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State Requirements for Childhood Vaccination
Exemption Forms in the United States

Katherine Elizabeth Hill

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

State Requirements for Childhood Vaccination Exemption Forms in the United States

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Background: In the United States, children must be vaccinated in order to attend school, although parents also have the right to request a vaccine exemption. The type of vaccine exemption varies by state but can include exemption for religious, philosophical, medical, and temporary medical reasons. The purpose of this research was to identify the use of provider signature requirements and fees in states during the vaccine exemption process.

Methods: A questionnaire was sent to immunization managers in the 50 United States, District of Columbia, the United States Indian Health Service, and eight United States territories. The managers were asked if their states required a provider, or other individual, to sign the exemption form prior to granting a vaccine exemption. If a provider signature was required to validate the vaccine exemption form, immunization managers were then asked to identify what type of provider was allowed to sign the form. Immunization managers also reported on whether parents needed to pay a fee in order to obtain a vaccine exemption.

Results: A provider signature was most frequently required on medical vaccine exemption forms. For religious exemptions, only two states required a signature from a religious leader. Three states allowed a physician, nurse practitioner, physician assistant, and naturopath to sign philosophical vaccine exemption forms. For medical and temporary medical vaccine exemption forms, the majority of states allowed a physician, nurse practitioner or physician assistant to sign the form. Only one state, Utah, confirmed that a fee was required to obtain religious or philosophical vaccine exemptions.

Conclusion: With the hope of reducing vaccine exemption rates, some states employ various obstacles to obtaining and validating a vaccine exemption form, such as requiring a provider signature or charging a fee to process the exemption form. Surprisingly, only a few states required a provider signature on religious and philosophical exemption forms and only one state reported charging a fee to obtain a vaccine exemption form. Identifying these data provides opportunities to further study the effectiveness of various vaccine exemption obstacles.

Keywords: vaccination, exemption, immunization, state requirements, provider, fee

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State Requirements for Childhood Vaccination

Exemption Forms in the United States

Vaccines are one of the most significant public health contributions (Sabnis & Conway, 2015), and are largely responsible for the worldwide reduction in deaths from infectious disease. In the early 1900s, infectious diseases were the leading cause of death; however, after the development of vaccines the number of infectious disease-related deaths decreased. The World Health Organization (WHO) (2016) estimates that vaccines prevent 2-3 million deaths every year. Childhood vaccinations, in particular, will prevent 322 million cases of disease in children born between 1994 and 2013 which amounts to a net societal cost savings of \$1.38 trillion (Hill, Elam-Evans, Yankey, Singleton, & Kolasa, 2015).

As incidence of vaccine preventable diseases (VPD) decreases, public perceptions regarding necessity of vaccines also declines (Atwell & Salmon, 2014). In the absence of active preventable disease illnesses, VPDs are sometimes perceived as less of a threat than potential vaccine side effects and adverse events. Skepticism regarding vaccine safety negatively influences vaccination rates, which then leads to a resurgence of VPDs. For example, high vaccination rates against measles resulted in a potential eradication of the disease in 2000; however, the lack of visible measles infections resulted in less vaccination. According to the Centers for Disease Control and Prevention (CDC) (2014), measles vaccination rates fell below 90% in 17 states during 2013. As a result, there were 644 reported cases of measles in the United States (U.S.) during 2014, which was three times as many cases as during 2013 (Horne, Powell, Hummel, & Holyoak, 2015). In response, Healthy People 2020 set a goal to reach at least 90% childhood vaccination adherence by 2 years of age. However, data published in 2014 indicate that only 72% of children in the U.S. had received all vaccines per the recommended

vaccine schedule by the time they were 35 months of age (Papachrisanthou, Lorenz, & Loman, 2016).

The states govern vaccine laws, primarily through the educational system (Bradford & Mandich, 2015). All private and public schools in the U.S. require children to be compliant with vaccine requirements according to state law. Thus, parents refusing to vaccinate their children must obtain a state authorized vaccination exemption form prior to school entry (CDC, 2015a). The process of obtaining a vaccination exemption form varies from state to state.

