Chair Salinas, Vice Chairs Hayden and Nosse, and Committee Members
House Committee on Health Care
Oregon State Legislature
900 Court St. NE, H-492, Salem, Oregon 97301
March 1, 2019

Dear Committee:

I am Alma Regan from Salem. My family is informed, intelligent, and well-educated. Both of my children have Master's degrees from Oregon Universities, and we have lived and worked in Oregon since 1994.

We value the protections and the herd immunity that vaccines can offer. We willingly receive vaccines – when those vaccines are made from components which are Biblically acceptable.

That said, I submit to you that this bill, (HB 3063), *written in haste*, is gravely flawed on two counts:

(1) The first flaw:

This bill removes the option for religious exemption, an option provided for by almost every other U.S. state; this bill *frivolously and unconstitutionally* prohibits the free exercise of religion, a founding principle of our great nation.

Why *frivolously*? Because, for even the *most* contagious diseases, such as measles; herd immunity *securely* allows for 5% -7% of the population to be unvaccinated. Statistics from Washington state, where a clear distinction *is* mandated, show that religious exemptions constitute less than *1/3 of 1%* of the population – hence a *negligible* factor in maintaining herd immunity.

(2) The second flaw:

This bill *fails* to allow for online education for the unvaccinated, and the partially vaccinated.

If this august body objects to the perceived *narrowness* of view of the vaccine hesitant; then *how* does it serve our society, or the *children* of hesitant parents, for those *children* to be *entirely denied* the *broader* view, and their *rights* to, a public education?

Thank you.

NOTE: Pertinent excerpts from supporting documentation immediately follows.

What do thresholds have to do with herd immunity?

The microbes that cause disease all have different infectious features. Some, like measles and influenza, pass from person to person more easily than others. Some tend to have more severe consequences in specific demographic groups. For example, the symptoms of pertussis, or whooping cough, are distressing at any age but can be fatal in infants, the age group with the highest death rate from pertussis. Each of these features—such as transmissibility and severity—affects a given disease's threshold, or the minimum percentage of immune individuals a community needs to prevent an outbreak.

To set a threshold, epidemiologists—experts in infectious disease transmission—use a value called "basic reproduction number," often referred to as "R0." This number represents how many people in an unprotected population one infected person could pass the disease along to. For example, R0 for measles is between 12 and 18, while for polio, it is between five and seven. The higher this number is, the higher the immunity threshold must be to protect the community. Because measles is extremely contagious and can spread through the air, for example, the immunity threshold needed to protect a community is high, at 95%. Diseases like polio, which are a little less contagious, have a lower threshold—80% to 85% in the case of polio.

The general concept of an immunity threshold seems simple, but the factors involved in calculating a specific threshold are complex. These factors include how effective the vaccine for a given disease is, how long-lasting immunity is from both vaccination and infection, and which populations form critical links in transmission of the disease. The collective differences in these factors result in different thresholds for different diseases (see below), with a significant factor being R0.

Disease	R0	Threshold (%)
Mumps	4-7	75–86
Polio	5-7	80–86
Smallpox	5-7	80–85
Diphtheria	6-7	85
Rubella	6-7	83–85
Pertussis	12-17	92–94
Measles	12-18	83–94

Relationship between R0 and threshold level needed for herd immunity

High percentages of vaccinated children results in "herd immunity," which helps prevent contagious diseases from spreading. But some doctors fear that eliminating states' religious exemptions won't adequately address the risk of outbreaks tied to geographic clusters of parents who are opting out of vaccinating their children.

That's partly because a very small percentage of parents who opt out of vaccines for their children are doing so for religious reasons, according to Daniel Salmon, a professor at Johns Hopkins Bloomberg School of Public Health and director of the Institute for Vaccine Safety. Exemptions from vaccines have gradually grown in the past three years to a median 2.2 percent of kindergartners among all states. It's unclear whether and by how much religious exemptions may have grown nationally, but researchers such as Salmon say more parents are using personal exemptions.

