination is available, there were 668 cases of measles reported in the United States in 2014, the highest number of cases in the last two decades (Centers for Disease Control and Prevention [CDC], 2014a). Additionally, cases of pertussis continue to increase (Debolt et al., 2012), a worrisome statistic considering the disease causes death, especially in infants under 3 months of age (CDC, 2014b).

Vaccines are routinely recommended for children, although the need for vaccines continues beyond childhood and into adulthood (CDC, 2014c). However, adult vaccination recommendations differ depending on the adult's age, lifestyle, co-morbidities, travel history, and previously documented vaccinations (CDC, 2012). Notwithstanding the potential variations in the recommended adult vaccination schedule, some vaccines are routinely recommended for the majority of adults including: 1) a measles, mumps, and rubella (MMR) vaccination as an adult (Immunization Action Coalition [IAC], 2014a); 2) a seasonal influenza vaccination every year (CDC, 2013a); 3) a tetanus vaccination every 10 years (CDC, 2013b); and 4) a one-time dose of pertussis in adulthood (CDC, 2013b).

As adults who are at-risk for contracting and spreading communicable diseases among co-workers and patients, it is especially important for healthcare workers (HCWs) to be fully vaccinated. In 2015, the Advisory Committee on Immunization Practices (ACIP) updated the

vaccine recommendations for HCWs (CDC, 2015). The updated HCW vaccination guidelines now include recommendations for two MMR, a seasonal influenza, one pertussis, two varicella, and three Hepatitis B (IAC, 2014b). Despite these recommendations, however, HCW vaccination rates are only 68% for Hepatitis B and 80% for influenza. No data are available on HCW vaccination for MMR and varicella, and pertussis vaccination rates among HCWs are reported to be suboptimal (CDC, 2011).

Vaccination recommendations for Utah HCWs follow the Immunization Action Coalition guidelines (Utah Department of Health [UDOH], 2010a). Since 2007, vaccination rates of hospital-based HCWs in Utah has been consistently higher than the national average (UDOH, 2010b). Notwithstanding these data, only 82% of Utah hospital staff were up-to-date on the influenza vaccine and only 53% of HCWs at long-term care facilities were adequately vaccinated for influenza (UDOH, 2010b).

While data are available on HCW vaccination rates in Utah hospital-based and long-term care facilities, the vaccination status of Utah outpatient HCWs is unknown. However, similar to hospital-based environments, HCWs employed in outpatient facilities also come into daily contact with patients. In the family practice setting, each healthcare provider spends about 34 hours of each work week in face-to-face contact with patients, accounting for approximately 89 patient encounters every week (American Academy of Family Physicians, 2011). Because some patients may be especially vulnerable to vaccine-preventable diseases, such as infants, the elderly, and immunocompromised (Infectious Diseases Society of America [IDSA], 2014), it is important for HCWs in the family practice setting to be fully vaccinated. Vaccination policies play an important role in ensuring that HCWs are fully vaccinated. Thus, the purpose of this

study is to collect information regarding HCW vaccination policies in Utah family practice clinics

Research Questions

1) How do managers of Utah family practice clinics describe their HCW vaccination policies?
2) What are the consequences regarding HCW non-compliance of vaccination policies Utah family practice clinics?

Methodology

Participants

Approval from the Institutional Review Board was granted prior to the collection of data. Informed consent was obtained from the participants. The sample included clinic managers from 155 Utah family practice clinics located in the most densely populated counties in Utah: Davis, Weber, Salt Lake, Utah, and Washington (United States Census Bureau, 2010). A list of family practice clinics in these counties was generated from an online search and healthcare provider information from local insurance companies (SelectHealth, Altius, Blue Cross Blue Shield). Clinic lists were cross-checked to avoid redundancies. To be eligible for participation, clinic managers needed to be employed either part-time or full-time in a family practice clinic in a densely populated county in Utah.

Setting

The study took place in Utah, the 33rd most populous state in the country. While most of the Utah land mass is rural, 89% of the population lives in urban areas. Additionally, 37% of Utah's total population reside in Salt Lake County. While Utah is one of the less populated

states, it had the third fastest population growth rate between 2010 and 2012 (Henry J. Kaiser Family Foundation, 2014).