Three types of vaccination exemptions are allowed in states across the U.S.: medical, religious, and philosophical (CDC, 2015b). All states allow a medical exemption when a child has a physical ailment that is a contraindication for vaccination. In addition, some states grant exemptions for non-medical reasons, namely religious and philosophical, if parents' religious or philosophical beliefs are contrary to vaccinations. As of 2016, 47 states allow parents to refuse childhood vaccinations based on religious beliefs. In addition, 18 states sanction philosophical exemptions (Billington & Omer, 2016).

Vaccination exemption rates have significantly increased in the last 10 years. Religious and philosophical exemptions account for most vaccination exemptions (Bradford & Mandich, 2015). Interestingly, states with simpler vaccination exemption procedures have more than twice as many non-medical exemptions as states with more complicated exemption procedures (Blank, Caplan, & Constable, 2013). Ideally, parents' decisions to claim vaccination exemptions should be unaffected by the ease of obtaining a vaccination exemption; however, complex exemption procedures effectively reduce the number of children exempted because of convenience rather than strong philosophical or religious views (Rota et al., 2001).

To decrease the number of schoolchildren with vaccine exemptions, and to ensure vaccine exemptions are not overly convenient for parents to obtain, some states employ various obstacles to obtaining a vaccination exemption. Two potential obstacles include: 1) requiring parents to obtain a provider's signature (such as a healthcare provider [HCP], religious leader, pharmacist, or naturopath) or other individual's signature (such as a notary, county health department nurse, or the court) to validate the vaccination exemption form; or, 2) pay a fee for vaccination exemptions. It is unknown, however, how many states employ these two specific tactics. Accordingly, the purposes of this research were to collect data from each of the 50 states, the District of Columbia, the Indian Health Service, and eight U.S. territories regarding: 1) whether a provider or other individual was required to sign vaccination exemption forms and if so, which types of providers/individuals were authorized to sign exemption forms; and 2) whether fees, fines, or penalties were required to obtain vaccination exemptions and if so, how these funds were utilized.

Research Questions

1. Which states require parents seeking a vaccination exemption to obtain a provider or other individual signature on either religious, philosophical, medical, or temporary medical exemption forms?
2. Which providers or other individuals are authorized to sign religious, philosophical, medical, or temporary medical exemption forms?
3. Which states require parents seeking a vaccination exemption to pay fees, fines, or penalties prior to obtaining a vaccination exemption form?
4. How are states utilizing the funds generated from vaccination exemption forms?

Methodology

Participants

The sample consisted of the immunization managers of all 50 states, District of Columbia, the U.S. Indian Health Service, and eight U.S. territories (American Samoa, Commonwealth of the North Mariana Islands, Federal States of Micronesia, Guam, Marshall Islands, Palau, Puerto Rico, and the Virgin Islands) for a total sample of 60 participants. The list of state immunization managers was generated from state health department websites and verified with the Association of Immunization Managers (AIM) which is the professional organization for state immunization managers. The immunization managers (hereafter referred to as “state”) needed to have first-hand knowledge of the vaccine exemption procedures for his/her jurisdiction to participate in the study.

Design

After review, the Institutional Review Board declared the study exempt because the sample consisted of state vaccination experts providing expert opinion rather than personal perceptions. The study was a descriptive design. Initially, AIM contacted states to explain the study and clarify the participation requirements. After making initial contact, AIM emailed an electronic link to the states directing them to complete a Qualtrics online questionnaire. AIM also sent a reminder email to all non-responders 3 weeks after the initial contact. A \$50 Visa gift card was offered as an incentive to participants who completed the study.

