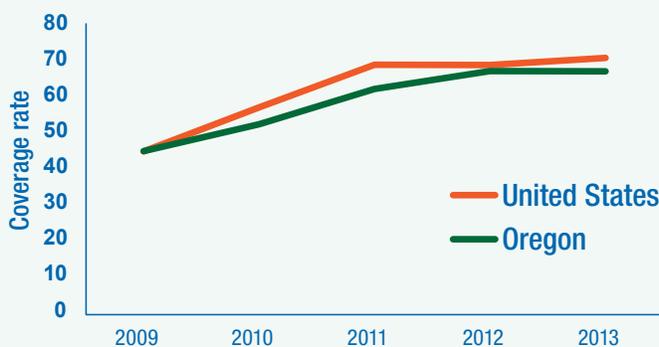


## >> Improve immunization rates



Immunizations are one of the 10 great public health achievements in the United States. A recent economic analysis estimated that vaccinating the 2009 U.S. birth cohort with the recommended childhood immunization schedule prevented approximately 42,000 deaths and 20 million cases of disease, and resulted in a net savings of \$14 billion in direct costs and \$69 billion in total societal costs.<sup>1</sup> Oregon has acceptable vaccination rates for many individual vaccines received by 2-year-olds, but much work is required to increase rates among other groups such as adolescents and adults.

### Two-year-olds, 4:3:1:3:3:1:4 series, Oregon and United States



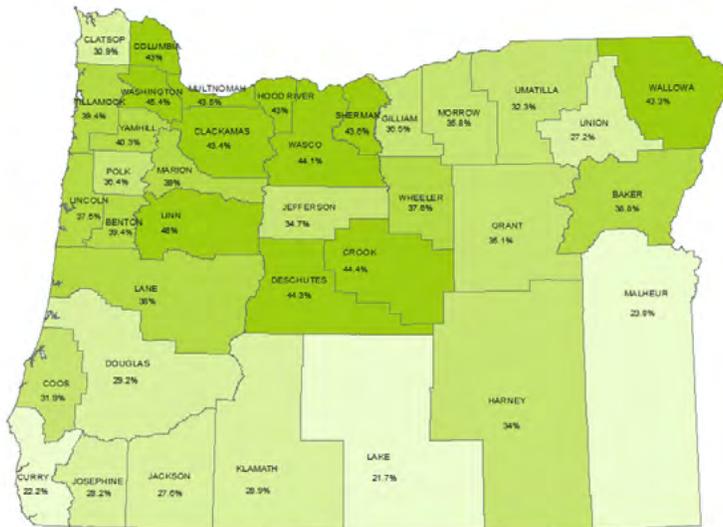
Source: National Immunization Survey, 2009–2013

Communities with high levels of immunization (83–95%) are protected against vaccine-preventable diseases (VPDs) because there is little opportunity for these diseases to spread. This community immunity also protects those who are most likely to experience poor outcomes to VPDs, such as infants or people who cannot be immunized for medical reasons. Pertussis (whooping cough) and seasonal influenza are two examples of diseases that affect the most vulnerable individuals. Since 2003, 214 (35%) of the 609 infants diagnosed with pertussis in Oregon have been hospitalized and five have died.<sup>2</sup> Hospitalizations in the Portland metro region were highest in 0

to 4-year-olds during the 2009–2010 influenza season, and were highest in those aged 65 and older during the 2012–2013 and 2013–2014 seasons.<sup>3</sup>

Oregonians enrolled in Oregon Health Plan or WIC have higher rates of immunization than people who do not participate in these programs. Well-educated, high-income White Oregonians are the most likely to resist immunizations. In 2014, Oregon had the highest nonmedical exemption rate (7%) for school-required immunizations, due in part to this resistance.

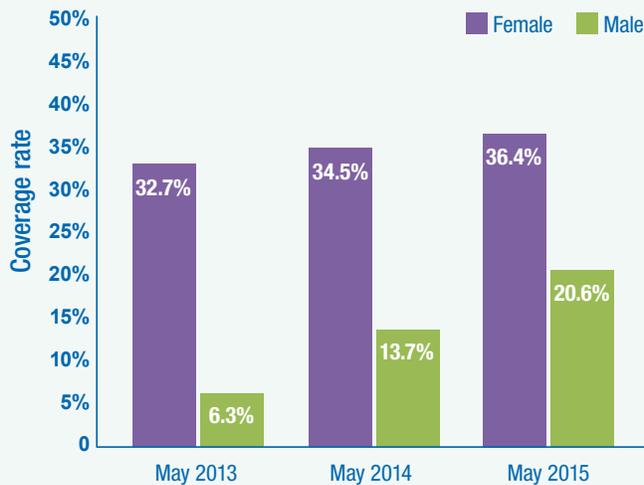
### Oregon estimated all-age county influenza immunization rates, 2013–2014 (average = 39.7%)