Design

This study was a cross-sectional, descriptive design. The managers of Utah family practice clinics located in the most densely populated counties were initially contacted by phone to explain the study and eligibility requirements. After the initial phone call, the clinic managers received a packet that included the informed consent document, the study questionnaire, an addressed and stamped return envelope, and $1.00 incentive for participation. Four weeks after the initial mailing, a follow-up packet was mailed to all non-responders, although the cash incentive was not included in the second mailing.

Instrument

The original instrument was designed by a group of researchers from Utah and a panel of Utah health experts, including local and state health department employees, healthcare providers, and vaccination experts. The original questionnaire was pre-tested in 12 outpatient clinics, including family and primary care clinics, and then adjusted according to feedback. The questionnaire consists of six demographic, eight multiple choice and four open-ended items.

Demographic questions addressed the participants' (clinic manager) age, gender, and years worked at the clinic as manager. Also included were questions about the clinic, including whether it was located in an urban, suburban, or rural area, the average number of patients seen per day, and percentage of clinic employees working directly with patients during a routine work day.

Multiple-choice questions addressed clinic policies and procedures for vaccination of various employees (i.e. front/back office staff, in-house billing staff, support staff, and administrators). If employees were able to refuse vaccinations despite the presence of a clinic

vaccination policy, clinic managers were asked to select the response that most closely resembled the circumstances under which refusals were allowed. Clinic managers were also asked about the availability of the required vaccines and if the clinic offered the vaccines free of charge to employees. All multiple-choice questions also contained an "other" choice to allow the clinic manager to write in their own response.

The questionnaire concluded with four open-ended questions. These included questions on how long the employee vaccination policy was in effect, how often employee vaccination records were reviewed, and common barriers clinic managers faced with regard to the vaccination policies. There was also a space provided for clinic managers to provide any additional comments regarding their clinic's vaccination policy.

Data Analysis

Responses were entered into SPSS 21 (SPSS Inc., Chicago IL, 2012). After the data were entered, two separate researchers checked the data for accuracy. The primary investigator examined the items when there was a question regarding a marked response and determined the correct response. Frequencies and percentages were calculated for all quantitative items. Open-ended responses were transcribed and reviewed for themes utilizing content analysis methods. Both quantitative and qualitative results are reported.

Results

Of the 155 questionnaires mailed to Utah family practice clinics in Davis, Weber, Salt Lake, Utah, and Washington counties, 91 were returned for a response rate of 59%. The mean age of the clinic managers was 47 years (SD = 11.5). The average number of years the office manager worked at the facility was 11.2 years (SD = 8.1).

Demographic data were also collected on the family practice clinics. Of the responding managers, 34 clinics (46.6%) were located in a suburban setting, 32 (43.8%) were located in an urban setting, and 7 (9.6%) located in a rural setting. The average number of patients served in the clinic per day, not including on-call or hospitalized patients, was 113.7 (SD = 153.9) (see Table 1).

Vaccine Policy Description

Participants were asked to select the response that best described their facility's vaccination policy. Of those who responded, 30 (37.0%) managers stated vaccinations for employees were recommended, although employees were also allowed to refuse vaccinations without consequence, and 19 (23.5%) reported that employee vaccinations were mandated, although refusal to comply with the vaccination policy resulted in consequences other than termination. Only 18.5% (n = 15) of managers reported that employee refusal of policy resulted in termination. Data regarding Utah family practice clinics' vaccine policies are reported in Table 2.

Clinic managers were also asked to report which vaccines were included in the clinic's policy. Influenza was the most commonly selected response (n = 52, 57%), with forty-eight (52.7%) managers including hepatitis B in their vaccination policy. Tdap was included as part of the vaccination policy 37.4% (n = 34) of the time. All vaccinations included in the policy are reported in Table 3.

Clinic managers were also asked to specify the employees to whom the clinic's vaccination policy applied. Employees working in the back office (i.e. clinicians, medical assistants, and nurses) were selected most frequently (n = 61, 67%). Receptionists, schedulers, and other employees working in the front office were the next most commonly selected group (n = 53, 58.2%). Clinic managers and administrative staff were subject to the vaccination policy

49.5% (n = 45) of the time. Data regarding the type of employee to whom the vaccine policy applied are reported in Table 4.

The clinic managers were asked when their current policy was implemented and how often the employee vaccination records were reviewed. Twenty-four (92.4%) managers reported that the employee vaccination policy had been implemented within the last 15 years. However, 36 (58.1%) managers were unsure of the year the vaccination policy was implemented. When questioned about the frequency with which employee vaccination records were reviewed, 62.7% (n = 35) of clinic managers reported they reviewed the employee vaccination records every year.

