

**Religious Exemptions  
to  
Oregon School Immunization  
Requirements**

**Oregon Immunization Program  
Research Report  
May 8, 2008**

## Executive Summary

We are pleased to share results of our study exploring religious exemptions to Oregon school immunization requirements. This report briefly describes study methodology, highlights research findings, and provides recommendations for translating findings into public health practices.

Results from this study suggest that parents' immunization decisions are primarily influenced by their personal beliefs, the experiences of their social networks, and by the recommendations of healthcare providers.

***Personal Beliefs.*** The Oregon Vaccine Hesitancy Index was developed to assess parents' level of vaccine concerns. Those with the highest levels of vaccine-hesitancy were significantly more likely to sign religious exemptions and to report that they would not fully vaccinate a future child.

***Social Network.*** Parents who described knowing an individual who believed they were harmed by vaccines were more likely to report that they had considered or signed a religious exemption to school immunizations requirements.

***Healthcare Providers.*** While all parents relied on providers for guidance, exempting parents were more likely to report that their child saw an alternative provider and that their provider did not recommend getting all vaccines. Providers serving vaccine-hesitant parents, however, described immunizations as a parent-driven service and reported that they were willing to alter the childhood immunization schedule to accommodate parent concerns about specific vaccines or about the number of shots given per visit. Several reported that their clinic followed a policy of four shots per visit in response to parent concerns.

Our hope is that this report will:

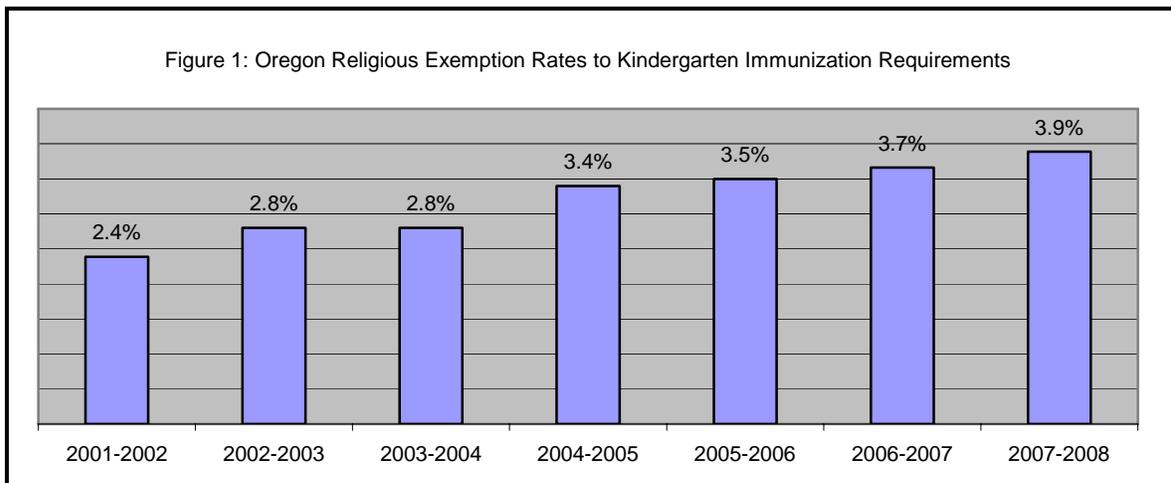
- Provide a clearer understanding of the immunization information and resource needs of Oregon's vaccine-hesitant parents and the providers who serve them;
- Encourage partnerships between public health and private providers in order to effectively engage vaccine-hesitant communities; and
- Inform Oregon Immunization Program policies and projects.

## Introduction

This report is based upon findings from an in-depth study of religious exemptions to Oregon school immunization requirements completed in 2007. The Oregon Immunization Program conducted the research with funding provided through a cooperative agreement with the Centers for Disease Control and Prevention.

## Background

All states require immunizations for school attendance, but the immunizations required and opportunities to waive requirements vary by state. In Oregon, physicians can sign medical exemptions when a child has had the disease or, in limited cases, when vaccination is contraindicated. Oregon parents can sign a waiver requesting religious exemption from school immunization requirements for all shots or for particular immunizations. Oregon is one of 48 states offering religious exemptions, but the State interprets religion broadly to mean “any set of beliefs, practices or ethical values,” which puts its religious exemptions more in line with philosophical exemptions offered by 19 other states.



Religious exemptions to school immunization requirements are on the rise in Oregon. Currently, 3.89% of kindergarten parents are opting to sign waivers to school immunization requirements rather than fully vaccinating their children. While this suggests overall compliance with school requirements, a closer look reveals pockets of under-immunization in some communities where exemption rates are well above the state average, which places vulnerable community members at-risk for vaccine preventable diseases.