Instrument

No previously designed tools were available; consequently, researchers developed an instrument in collaboration with representatives from the AIM Research Committee (comprised of immunization program staff, immunization program managers, and staff from the CDC). The Qualtrics online questionnaire utilized skip logic which created unique pathways for each state, depending on the responses provided. The data presented in this article reports results of 2 core and 9 follow-up questions, all of which relate to vaccination exemption obstacles. One core question allowed respondents to select their response from Yes/No/Not Sure/NA choices and the second core question allowed for a Yes/No response. Follow-up questions included 4 multiple choice and 5 open-ended items.

Data Analysis

Quantitative data were entered into SPSS 23 (SPSS Inc.; Chicago IL, 2015). Data were then checked for accuracy by two researchers. The primary investigator read the responses and a co-investigator reviewed the entered data. Two researchers performed a content analysis of the open-ended responses.

Results

States Requiring Provider Signatures

For research question #1, states were asked if a provider or other individual signature was required on vaccine exemption forms. There were 47 states that responded. Data regarding which states required a provider or other individual signature for each type of vaccine exemption are listed in Table 1.

Recognized Providers

To answer research question #2, states were also asked what type of provider signatures were recognized as acceptable, or qualified, to validate each type of exemption form. Fifty states

(96.1%) responded. Only two states (New Hampshire and Wyoming) did not respond to this question. All data are reported in Table 2.

Provider signatures for religious exemptions. States were asked what type of provider signature was needed to validate the religious exemption form. Forty states responded. Only two states (5%), New Mexico and Oklahoma, required a religious leader to sign the religious exemption form; however, both states reported the religious exemption form could also be signed by a parent. Oklahoma and Washington (5%) were the only two states that accepted religious exemption forms signed by a naturopath provider. There were two states (5%) that allowed HCPs (specifically physicians, nurse practitioners [NPs], and physician assistants [PAs]) to validate the religious exemption form with a signature. Thirteen states (32.5%) reported the option of a religious exemption, but there were no specifics outlining who was qualified to sign the religious exemption form (See Table 2).

Also answering the second research question, there were 26 states who selected the “other” option when identifying providers and/or individuals eligible to sign, and thus validate, the religious exemption form. The most common response was that states allowed parents to sign the religious vaccination exemption forms (n = 12; 46%). Four states (Alaska, Iowa, Texas, and Virginia) (15.3%) required all religious exemption forms to be notarized. A signature from a public health representative was required by 4/26 (15.3%) states. The remaining *other* responses included three states requiring dual signatures by parent and notary (11.5%), and individual states requiring either parent or religious leader signature (3.8%), Registered Nurse signature (3.8%), or court order (3.8%) (see Tables 2 and 3).

Provider signatures for philosophical exemptions. Three states (3/13; 23%), California, Oregon, and Washington, confirmed the need for a physician, NP, or PA to legalize

the philosophical exemption form. All three of these states (23%) also recognized the naturopath as a provider who could certify the philosophical exemption with a signature. Six states (46%) had a philosophical exemption option, but had no specific guidelines on who could sign the philosophical exemption form (see Table 2).

Also related to research question #2, eight states selected the “other” response when asked to identify providers or individuals allowed to sign philosophical exemption forms. The most commonly selected response was parents validating the form with a signature (3/8; 37.5%). Two states (25%) reported that a public health representative needed to sign the philosophical exemption form. Remaining single state responses included: 1) Registered Nurse (12.5%); 2) school nurse (12.5%); and 3) notary (12.5%) (see Table 3).

Provider signatures for medical exemptions. Regarding the medical exemption form, 43/46 (93.4%) states required parents to obtain a physician signature before acknowledging exemptions. Twenty-two (47.8%) states allowed NPs and 18 (39.1%) authorized PAs to sign. Two states (4.3%) accepted medical exemption forms signed by a naturopath and one state (2.1%) accepted medical exemption forms signed by a pharmacist. Only one state (2.1%) reported having a medical exemption option with no specifics regarding who could legally sign the medical exemption form, thus verifying that vaccinations were medically contraindicated (see Table 2).