Employee Refusal of Vaccines

Managers reporting that clinic employees could refuse vaccinations were asked to provide additional information about the refusal process. Vaccination refusals were allowed for medical reasons, as long as the employee had a written excuse from their healthcare provider (n = 35, 38.5%). Another 38.5% (n = 35) allowed employees to refuse the clinic vaccination policy if the vaccination did not align with their religious beliefs. Managers also allowed employees to refuse vaccinations for medical reasons even though the medical contraindication was self-reported by the employee rather than a healthcare provider (n = 34, 37.4%). Data are reported on Table 5.

Additionally, clinic managers were asked to describe the accepted method of documentation for refusal of vaccines. Most commonly, employee's vaccination refusal was formally documented on a paper form (n = 31, 49.2%). Interestingly, 16 (25.4%) managers either did not know how to document the employee's refusal of vaccines or reported that the employee vaccine refusal was not formally documented. Data on accepted methods of employee vaccination refusal are reported on Table 6.

When asked about what items were required on the employee vaccination refusal form, the clinic managers were instructed to select all that apply. The most commonly selected answer was a hand or electronic signed statement by the employee (n = 25, 27.5%). The second most common response was the inclusion of health risks to employees who refused vaccines for personal reasons (n = 18, 19.8%), followed closely by a statement of how refusal of employee vaccination poses a health risk to patients (n = 17, 18.7%). Data on the employee vaccination refusal form are on Table 7.

Managers were also asked about the presence of additional restrictions for unvaccinated employees who arrived at work while ill. Twenty-one managers (23.1%) required their unvaccinated and ill employees to wear masks if they had a fever, cough, or rash. Unvaccinated and ill employees were restricted from patient care duties 16.5% (n = 15) of the time when they had a fever, cough, or rash. Interestingly, 22 (24.2%) clinic managers reported there were no additional safety requirements for unvaccinated employees who reported to work while ill. Complete data presented in Table 8.

Vaccine-related Services for Employees

Clinic managers were asked to select all the vaccine-related services available for their employees. Clinics providing vaccinations free of charge to their employees was the most frequently selected response (n = 53, 58.2%). Thirty-six (39.6%) managers reported their employees were provided specific education regarding the benefits and risks of vaccinations. The third most commonly selected response was that employee vaccination rates were tracked on a regular basis (n = 27, 29.7%). See Table 9 for complete data.

Vaccine Policy Barriers

Clinic managers were asked to provide an open-text response regarding the barriers they encountered to having a clinic vaccination policy. Thirty-six (39.5%) responses were able to be

coded into themes. The two main themes were problems with policy resistance and enforcement. The two minor themes included concern regarding violation of employee rights and limited resources.

Resistance to employee vaccination policies (n = 9, 25%) and enforcement of the policies (n = 9, 25%) were the two most common themes. Managers expressed problems with employee resistance to the vaccination policy with comments such as, "Our doctor believes that vaccination is a personal choice. She does not believe all vaccinations are necessary for healthy adults," and "[There are issues with] the employees' willingness to do them." Managers also reported that enforcing the vaccination policy posed a challenge in comments such as, "[It's difficult to] keep track of vaccinations/employee medical records," and "[It's challenging to] remember to do it once a year."

Violation of employee rights, privacy and freedom (n = 4, 11%) and unavailability of resources (n = 4, 11%) were also cited as formidable barriers to executing a clinic vaccination policy. Managers expressed concern regarding the potential violation of employee's rights, privacy, and freedom with comments such as, "Employees should be able to choose if they want vaccinations or not," and "[Vaccination policies] don't allow for employee choice. They feel forced to do something they may not want to do." The lack of resources was reported as a barrier to enforcing the clinic vaccination policy with comments such as, "…a small clinic like this one does not have resources to administer and enforce such a policy in terms of finances and manpower," and "The largest barrier for us is having a more inclusive vaccination policy is cost." Frequencies of all themes are reported on Table 10.