In order to interpret this trend and develop an effective public health response, the Oregon Immunization Program:

- Explored exemption trends within communities;
- Conducted a statewide survey of parents’ immunization attitudes, beliefs, and practices; and
- Completed a pilot study of providers who serve vaccine-hesitant communities.

## Trends in Religious Exemptions

**Objective.** To identify exemption patterns within communities over time and among different cohorts of children

**Methods.** Collected and analyzed the vaccine histories of 6,705 de-identified students with religious exemptions who attended kindergarten through fifth grade during the 2004-2005 academic year.

### *Do exemptors receive any immunizations?*

Yes. Forty-four percent of exempt students received at least one immunization recommended by the Advisory Committee on Immunization Practices.

**Figure 2: Vaccine Histories of Oregon K – 5 Exemptors (N 6,705)**

	Children with at least one shot per series
DTaP	42%
IPV	40%
MMR	37%
HepB	32%
Hib	20%
Varicella	17%

\*CIS data, 2004-2005

### *How are religious exemptions distributed across the state?*

Although religious exemptions are signed throughout the state, we found that exemptions are clustered in vaccine-hesitant communities. For the purposes of this study, communities were defined by their high school catchment area. Overall, 228 high school based communities (HSBC) were identified, representing 1,238 schools. Exemption patterns were discernable among communities with high (greater than or equal to 3.2%), medium (3.1% to 1.2%),

and low (less than 1.2%) rates of exemption to school immunization requirements.

### ***Translating Findings into Practice***

1. Preparing communications with stakeholders  
Parents who sign religious exemptions may be supportive of select immunizations. Working with community stakeholders to identify antigen-specific concerns may promote immunization uptake.
2. Identifying pockets of need  
HSBCs are a functional unit of analysis in the assessment of communities at-risk for vaccine preventable disease.

## **Learning from Oregon Parents**

***Objectives.*** To understand the factors associated with Oregon parents signing religious exemptions

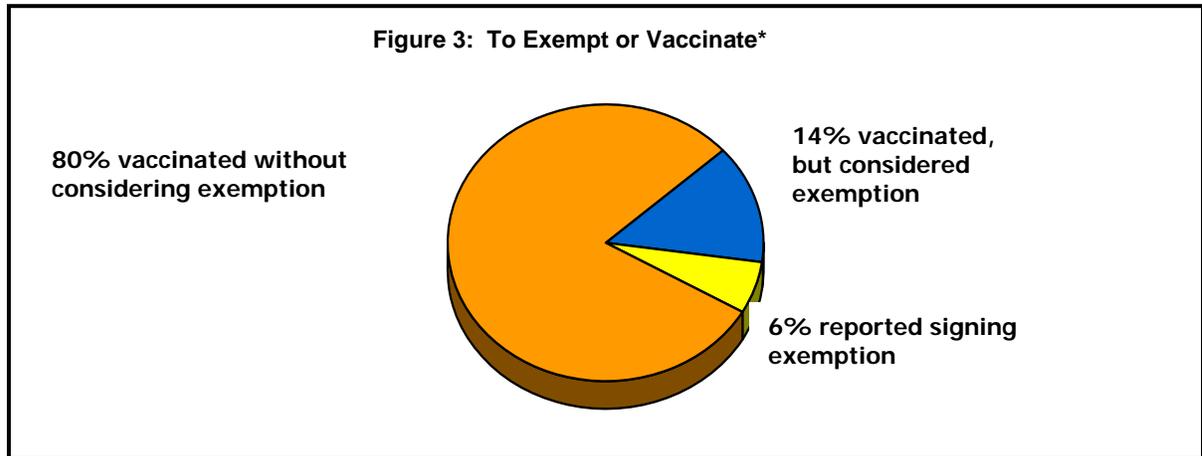
***Methods.*** This was a quasi case-control study, with exempting households as cases and non-exempting households as controls. This research used population-proportionate sampling and weighting schema in order to ensure that findings were representative of Oregon's population.

Randomly selected households received a mailed survey, which included a \$2 token of appreciation for their time and effort. They also had the option to complete the survey online or by telephone. The total adjusted response rate was 55%, with 48% (n=323) of exemptors and 56% (n=1265) of non-exemptors responding.

No significant differences were found between exempting and fully vaccinating parents in age, education level, and insurance coverage. However, exempting parents were significantly more likely ( $p < .05$ ) to report a family income below \$25,000 per year.

