

OREGON FLU VACCINATION UPTAKE RATES

2013-2014 Influenza Season

Final Report
JUNE 2014

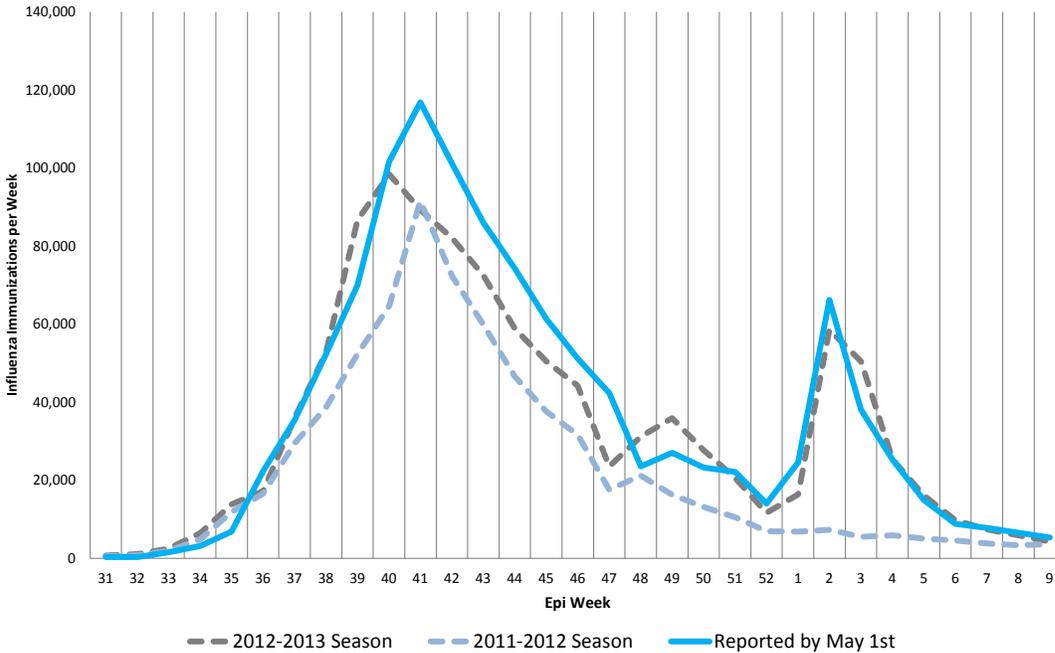


OVERVIEW

A key element of public health is the identification of vulnerable populations to disease. For seasonal influenza, the majority of attention to date has been placed on disease surveillance in support of a need to know when epidemic levels are reached. However, the population-level risk and vulnerability for influenza has received less attention, with immunization levels usually only determined long after the disease season was done. Starting with the 2013-2014 influenza season, the Oregon Immunization Program (OIP) began providing weekly estimates of immunization coverage in Oregon using the ALERT Immunization Information System (ALERT IIS). This weekly tracking gives decision makers and the public a guide to Oregon populations that are vulnerable to seasonal influenza. Nationally, this was the first time an immunization registry was used to provide timely, all-age estimates of influenza immunizations.

Overall, for the 2013-2014 influenza season, ALERT IIS received over 1.2 million influenza immunization reports. Presently, OIP estimates that 75% to 80% of all influenza immunizations given to Oregon residents are captured by ALERT IIS. While the defined influenza season begins in August, immunization delivery to patients generally begins in September, peaking in mid-October, and steadily declines into the holiday season. A novel feature of the last two influenza seasons has been a strong spike in immunizations in mid-January, possibly driven by news reports of influenza and the presence of cases in local communities. This seasonal pattern is presented in Figure 1.