Discussion

HCWs are employed in an environment where they may regularly come into contact with infectious disease, thus, vaccinations are instrumental in protecting the health of HCWs (Infectious Diseases Society of America, 2015) and, by extension, those with whom HCWs have close contact beyond the work environment. Vaccinations not only benefit HCWs personally, but also protect the health and safety of the patients entrusted to their care. HCWs, therefore, have a professional and ethical responsibility to be fully vaccinated (Ottenberg et al., 2011; Theodoridou, 2014). However, not all institutions have HCW vaccination policies and even those who do may have policies with no real consequences for noncompliance. While most of the research thus far regarding HCW vaccinations has focused on the inpatient environment, the researchers of this Utah study found that outpatient family practice clinics also struggle with ensuring full vaccination of all HCWs. In fact, most of Utah family practice clinics either had no vaccination policy for HCWs or had a vaccination policy with no consequences for noncompliance. Hence, it is necessary for family practice clinics to revisit existing HCW vaccination policies and to consider toughening consequences for noncompliance. Furthermore, family practice clinics with no HCW vaccination policy should institute a policy following the guidelines set forth by the ACIP.

Since 2009, the Centers for Disease Control and Prevention (CDC) have recommended the use of a mask by HCWs in healthcare settings to prevent the spread of influenza, particularly when the HCW or patient has a fever. However, the CDC also states that no studies have definitively proven that wearing a mask prevents the transmission of influenza from infectious patients or infectious HCWs (CDC, 2009). While vaccination remains the most effective tool in preventing the spread of infectious diseases (World Health Organization, 2015), many inpatient

facilities still allow unvaccinated HCWs to continue working with the requirement of wearing a mask (Immunization Action Coalition, 2015). In our sample, few of the family practice clinics required unvaccinated HCWs who were ill to wear a mask while at work. Furthermore, it is concerning that less than one-fourth of Utah family practice clinics had no additional requirements for unvaccinated employees who reported for work with an illness. Consequently, family practice clinics should reconsider HCW vaccination policies and implement more stringent vaccination policies. Rigorous influenza vaccination policies (i.e. requiring HCW vaccination or donning of mask during the entire influenza season) have the potential to improve HCW vaccination rates for influenza in particular. For example, in one British Columbia study, providing HCWs with the option of either receiving an influenza vaccination or requiring mask usage, independent of the presence of illness, during influenza season resulted in improved influenza vaccination rates, from 40% to 74% within one year (Ksienski, 2014).

HCW resistance to mandatory vaccination policies was cited as a formidable barrier to enforcing a clinic vaccination policy. Nevertheless, according to recent studies the majority of HCWs believe the influenza vaccine is both safe and effective (Maurer, Harris, Black, & Euler, 2012). Some HCWs, however, maintain that vaccination mandates with consequences for noncompliance are too harsh (Winston, Wagner, & Chan, 2014). Thus, some HCWs do not want to be required to abide by vaccination policies, even though the majority of HCWs also believe vaccinations to be safe. While HCW vaccination requirements may be uncomfortable to some HCWs, it should be noted that there is also "no evidence to support concern that psychosocial harm from a mandatory policy…alienate[s] staff [or] damage[s] morale" (Sullivan, Jacobson, & Poland, 2009, p. 1497).

Implications for Practice

According to the American Association of Nurse Practitioners (2013), nurse practitioners have a responsibility to "promot[e]…optimal health," (para. 9) as well as to "promot[e] a safe environment" (para. 12). Additionally, the American Nurses Association (2015) recently updated their official statement on vaccines stating, "To protect the health of the public…all health care personnel…should be vaccinated according to current recommendations for immunizations by the CDC and Association for Professionals in Infection Control and Epidemiology" (para. 2). Ensuring all HCWs in the family practice clinic are adequately vaccinated promotes the optimal health of patients and HCWs by preventing the spread of infectious diseases. Therefore, supporting HCW vaccinations and vaccination policies within the family practice clinic setting simultaneously promotes a safer environment for all individuals.

Study Limitations

The convenience sample for this study was from one state and included the most densely populated counties in Utah. Therefore, the findings may not represent the entire population in the less populated counties in Utah or other family practice clinics located in the United States. Furthermore, because the sample only included family practice clinics, the findings may not represent vaccination policies in other specialties, such as pediatrics or oncology.