***Do many parents consider signing a religious exemption?***

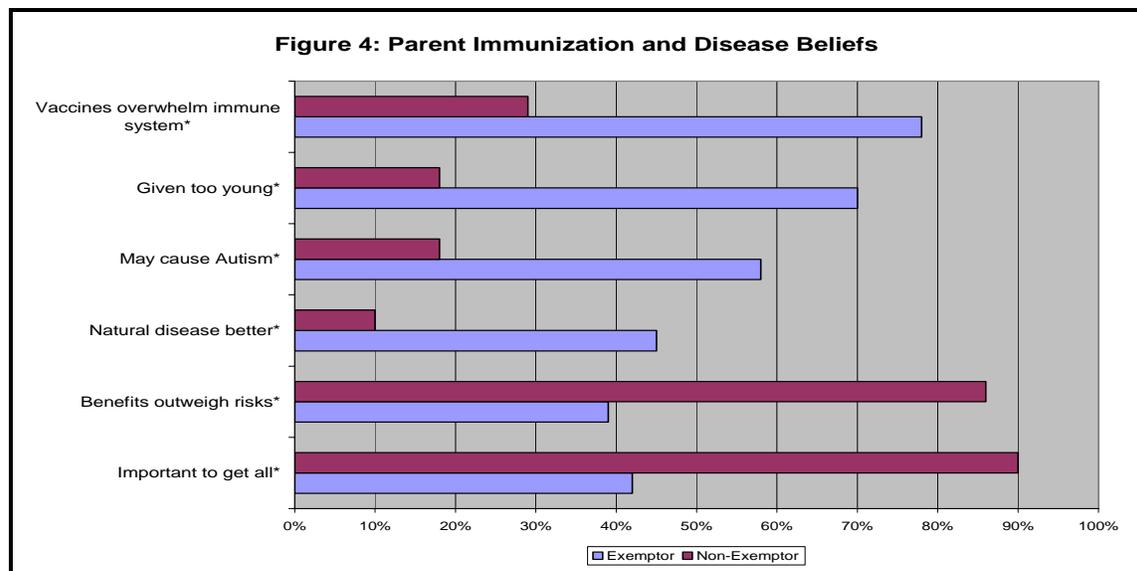
The majority of parents responding to the survey (94%) reported that their children were fully vaccinated. Among these, 14% mentioned that they had considered signing a religious exemption to school immunization requirements.



\*OIP Parent Survey 2006

***What are parents concerned about?***

Parents were asked 6 questions about immunizations and vaccine preventable disease. Exempting parents were significantly more likely to believe that vaccines overwhelmed the immune system, were given at too young an age, could cause autism, and that getting a disease naturally was better than developing immunity through vaccinations.



\*OIP Parent Survey 2006, p<.05

The Oregon Vaccine-hesitancy Index (OVHI) was developed by combining responses to the 6 statements listed in Figure 4 into an index measuring the extent of a respondent’s concerns about vaccine safety. The OVHI provides a

basis for grouping parents by their degree of hesitancy and allows us to explore how current beliefs can predict decisions to exempt children from required vaccinations.

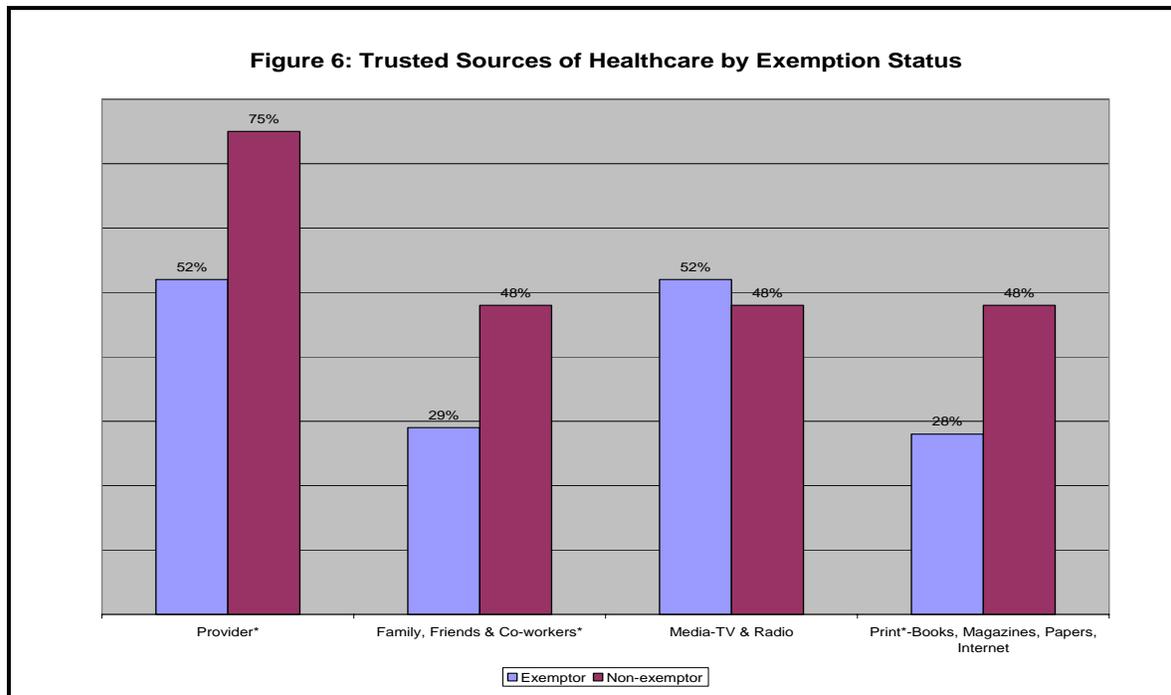
**Figure 5: OVHI Level of Vaccine-hesitancy by Exemption Status\***