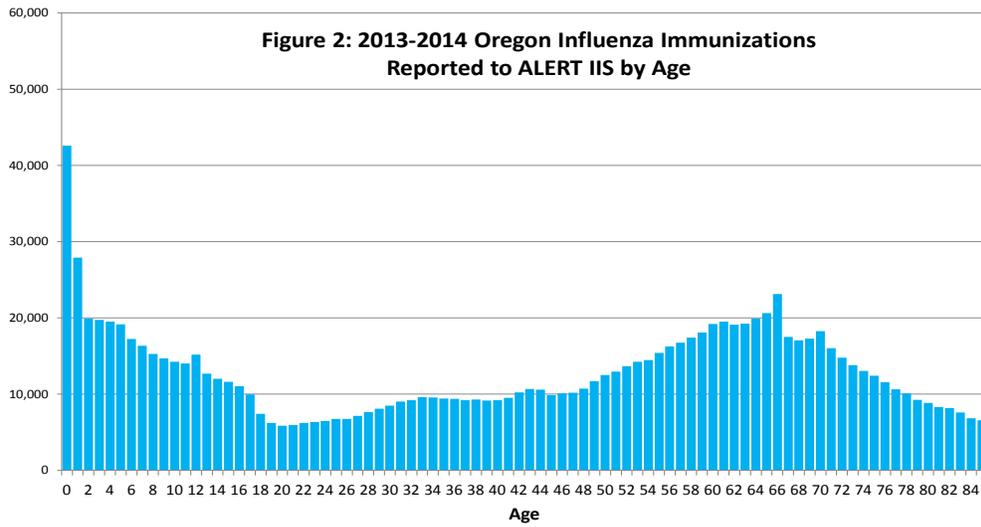
Figure 1: 2013-2014 Oregon Influenza Immunizations in ALERT IIS by Week



Source: Oregon Immunization Program, Oregon Health Authority

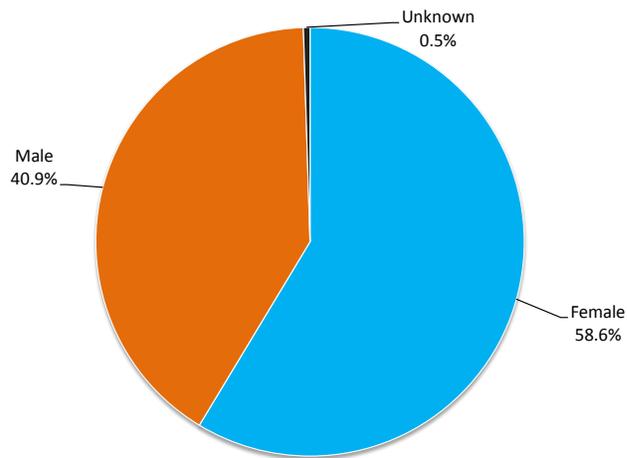
AGE, GENDER AND INFLUENZA IMMUNIZATION

Influenza immunization receipt is strongly dependent on age, with young children and older adults having the highest rates. In contrast, young adults generally do not get influenza immunizations. Gender also is a factor for adults in influenza immunization receipt. While gender parity exists in childhood for immunization, starting with young adults there is a substantial bias towards women for influenza immunization receipt. This gender bias is present from age 19 up to retirement ages, and is strongest for women of childbearing age. For adults, 59% of influenza immunizations were given to women. As the few young adults who are getting influenza immunization tend to be women, the largest population at risk of disease is young male adults. Although young adults may not be worried for their own health due to the flu, their capacity to spread disease to more vulnerable populations such as the young or old is a public health concern. Young adults also tend to work in positions with more close public contact and potential to spread disease, such as for cashier or other service industry occupations. See Figures 2 and 3 for 2013-2014 rates of flu vaccine uptake in Oregon by age and gender.