Conclusion

Rates of vaccine preventable diseases have steadily risen during the last 5 years. Thus far, the majority of research involving vaccination compliance has been conducted in the field of pediatrics, although the vaccination of adults is also an important aspect of community health. HCWs, in particular, are employed in environments where infectious diseases can be easily spread from person to person. In this study of family practice clinic vaccine policies, it is

apparent that these clinics need to implement changes to create and maintain HCW vaccination policies. The presence of vaccination policies positively influences HCW compliance with the HCW vaccinations recommended by the ACIP. Nurse practitioners are in a key position where they should utilize their clinical expertise and patient advocacy skill to facilitate a safe environment for patients where the spread of infectious disease from HCW to patient is halted through vaccination policies.

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Table 1

Demographics

Result	Frequency (%)	Mean	SD
Manager demographics			
Female	59 (74.7)		
Male	29 (25.3)		
Age		47	11.5
Years managing the clinic		11.2	8.1
Clinic demographics			
Suburban	34 (46.6)		
Urban	32 (43.8)		
Rural	7 (9.6)		
Number of patients per day*		113.7	153.9

*Not including on-call or hospitalized patients

Table 2

Consequence of vaccination refusal

Result	Frequency	Percent
Vaccination recommended with no consequence for noncompliance	30	37.0
Vaccination mandated with consequences other than termination for noncompliance	19	23.5
No vaccination policy	16	19.8
Vaccination mandated with termination for noncompliance	15	18.5
Other	1	1.2

Table 3

Vaccinations included in the clinic's policy

Result	Frequency	Percent
Influenza	52	57.0
Hepatitis B	48	52.7
Tetanus, diphtheria, and pertussis (Tdap)	34	37.4
Hepatitis A	29	31.9
Measles, mumps, and rubella (MMR) or proof of the disease	23	25.3
Varicella or proof of the disease	16	17.6

Table 4

Employees subjected to vaccination policy

Result	Frequency	Percent
Back office staff (clinicians, medical assistants, and nurses)	61	67.0
Front office staff (receptionists, schedulers, etc.)	53	58.2
Clinic managers/administrators	45	49.5
In-house billing staff	36	39.6
Support staff (custodians and IT support)	29	31.9
Other	10	11.0

Table 5

Acceptable refusals to vaccination policy

Result	Frequency	Percent
Refusal for medical reasons with written excuse from employee's health care provider	35	38.5
Refusal for religious reasons	35	38.5
Refusal for medical reasons as reported by employee	34	37.4
Refusal for personal beliefs	26	28.6
Refusals not allowed	3	3.3

Table 6

Accepted methods for employee vaccination refusal

Result	Frequency	Percent
Formally documented on paper form	31	49.2
Don't know	9	14.3
Refusal informally documented (verbal/email communication)	8	12.7
Formally documented on electronic form	7	11.1
Not documented	7	11.1

Table 7

Information included on vaccine refusal form

Result	Frequency	Percent
Employee signature statement (hand or electronic)	25	27.5
Personal risk (of vaccine refusal)	18	19.8
Risk to patients (of vaccine refusal)	17	18.7
Employee explanation for refusing vaccination	13	14.3
Facility rationale for requiring the vaccine	12	13.2
Don't know	5	5.5

Table 8

Required actions for unvaccinated and ill employees

Result	Frequency	Percent
No additional requirements for employees	22	24.2
Employees required to wear masks in the event of a fever, cough, or rash	21	23.1
Fever	12	13.2
Cough	15	16.5
Rash	9	9.9
Employees restricted from patient care duties in the event of a fever, cough, or rash	15	16.5
Fever	11	12.1
Cough	9	9.9
Rash	6	6.6
Employees temporarily suspended in the event of a fever, cough, or rash	2	2.2
Fever	2	2.2
Cough	2	2.2
Rash	2	2.2

Table 9

Vaccine-related services for clinic employees

Result	Frequency	Percent
Free vaccines to employees	53	58.2
Education on the benefits/risks of vaccination	36	39.6
Regular tracking of employee vaccination rates	27	29.7
Employee vaccinations offered during nights and weekends	20	22.0
Vaccination rates reported to administrators/owners	17	18.7
Vaccinations offered during employee meetings	11	12.1
None of the above	3	3.3
Incentives for employee vaccination	1	1.1
Other	1	1.1

Table 10

Significant barriers to employee vaccination policy

Result	Frequency	Percent
Resistance to policy	9	25
Enforcement of policy	9	25
Violation of employee rights, privacy, freedom	4	11
Available resources for policy	4	11
Lack of understanding	3	8.3
Miscellaneous responses	7	19