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2022-2023 SEASON UPDATES: HIGHLIGHTS AND VACCINE EFFICACY UPDATES

Introduction

The 2022-23 influenza (“flu”) season began on October 2, 2022, and ends on May 20, 2023. Updates for this flu season are provided below, including interim vaccine effectiveness (VE) estimates.

Vaccine Effectiveness Estimates

Influenza vaccine effectiveness (VE) is the description of a flu vaccine’s ability to: prevent flu-related medical visits, prevent severe flu illness requiring hospitalization or intensive care unit (ICU) admission, protect against different influenza subtypes and lineages, and protect different age groups and higher risk groups from illness and severe illness.¹

Interim VE estimates were presented during an Advisory Committee on Immunization Practices meeting in Atlanta on February 22, 2023.² Vaccine efficacy estimates were available earlier than usual, primarily due to the early flu activity experienced throughout the country. Estimates were calculated through monitoring performance of vaccines through different vaccine efficacy networks: The New Vaccine Surveillance Network (NVSN), Investigating Respiratory Viruses in the Acutely Ill (IVY) Network, and the Vision VE Network.^{2,3} Estimate calculations were found to be consistent across these different networks.

The current season’s flu vaccines have been estimated to have reduced the risk of influenza A-related hospitalization among adults by nearly half and among children by nearly three quarters.¹ Vaccination also provided significant protection against flu-related illness and flu-related emergency department visits, with people who were vaccinated about half as likely to have those outcomes as people who had not been vaccinated. Benefit from vaccination was observed across all age groups.

The NVSN found VE against the predominant H3N2 virus was 45% among children, which is higher than the 30% seen previously for this virus, and 56% against influenza A(H1N1).² This network also found that vaccinated children were 68% less likely to be hospitalized because of flu illness or related complications, 42% less likely to visit an emergency

department because of flu-related illness, and an overall VE of 49% in hospital and emergency department settings.

The IVY Network found adults who were vaccinated against flu were 43% less likely to be hospitalized because of flu illness or related complications, adults 65 years and older were 35% less likely to have a flu-related hospitalization, and adults 18-64 years were 51% less likely to have a flu-related hospitalization.² Importantly, IVY found the flu vaccination provided important protection for those immunocompromised, with those adults being 44% less likely to be hospitalized with flu-related complications.

The Vision VE Network identified trends consistent with the IVY Network findings and Vision data also illustrated the VE estimates for the 2022-2023 season were higher than the 2021-2022 season against emergency department or urgent care visits (44% less likely compared to 25%) and hospitalizations (39% less likely compared to 25%).² This network also found more than 90% of adults 65 years and older with a known vaccine type received high dose or adjuvanted flu vaccine, as recommended.

Interim VE estimates against medically attended illness found that children and adults younger than 65 years who received a flu vaccine were half as likely to visit a health care provider because of flu illness, and flu vaccination reduced risk of getting sick with flu by more than two thirds among children.²

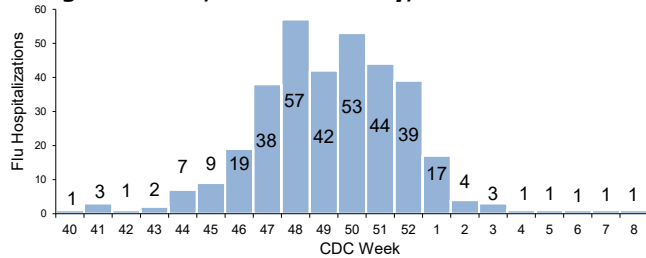
The higher VE this season is likely because flu vaccination elicited good immunity against the variety of viruses circulating as most are genetically and antigenically “like” the flu viruses used in vaccines this season.^{2,4} These data illustrate how flu vaccination offers substantial benefit against flu and its potentially serious complications.

Washoe County Influenza Update

Washoe County experienced an early seasonal peak similar to the state and the country. The increase started locally around week 44 (Oct 30th) with a sharp increase and steady elevation between weeks 46-52 (roughly Nov 13th - Dec 31st). During the peak, there

were 292 hospitalizations and 20 deaths among Washoe County residents.

Figure 1: Influenza Hospitalization Counts by Week through Week 08, Washoe County, 2022-2023



As of February 25th, 2023, a total of 258 of the 344 hospitalized cases (75%) did not have a documented history of a current seasonal flu vaccine at least two weeks prior to illness onset (henceforth referred to as “not vaccinated” or “unvaccinated.”) Eight (3.1%) were too young to receive vaccine. Of the remaining 250 unvaccinated cases, 217 (87%) had a least one documented underlying medical condition that contributes to an increased risk for flu-related complications. In addition, 111 (44%) of these unvaccinated hospitalized cases were aged 65 years or older. Fourteen of the 22 influenza-associated deaths this season so far (64%) were not vaccinated.

Vaccination is particularly important for persons at increased risk for flu-related complications.⁵ These data demonstrate that many vulnerable patients who should have been recommended for immunization did not receive a timely vaccination. Providers are encouraged to offer immunizations to patients, especially those who are at increased risk for complications from influenza as well as those who live with or care for persons at higher risk for influenza-related complications (including health care providers).

Prevention

While flu activity is currently measured at low levels, annual vaccination is still recommended as long as flu is spreading in the community. **Annual influenza vaccination is recommended for all people six months and older who do not have contraindications.**⁵

WCHD’s Weekly Flu Reports

WCHD produces and disseminates reports each week during the flu season. If you would like to receive these reports, email epicenter@washoecounty.gov and include in the request: name, organization, and email address. Past reports are located here: <https://tinyurl.com/FluWashoe>.

Influenza Reporting Requirements

The 2022-23 Influenza Season is still in progress. Reporting requirements are listed in Chapter 441A of the Nevada Administrative Code (NAC). Influenza must be reported if:

1. Hospitalized positive influenza case (includes hospitalized for a reason other than influenza) **OR**
2. Pediatric death with a positive flu test **OR**
3. Influenza strain is known or suspected to pose a risk of a national or global pandemic as determined by the Centers for Disease Control and Prevention or the World Health Organization **OR**
4. Influenza strain is novel or untypable. This would include avian flu (e.g., H5N1, H7N9) and swine flu (e.g., H3N2v) **OR**
5. Suspect an influenza outbreak is occurring

Reports of influenza using a Communicable Disease form located at

<https://tinyurl.com/ReportDisease> can be faxed to 775-328-3764 or called into the Washoe County Health District’s (WCHD) Communicable Disease Line at 775-328-2447.

Acknowledgement

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References

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