Also related to research question #2, only three states selected the “other” option when asked which providers and/or individuals were qualified to sign the medical exemption form. Two of the states (2/3; 66.6%), Maryland and Utah, authorized public health representatives to approve and sign medical exemption forms. One state (1/3; 33.3%), American Samoa, required a court order before accepting a medical exemption form (see Table 3).

Provider signatures for temporary medical exemptions. When questioned whether a physician signature was required to validate a temporary medical exemption form, 18/21 (85.7%) states affirmed a physician's signature was necessary. Six states (6/21; 28.5%) recognized NPs and 4/21 (19%) identified PAs as qualified to sign a temporary medical exemption form. One state (1/21; 4.7%) permitted naturopaths to validate a temporary medical exemption with a signature. Only one state (1/21; 4.7%) reported having a temporary medical exemption option with no specific policies delineating which providers and/or individuals could sign the form (see Table 2).

Also answering research question #2, there were three states that selected the "other" option when identifying providers and/or individuals who could authorize a temporary medical exemption. Of these three states, one (1/3; 33.3%) accepted temporary medical exemption forms signed by school nurses and two (2/3; 66.6%) states required a public health representative signature before permitting a temporary medical exemption (see Table 3).

Exemption Fees

For the third research question, all states were questioned regarding fees/fines/penalties associated with different types of vaccination exemption forms. Only one state (1/52; 1.9%), Utah, confirmed a fee was required before parents could obtain a vaccination exemption form in some, but not all, of the counties in the state. When Utah county health department agencies imposed a fee for the vaccination exemption form, it was collected for religious and personal exemptions but not for medical. When asked about the fee amount, Utah reported county health departments charged up to \$25 per child for religious and personal exemption forms. Each county health department was responsible for collecting the vaccination exemption fee and could

utilize the fees as deemed appropriate. Due to only one state collecting exemption form fees, our last research question was mute regarding how those fees were utilized.

Discussion

States with more difficult exemption processes tend to have lower vaccination exemption rates and fewer cases of VPDs (Bradford & Mandich, 2015). Mandating HCP signatures on vaccination exemption forms is just one approach to make the process of obtaining vaccination exemptions a little more difficult for parents, which may help reduce the number of vaccination exemptions obtained for convenience sake (Rota et al., 2001). Another purpose for requiring a HCP signature is that to obtain the signature, parents need a face-to-face meeting with a HCP, thus allowing the HCP to address any vaccine-related questions the parent may have (Yang & Silverman, 2015). Because HCP visits usually take place in a clinic-type setting where vaccinations are readily available, parents have another opportunity to vaccinate the child rather than simply obtain a HCP signature on the vaccination exemption form.

Currently, HCP signature requirements for obtaining vaccination exemption forms vary widely among states as there is no national guideline outlining which HCPs *should* be authorized to sign vaccination exemption forms. Instead, state officials are responsible for determining if a HCP signature is required before granting a vaccination exemption and, if so, the types of HCPs authorized to sign the form. The lack of continuity between states, however, provides little assurance that vaccination exemptions are, in fact, reviewed by qualified individuals with accurate data. Therefore, it may be beneficial to establish a national guideline to identify which type of HCPs should be allowed to sign exemptions. Providing such a guideline would help ensure that only those with proper training and education make critical decisions, such as

deciding to exempt a child from receiving vaccinations, especially for medical and temporary medical conditions.

Pediatric HCPs, in particular, are one of parents' primary sources of information regarding vaccines (Freed, Clark, Butchart, Singer, & Davis, 2010). Pediatric HCPs have the potential to allay fears and dispel myths regarding vaccinations. In fact, parents who consult with HCPs are less likely to have hesitations regarding vaccinating their children (Wheeler & Buttenheim, 2013). However, despite trusting the advice of their pediatric HCP regarding a multitude of topics, some parents believe providers are unprepared to properly educate families about the risks and benefits of vaccination (Glanz et. al, 2013). In addition, providers may be hesitant to discuss vaccination with parents because providers feel uncertain about vaccination information (Kennedy, Lavail, Nowak, Basket, & Landry, 2011).

