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HEALTH AND HUMAN SERVICES

NEVADA DIVISION of PUBLIC
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Date: August 15, 2024

To: Nevada State Board of Health

Through: Richard Whitley, MS, Director DHHS
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From: Ihsan Azzam, PhD, MD, MPH, Chief Medical Officer

Re: Report to the Board of Health for September 06, 2024

Enhanced Influenza Monitoring During the Summer of 2024

For decades, the highly pathogenic H5N1 Avian Influenza has been circulating and continuously spreading in wild birds worldwide causing extensive outbreaks in poultry and most recently among dairy cows in the United State (U.S.), with several recent human cases among the U.S. dairy and poultry workers.

Since April 2024, an outbreak of avian influenza A (H5N1) is affecting dairy cattle and poultry in more than a dozen states. Nationwide, 14 human cases have been reported among farm workers exposed to infected cattle and poultry in 2024. So far, no currently affected livestock, poultry or people have been reported in Nevada. To date, four human cases have been reported in the U.S. among dairy workers who were exposed to infected cows in other states, suggesting probable cow-to-person spread. At least 10 additional human cases have been identified among workers exposed to infected cattle and poultry in Colorado.

Avian influenza A (H5N1) has been circulating widely among birds and mammals in the United States since 2022. In the spring of 2024, H5N1 was detected in dairy cattle for the first time. Since the initial detections in dairy cattle, more than 189 affected herds have been reported in at least 13 states. As of August 15, 2024, the date of preparing this report, H5N1 has not been detected among dairy cattle in Nevada. However, H5N1 continues to affect poultry flocks across the U.S. with the last reported poultry detection in Nevada occurring in March 2023.

According to CDC the risk to the general public is considered low. However, those with unprotected exposures to infected animals or animal environments may be at higher risk.

The Division of Public and Behavioral Health (DPBH is advising health care providers to consider avian influenza H5N1 in the differential diagnosis of patients with compatible symptoms and recent animal exposures. Health care providers are also asked to participate in enhanced influenza monitoring during summer 2024.

Patients associated with the 2024 H5N1 outbreak among dairy cattle and poultry experienced relatively mild illnesses involving conjunctivitis and/or respiratory symptoms typical of seasonal influenza infection.

Historically, human infections with H5N1 used to often be severe, with approximately 50% of cases since 1997 resulting in severe pneumonia and death. The Centers for Disease Control and Prevention (CDC) currently considers risk to the general population from H5N1 to be low. However, individuals who have unprotected exposures to infected animals may be at higher risk of infection. While the current public health risk is low, DPBH is carefully watching the situation and is working with local health authorities (LHAs) and the Nevada State Public Health Laboratory (NSPHL) to monitor the situation and are using the state flu surveillance systems to monitor for H5 bird flu activity in people. Additionally, DPBH is urging health care providers to take actions to help ensure rapid identification and response in the event of a human H5N1 infection in Nevada.

For patients with symptoms compatible with H5N1 infection, clinicians should inquire about contact with birds, livestock, or other animals within 14 days before symptom onset. The U.S. Department of Agriculture (USDA) reports that cows without clinical signs have tested positive for H5N1. Occupational or recreational exposures to infected animals could include exposures to animals that appear healthy. The FDA has identified infectious H5N1 in raw milk produced by infected cattle. Pasteurization inactivates the virus in milk, providing strong assurance that the commercial milk supply is safe. Providers should follow universal infection prevention and control (IPC) recommendations. Standard Precautions, plus Contact and Airborne Precautions (including the use of eye protection), are recommended when evaluating patients for infection with avian influenza A viruses. Patients not requiring inpatient admission should be advised to isolate at home away from household members and not go to work or school until it is determined they do not have avian influenza A virus infection.