	Low concern	Moderate concern	High concern
Exemption taken	2%	45%	89%
Fully Vaccinated	98%	55%	11%

\*OIP Parent Survey

***Where do parents get their health information?***

Parents were asked to report the extent of their trust in a variety of healthcare information sources. Parents who fully vaccinated their children (non-exemptors) were overall more trusting than exempting parents and were significantly more likely to trust healthcare providers, family and friends, and the print media (p<.01). In general, exempting parents described low levels of trust; relying on their healthcare providers and the media more than other sources of healthcare information. Exempting parents were significantly more likely (p<.05) to report that their primary care provider practiced alternative healthcare.



\*OIP Parent Survey, Significant difference between exemptors and non-exemptors (p<.01)

## ***Translating Findings into Practice***

### **1. Developing resources for vaccine-hesitant parents**

Findings from this survey can support social marketing by helping to segment the audience and provide direction in developing clear, relevant messages.

### **2. Networking with the alternative medical community**

Findings from this survey have highlighted the need for better communication and coordination with Oregon's active alternative medical community. Oregon is home to a Naturopathic College, a Chiropractic College, and numerous midwifery programs. The Immunization Program continues to work with the Naturopathic College to integrate immunizations into school curricula and engage students in community service activities.

### **3. Identifying vaccine-hesitant communities for surveillance and intervention**

The Oregon Vaccine Hesitancy Index may be used in the future to complement surveillance of vaccine preventable diseases and to identify intervention opportunities among vaccine-hesitant communities.

## **Listening to Providers**

***Objective.*** To explore provider knowledge, attitudes, and beliefs about childhood vaccinations in clinics with irregular patterns of immunization in vaccine-hesitant communities

***Methods.*** Semi-structured interviews were held with immunization staff from 19 (68% response rate) clinics serving high exemption communities. Among these were fourteen family practice clinics, four pediatric clinics, and one public health clinic. A total of 41 interviews were completed. Participating clinics were offered professional quality temperature trace units as tokens of appreciation.

### ***Who handled vaccines in participating clinics?***

In general, those with the least immunization knowledge delivered vaccines. Clinicians had more vaccine knowledge and confidence than staff members in discussing vaccines with clients; however, they were described as having the least vaccine-related contact with their clients.

### ***How did providers perceive their role in vaccine decision-making?***

Immunizations were typically seen as a parent-driven service. Every provider adjusted the vaccine schedule to comply with concerns raised by parents. Providers explained that it is important that children receive at least some protection from vaccine-preventable disease, and consequently, they will continue to negotiate vaccine schedules with parents to ensure this happens.

### ***What parental concerns did providers report hearing?***

Parents were concerned about vaccine safety. Providers consistently noted that parents were apprehensive regarding the number of shots given in one visit. While providers universally dismissed the lack of scientific reasoning behind this concern, several medical assistants expressed empathy for the parents and children. In response to pressures from parents, all providers volunteered to reduce the number of shots per visit, while some clinics adopted a policy of limiting shots to four per visit.

Other providers identified antigen-specific concerns as the source of vaccine hesitancy. “Some parents still think there is this link with autism,” mentioned one doctor. “The people I deal with have questions and I think they should,” revealed another. Immunizations were seen as safe and efficacious, but the growing number of vaccines available, issues of insurance coverage, paperwork, and school law requirements challenged their parents’ patience and the clinics’ resources.

### ***Translating Findings into Practice***

1. Increasing opportunities for vaccine training among Medical Assistants  
Education and training were mentioned as important ways to support clinic staff, particularly among medical assistants. Clinic staff reported that they read the posters, vaccine information sheets, and parent education materials available in the clinic to learn about specific vaccines and vaccine preventable diseases, but would be more confident if they had training.
2. Developing tools and training for health education and outreach  
Providers serving vaccine-hesitant parents felt caught between their responsibilities for patient care and for public health. Understanding the unique role these providers play in immunizing vaccine-hesitant parents can help the Oregon Immunization Program better support these clinics.

## **Want more information?**

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<http://www.oregon.gov/DHS/ph/imm/Research/Exempt.shtml>