Implementing a standardized education module ensures all parents seeking a vaccination exemption receive uniform and scientifically-based vaccination information, regardless of geographical location, access to a HCP, or time restrictions with HCPs during clinic visits. In 2014, Oregon was the first state to pass legislation regarding the use of a standardized vaccine education module. The Oregon law requires parents seeking a nonmedical vaccine exemption to either complete the online education module or receive vaccine education from their HCP (Oregon Health Authority, 2015a). Within 1 year of enacting Oregon's new vaccination law, total Kindergarten vaccination exemptions fell from 7% to 5.8%, which is a 17% decline (Oregon Health Authority, 2015b). Most recently, Utah followed Oregon's model, passing legislation in 2017 that requires all parents seeking a vaccine exemption (both medical and nonmedical) to not only complete a standardized vaccine education module, but to also renew

the certificate of completion every 2 years (Utah State Legislature, 2017). Utah's new vaccination law will take effect on July 1, 2018 (Utah State Legislature, 2017).

Only one state, Utah, reported charging parents a fee to obtain a vaccination exemption form. However, exemption fees in Utah were unregulated, meaning that local health departments could choose the amount to charge for exemptions, as well as how these funds were utilized. Interestingly, Utah passed new vaccine legislation in 2017 that prevents local health departments from charging any fees for exemption forms (Utah State Legislature, 2017).

Limitations

There are limitations to this study. While the instrument was developed in collaboration with researchers from the AIM Research Committee, this nationwide study is the first time the questionnaire was utilized. After collecting data for this study, some states have since passed legislative changes regarding vaccine exemption laws.

Recommendations for Future Research

The fact that Oregon's vaccine exemption rates fell by 17% in the year following the mandate for parental vaccine education prior to obtaining a vaccination exemption is promising. However, it is unknown at this time whether the reduction of vaccine exemption rates in Oregon can be directly attributed to the mandatory parental vaccine education. Therefore, further study regarding standardized vaccine education materials is warranted. Because Oregon allows parents seeking a vaccine exemption to obtain vaccine education from a HCP or an online module, researchers should carefully examine which method of vaccine education is the most effective in reducing the number of vaccine exemptions. It is also recommended that researchers evaluate various elements of online vaccine education modules to identify ideal module length and

content. In addition, researchers should study the effect of mandatory education renewal requirements on vaccination exemption rates.

Conclusion

Even though vaccinations are the most effective way to prevent VPDs, states permit unvaccinated children to attend school through religious, personal, medical, and temporary medical exemptions, putting themselves and others at risk for contracting VPDs. With the hope of reducing vaccine exemption rates, some states employ various obstacles to obtaining and validating a vaccine exemption form, such as requiring a provider signature or charging a fee to process the exemption form. Until this research, however, the number of states with these vaccine exemption obstacles was unknown. Surprisingly, only a few states required a provider signature on religious and philosophical exemption forms and only one state reported charging a fee to obtain a vaccine exemption form. Identifying these data provides opportunities to further study the effectiveness of various vaccine exemption obstacles.

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Table 1

States requiring a provider or other individual signature on exemption forms

	Religious n = 28	Philosophical n = 9	Medical n = 45	Temporary Medical n = 20
States	AK,AL,AS,CA ¹ ,CT,FL,GA, GM,IA,IL,KS,MA,MI,MN, MO,NE,NJ,NM,NC,OK,OR ² , SC,TN,TX,UT,VA,WA,WI	CA ¹ ,MI,MN,OK,OR ² ,TX, UT,WA,WY	AK,AL,AR,AS,AZ,CA ¹ ,CO, CT,DE,FL,GA,GM,HI,IA,ID, KS,KY,MA,MD,MI,MN,MO, MS,MT,NC,ND,NE,NJ,NM, NV,NY,OK,OR ² ,PA,RI,SC, SD,TN,TX,UT,VA,VT,WA, WI,WV	AL,AZ,CA ¹ ,FL,GM,HI,IA,KS, MD,MS,MT,NC,NM,OR ² ,RI, SC,UT,VA,VT,WV