Source: ALERT IIS

Disparities in vaccination rates occur in other groups as well. During the 2013–2014 influenza season, seven of nine southern Oregon counties had seasonal influenza rates of less than 30% compared to the statewide average of 39.7%. Adult men have consistently lower seasonal influenza vaccination rates than women. In 2014, Oregon’s rate of immunization for the vaccine that protects people from human papilloma virus (HPV) -related diseases and cancers was lower among adolescent males (13.7%) than females (34.5%) for three or more doses.

### HPV vaccine rates (3-dose series) among Oregon adolescents aged 13–17 years, 2014



Source: ALERT IIS

### Strategies to improve immunization rates

Strategies to increase immunizations for the priority targets are multi-pronged and require partnerships within the public health system. These strategies include:

- Working to ensure all vaccinations administered in Oregon are reported into the ALERT Immunization Information System (ALERT IIS);
- Targeting educational campaigns to individuals living in southern Oregon, men and teens; and
- Giving immunization providers the tools they need to talk with patients about the importance of immunizations.

### Priorities, strategies and measures

#### Priority targets

##### Rate of 2-year-olds who are fully vaccinated

**Target:** 72%

**Baseline:** 58.2% (2013)

**Data source:** ALERT Immunization Information System (ALERT IIS)

##### HPV vaccination series rate among 13- to 17-year-olds

**Target:** 50% for females and males

**Baseline:** Females: 34.5%, males: 13.7% (2014)

**Data source:** ALERT IIS

##### Seasonal flu vaccination rate in people $\geq 6$ months of age

**Target:** 60%

**Baseline:** 42% (2014)

**Data source:** ALERT IIS

## Population interventions

### **Strategy 1: Increase the percentage of school-aged children who are vaccinated**

Justification: The Guide to Community Preventive Services recommends school vaccination programs to increase vaccination rates and decrease rates of VPD-associated morbidity and mortality.<sup>4</sup>

Measure 1.1: Nonmedical exemption rate for kindergartners

Target: 5.0%

Baseline: 7.0% (2014)

Data source: Oregon Immunization School Law data

Measure 1.2: Number of vaccines administered by SBHCs

Target: 25,000

Baseline: 20,742 (2014)

Data source: ALERT IIS

### **Strategy 2: Increase the percentage of adults who receive annual influenza vaccine**

Justification: The Guide to Community Preventive Services recommends enhancing access to vaccination services to increase appropriate vaccination.

Measure 2.1: Percentage of flu vaccinations administered by pharmacists

Target: 50%

Baseline: 38% (2013–2014 influenza season)

Data source: ALERT IIS

### **Strategy 3: Increase the percentage of adolescents who complete the HPV vaccine series**

Justification: HPV vaccinations reduce morbidity and mortality by preventing HPV-related cancers and diseases.

Measure 3.1: Percentage of HPV vaccines administered by pharmacists to 11- to 17-year-olds

Target: 5.0%

Baseline: 0.2% (2014)

Data source: ALERT IIS

Measure 3.2: Number of HPV vaccines administered by SBHCs

Target: 3,755

Baseline: 3,129 (2014)

Data source: ALERT IIS

Measure 3.3: Number of independent labs reporting HPV-related dysplasias

Target: 99%

Baseline: 36% (2015)

Data source: College of American Pathologists

## Health equity interventions

**Strategy 1: Increase flu vaccinations in southern rural and frontier counties with rates below the Oregon average.**

Justification: Office of Rural Health 2015 finding: 53 of Oregon's 104 rural service areas have unmet health care needs.<sup>5</sup>

Measure 1.1: Seasonal influenza vaccinations in southern rural and frontier counties

Target: 42%

Baseline: 27.5% (2013–14)

Data source: ALERT IIS

**Strategy 2: Increase the percentage of influenza vaccinations given to men  $\geq 19$  years of age**

Justification: Advisory Committee on Immunization Practices recommends seasonal influenza vaccinations for all adults.<sup>6</sup>

Measure 2.1: Seasonal influenza vaccinations among adult men

Target: 46%

Baseline: 41% (2013–14)

Data source: ALERT IIS

## Health system interventions

### **Strategy 1: Create incentives for private and public health plans and health care providers to increase immunization rates**

Justification: Incentive measures and alternate payment methodologies ensure health plans and health care providers are working on a common set of priority areas designed to improve care and access, eliminate disparities and contain health care costs. The measures currently focus on public health plans, but measures will be expanded to include private insurers as data become available.