"People think of the Amish as the classic group that doesn't want to vaccinate," he said. (However, many Amish in Ohio began vaccinating after a measles outbreak there in 2014.) "Most people who have concerns aren't ideologically opposed to vaccines. They just don't trust the science, they've been misinformed, or they hold different values."

Nearly every state has carved out religious exemptions for parents who wish not to vaccinate their children (West Virginia and Mississippi, in addition to California, have not). West Virginia is considering a new proposal to add personal and religious exemptions.

Washington, which is one of the least religious states in the country, is one of the 17 states that allow a personal or philosophical exemption for the vaccine, which means that most anyone can opt out for any reason. In 2018, just 0.3 percent of Washington's families with kindergartners used a religious exemption, while 3.7 percent of families used a personal exemption and 0.8 percent used a medical exemption.

Large majorities of Americans from all major religious groups say healthy children should be required to receive vaccinations to attend school, according to the Pew Research Center. Scholars believe no major religious group advocates against vaccinations on the basis of official doctrine. However, some individuals from various faith traditions believe vaccinating goes against their personal religious beliefs.

Washington State Department of Health

Certificate of Exemption - Personal/Religious

From School, Childcare, and Preschool Immunization Requirements *Complete the box for the desired exemption type*

Child's Last Name: **First Name:** **Middle Initial:** **Birthdate** (mm/dd/yyyy): **Gender:**

NOTICE: A parent or guardian may exempt their child from some or all vaccinations listed below by submitting this completed form to the child's school and/or child care. A person who has been exempted from a vaccination is considered at risk for the disease or diseases for which the vaccination offers protection. Exempted children/students may be excluded from school or child care settings and activities during an outbreak of the disease that they have not been fully vaccinated against. The diseases vaccines can protect against still exist, and can spread quickly in school and child care settings. Immunizations are one of the best ways to protect people from getting and spreading diseases that may result in serious illness, disability, or death.

Personal/Philosophical or Religious Exemption

Exemption Type: ☐Personal/Philosophical ☐Religious

I am exempting my child from the requirement that my child be vaccinated against the following diseases to attend school or child care:

☐ Diphtheria ☐ Hepatitis B ☐ Hib ☐ Measles ☐ Mumps ☐ Pertussis (whooping cough)
☐ Pneumococcal ☐ Polio ☐ Rubella ☐ Tetanus ☐ Varicella (chickenpox)

Parent/Guardian Declaration

One or more of the required vaccines are in conflict with my personal, philosophical or religious beliefs. I have discussed the benefits and risks of immunizations with the health care practitioner below. I have received notice that if an outbreak of vaccine-preventable disease for which my child is exempted occurs, my child may be excluded from the school or child care center for the duration of the outbreak. The information on this form is complete and correct.

Parent/Guardian Name (print) _____ Parent/Guardian Signature _____ Date _____

Health Care Practitioner Declaration

I have discussed the benefits and risks of immunizations with the parent/legal guardian as a condition for exempting their child. I am a qualified MD, ND, DO, ARNP or PA licensed under Title 18 RCW, and the information provided on this form is complete and correct.

☐MD ☐ND ☐DO ☐ARNP ☐PA

Licensed Health Care Practitioner Name (print) _____

Licensed Health Care Practitioner Signature _____ Date _____

Religious Membership Exemption

Complete this section **ONLY** if you belong to a church or religion that objects to the use of medical treatment. Use the section above if you have a religious objection to vaccinations but the beliefs or teachings of your church or religion allow for your child to be treated by medical professionals such as doctors and nurses.

Parent/Guardian Declaration

I am the parent or legal guardian of the above named child. I affirm that I am a member of a church or religion whose teaching preclude health care practitioners from providing medical treatment to my child. I have received notice that if an outbreak of vaccine-preventable disease for which my child is exempted occurs, my child may be excluded from the school or child care center for the duration of the outbreak. The information on this form is complete and correct.

Parent/Guardian Name (print) _____ Parent/Guardian Signature _____ Date _____

Name of Church or Religion of which you are a member: _____