Source: Oregon Immunization Program, Oregon Health Authority

Figure 3: 2013-2014 Oregon Adult Influenza Immunizations Reported to ALERT IIS by Gender

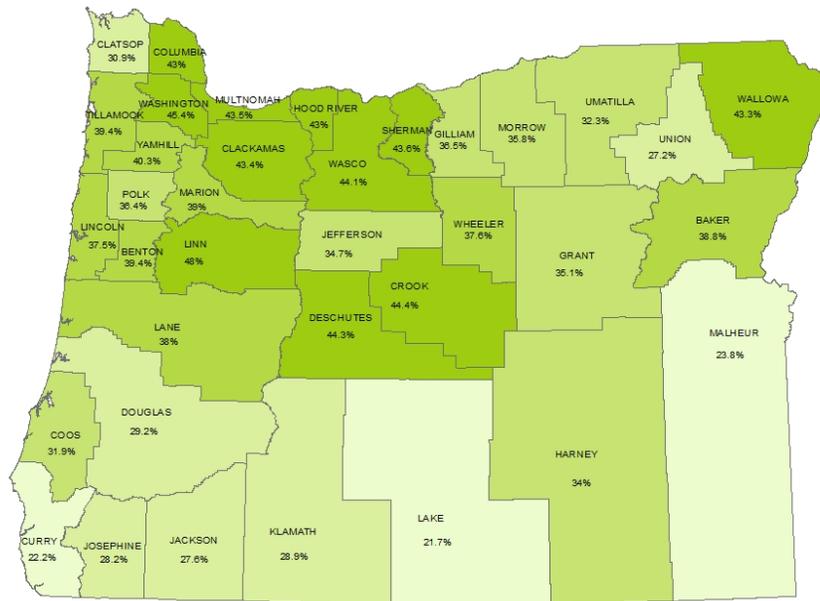


Source: Oregon Immunization Program, Oregon Health Authority

LOCAL PATTERNS OF INFLUENZA IMMUNIZATIONS

A key feature of OIP’s influenza immunization surveillance is finding vulnerable populations on a county level. Influenza immunization rates vary across the different regions of Oregon. In general, the southern Oregon counties have lower rates than the rest of the state; for many southern Oregon counties, their all-age influenza immunization rates are almost half that of the metropolitan Portland area. In almost all lower rate counties, the lack of immunization applied across all-age groups. As a caveat, on the local level, it is difficult in the ALERT IIS to tell a lack of immunizing from a lack of reporting. However, experience suggests that ALERT IIS participation and good immunization practice are highly associated. Figure 4 presents the all-age rate map for Oregon.

Fig. 4: 2013-2014 Oregon Estimated All-Age County Influenza Immunization Rates from ALERT IIS (Average = 39.7%)



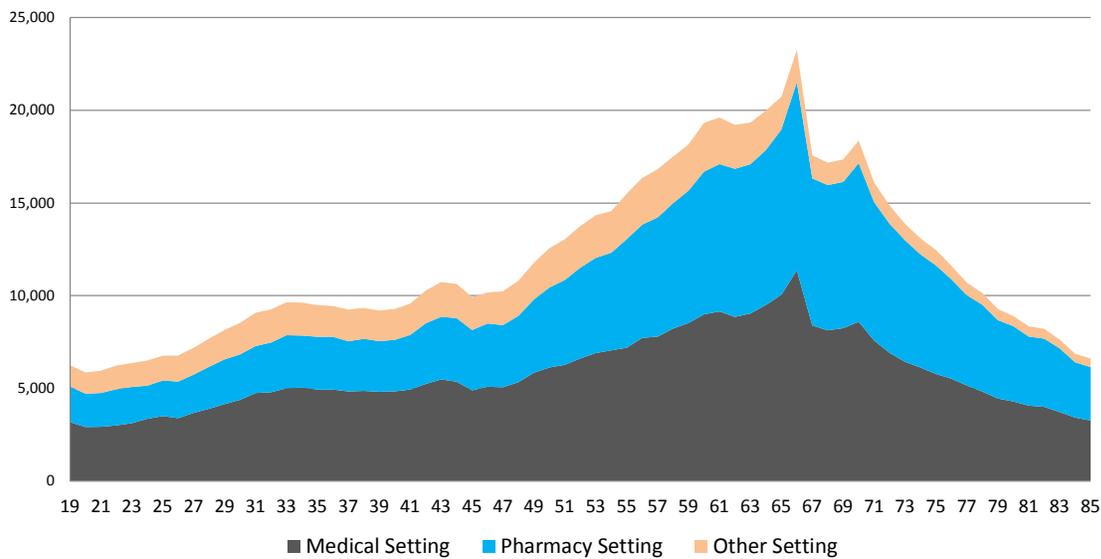
Source: Oregon Immunization Program, Oregon Health Authority