¹California law has changed since collection of these data, revoking religious and philosophical exemptions

²Oregon has two options: see a provider (signature obtained) or complete an online education module (no signature necessary)

Table 2
Provider/individual types qualified to sign exemption forms in each state[#]

Provider/ Individual	Religious N=	Religious States	Philoso- phical N=	Philosophical States	Medical N=	Medical States	Temporary Medical N=	Temporary Medical States
Physician	2	IL,WA	3	CA ¹ ,OR,WA	43	AK,AL,AR,AZ,CA ¹ ,CO,CT,DE,FL, GA,GM,HI,IA,ID,KS,KY,MA,MD,MI, MN,MO,MS,MT,NC,ND,NE,NJ,NM, NV,NY,OK,OR ² ,PA,RI,SC,SD,TN,TX, VA,VT,WA,WI,WV	18	AL,AZ,CA ¹ ,FL, GM,HI,IA,KS, MD,MS,MT,NC, NM,OR ² ,SC,VA, VT,WV
Nurse Practitioner	2	IL,WA	3	CA ¹ ,OR ² ,WA	22	AK,AL,AZ,CO,CT,GA,IA,KY,MA,MD, MN,MO,ND,NE,NJ,OK,PA,RI,SD,VA, VT,WA	6	AL,AZ,IA,MD, VA,VT
Physician Assistant	2	IL,WA	3	CA ¹ ,OR ² ,WA	18	AK,AL,CT,GA,IA,KY,MA,MN,MO, ND,NE,OK,PA,RI,SD,VA,VT,WA	4	AL,IA,VA,VT
Religious leader	2	NM,OK	0	-----	0	-----	0	-----
Naturopath	2	OK,WA	3	CA ¹ ,OR ² ,WA	2	VT,WA	1	VT
Pharmacist	0	-----	0	-----	1	ND	0	-----
Varied “other” responses	26	AK,AL,AS,CA ¹ ,CT, FL,GA,GM,IA,KS, MA,MI,MN,MO,NE, NJ,NM,NC,OK,OR ² , SC,TN,TX,UT,VA, WI	8	CA ¹ ,MI,MN, OK,OR ² ,TX, UT,WY	3	AS,MD,UT	3	MD,RI,UT
No specifics	13	CO,HI,ID,IN,MD, MT,ND,NV,PA,RI, SD,TX,VT	6	CO,ID,ND,PA, TX,UT	1	IN	1	ND

¹California law has changed since collection of these data, revoking religious and philosophical exemptions

²Oregon has two options: see a provider (signature obtained) or complete an online education module (no signature necessary)

*NH and WY did not respond to this question

[†]LA and OH do not use exemption forms

Table 3

“Other” types of providers/individuals allowed to sign vaccination exemption forms by state

	Religious Exemption	Philosophical Exemption	Medical Exemption	Temporary Medical Exemption
Registered Nurse	OR	OR	-----	-----
School Nurse	-----	CA ¹	-----	RI
Parent	CA ¹ ,CT,KS,MA, MN,MO,NC,NJ, NM,SC,TN,WI	MN,OK,WI	-----	-----
Notary	AK,IA,TX,VA	TX	-----	-----
Parent and Notary	GA,GM,NE	-----	-----	-----
Parent or Religious Leader	OK	-----	-----	-----
Court Order	AS	-----	AS	-----
Public Health Representative	AL,FL,MI,UT	MI,UT	MD,UT	MD,UT

¹California law has changed since collection of these data, revoking religious and philosophical exemptions

²Public health representatives include county health department employee, county health department nurse, county health officer, and local health officer