Measure 1.1: Number of public health plans that receive an incentive or shared savings payment for increasing immunization rates

Target: 16 CCOs, PEBB and OEBC carriers

Baseline: 0 CCOs, PEBB and OEBC unknown (2015)

Data source: OHA Metrics and Scoring, PEBB and OEBC contracts

Measure 1.2: Number of public health plans that incorporate increasing immunization rates in alternative payment methodologies for contracted providers

Target: 16 CCOs, PEBB and OEBC carriers

Baseline: Unknown, developmental measure (2015)

Data source: CCO Transformation Plans, PEBB and OEBC contracts

### **Strategy 2: Promote strategies to health care providers to increase delivery of on-time immunizations**

Justification: The Guide to Community Preventive Services recommends provider- or system-based interventions to increase appropriate vaccination.

Measure 2.1: Number of statewide reminder recalls for 2-year-olds conducted over five years

Target: 60

Baseline: 12 (2014)

Data source: ALERT IIS

Measure 2.2: Percentage of enrolled and eligible Vaccines for Children (VFC) providers receiving CDC-defined AFIX quality improvement services

Target: 25%

Baseline: 0 (2014)

Data source: Vaccines for Children (VFC) Management Survey

### **Strategy 3: Increase flu vaccination rates among health care workers**

Justification: Joint Commission standard IC.02.04.01 specifies health care organizations set incremental goals to achieve Healthy People 2020 objective of 90% influenza vaccination rates.<sup>7</sup>

Measure 3.1: Seasonal flu vaccination rate for health care workers in long-term care facilities

Target: 90%

Baseline: 56% (2014)

Data source: Acute and Communicable Disease Prevention, Healthcare-Associated Infections Program

Measure 3.2: Seasonal flu vaccination rate for health care workers in hospital settings

Target: 90%

Baseline: 77% (2014)

Data source: Acute and Communicable Disease Prevention, Healthcare-Associated Infections Program

Measure 3.3: Seasonal flu vaccination rate for health care workers in ambulatory surgical centers

Target: 90%

Baseline: 67% (2014)

Data source: Acute and Communicable Disease Prevention, Healthcare-Associated Infections Program

<sup>1</sup> Zhou, F, Shefer, A, Wenger, J et al. Economic evaluation of the routine childhood immunization program in the United States, 2009. *Pediatrics* 2014;133:577-85.

<sup>2</sup> Oregon Health Authority, Public Health Division, Acute and Communicable Disease Prevention section. Selected Reportable Communicable Disease Summary (Pertussis). 2013. Retrieved from: <https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/DiseaseSurveillanceData/Annual-Reports/Pages/2013.aspx>.

<sup>3</sup> Oregon Health Authority, Public Health Division. Oregon State Health Profile. Influenza Hospitalizations. 2014. Retrieved from: <https://public.health.oregon.gov/ProviderPartnerResources/PublicHealthAccreditation/Documents/indicators/influenzahosp.pdf>.

<sup>4</sup> Community Preventive Services Task Force. The Guide to Community Preventive Services. Increasing Appropriate Vaccination: Vaccination Programs in Schools and Organized Child Care Centers. 2014. Available at: [www.thecommunityguide.org/vaccines/schools\\_childcare.html](http://www.thecommunityguide.org/vaccines/schools_childcare.html).

<sup>5</sup> Oregon Office of Rural Health. 2015 Areas of Unmet Health Care Need in Rural Oregon Report. 2015. Available at: [www.ohsu.edu/xd/outreach/oregon-rural-health/data/upload/2015-Unmet-Need-Report.pdf](http://www.ohsu.edu/xd/outreach/oregon-rural-health/data/upload/2015-Unmet-Need-Report.pdf).

<sup>6</sup> Centers for Disease Control and Prevention (CDC). 2014. Influenza ACIP Vaccine Recommendations. Available at: [www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html](http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html).

<sup>7</sup> The Joint Commission. Standard IC.02.04.01 Influenza Vaccination for Licensed Independent Practitioners and Staff for CAH, HAP, and LTC Accreditation Programs. 2011. Available at: [www.jointcommission.org/assets/1/6/InfluenzVacPres\\_CAHHAPLTC.pdf](http://www.jointcommission.org/assets/1/6/InfluenzVacPres_CAHHAPLTC.pdf).