SETTINGS FOR INFLUENZA IMMUNIZATIONS IN OREGON

A component of OIP’s novel influenza immunization surveillance was tracking not only how well Oregon populations are immunized against influenza, but also the setting and type of provider giving the shot. In the 2013-2014 season, the single largest source of adult influenza immunizations reported to ALERT IIS were local medical providers (46%); however, the second

largest source were pharmacists (38%). Even if missed ALERT IIS reporting from other provider types and settings are accounted for, pharmacists still supply a third of all adult influenza immunizations in Oregon. While pharmacists are eligible in Oregon to immunize those ages 11 and up, the proportion of adolescents receiving an influenza immunization at a pharmacy ranged from 7% at age 11 to 26% at age 18. Figure 5 presents adult influenza immunizations by delivery setting and age.

Figure 5: Adult Seasonal Influenza Immunizations Reported to ALERT IIS, Oregon 2013-2014 by Delivery Setting and Age

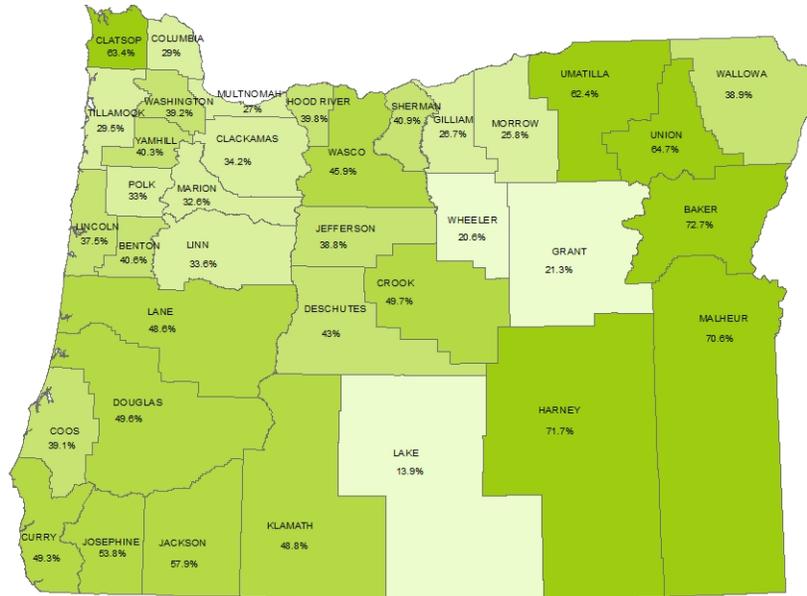


Source: Oregon Immunization Program, Oregon Health Authority

COMMUNITY DEPENDENCE ON PHARMACY IMMUNIZATIONS

The level of community dependence on local pharmacies for influenza immunizations also varied greatly across Oregon counties during the 2013-2014 influenza season. In a reversal from the pattern for overall rates, most southern Oregon counties showed a higher level of dependence on their pharmacies for immunizations, while the higher rate metropolitan Portland area had a lower rate of pharmacy dependence. This suggests that across much of the state, pharmacists are filling an unmet need for influenza immunizations in communities where barriers to adult immunizations exist at the level of traditional medical settings for immunization. Figure 6 presents rates of adult pharmacy immunizations by county.

Figure 6: 2013-2014 Oregon Adult Pharmacy Usage for Influenza Immunization Reported to ALERT IIS by County (Average = 38.4%)



Source: Oregon Immunization Program, Oregon Health Authority