Surge in Mpox Clade I Cases in Africa

The rapid spread of mpox in African countries constitutes a global health emergency, the World Health Organization (W.H.O.) declared on August 14, 2024. This is the second time in three years that the W.H.O. has designated an mpox epidemic as a global emergency. It previously did so in July 2022. That global outbreak went on to affect nearly 100,000 people, primarily gay and bisexual men, in 116 countries, and killed about 200 people. The threat this time with Mpox Clade I seems to be much serious. with most at risk of contracting the infection and dying from it are women and children under 15.

Since January 2023, the Democratic Republic of Congo (DRC) has reported the largest number of yearly suspected clade I Mpox cases on record. While clade I MPXV is endemic and naturally occurring, in DRC, the current outbreak is more widespread than any previous DRC outbreak and has resulted in clade I Mpox transmission to some neighboring countries. No cases of clade I Mpox have been reported outside central and eastern Africa at this time.

Mpox Virus has two distinct genetic clades (subtypes), I and II, which are endemic to central and west Africa, respectively. Clade I Mpox has previously been observed to be more transmissible and to cause a higher proportion of severe infections than clade II Mpox. The ongoing global Mpox outbreak that began in 2022 is caused by clade II Mpox, and cases continue to be reported worldwide. Clade I Mpox is endemic in DRC and more than 27,000 suspect cases, with more than 1,200 suspected deaths, have been reported in DRC since January 1, 2023, a substantial increase from the median 3,767 suspect clade I Mpox cases reported annually in DRC during 2016 - 2021. Mpox vaccine, which is expected to be effective against both clades, is not currently available in the DRC.

Due to the limited number of travelers and lack of direct commercial flights from DRC or its neighboring countries to the United States, the risk of clade I Mpox importation to the United States is considered to be low. However, because there is a risk of additional spread, the DPBH recommended that clinicians and jurisdictions in Nevada maintain a heightened index of suspicion for Mpox in patients who have recently been in DRC or to any country sharing a border with DRC and present with signs and symptoms consistent with Mpox. These can include rash that may be located on the hands, feet, chest, face, mouth, or near the genitals; fever; chills; swollen lymph nodes; fatigue; myalgia (muscle aches and backache); headache; and respiratory symptoms like sore throat, nasal congestion, and cough.

Nevada has robust Mpox testing capacity in the NSPHL and several other commercial laboratories, including clade-specific testing, sequencing, and/or flagging high-likelihood of clade I Mpox samples.

The risk of clade I Mpox spreading to the U.S. is low at this time. However, the DPBH urges individuals to seek medical care immediately and avoid contact with others if they have been in the DRC or its neighboring countries in the last 21 days and develop a new, unexplained skin rash lesions on any part of the body, with or without fever and chills. Additionally, the DPBH advises those who may have high risk factors for being exposed to Mpox to consider vaccination if they are eligible to receive the Mpox vaccine.

To achieve best protection CDC continues to recommend that people who are eligible for vaccination receive two doses of the JYNNEOS Vaccine. People at risk for Mpox who have only received one dose more than 28 days prior should receive a second dose as soon as possible. JYNNEOS vaccine is believed to protect against both Mpox clades I and II. Additionally, CDC issued Travel Health Advisories/Notices for the DRC and neighboring countries.

Individuals with risk factors for Mpox infection who are not able to be vaccinated (e.g., pregnant people, infants less than one year of age, individuals with eczema or active skin conditions, and people who are immunocompromised) should avoid situations that might increase their risk for Mpox.

Plans to Enhance Wastewater Surveillance

Nevada and the U.S. continue to face a severe drug overdose epidemic, with substance abuse and opioid-related deaths rising to extremely high levels. Overall, drug overdose deaths in the U.S. continued to rise from 2019 to 2022, with 107,941 drug overdose deaths reported in 2022. Additionally, deaths involving synthetic opioids other than methadone (primarily fentanyl) continued to rise with 73,838 overdose deaths reported in 2022. The nation certainly needs all the tools available to identify the presence of such dangerous substances and reverse the trends of this deadly epidemic. Wastewater-based monitoring could help guide responses to the U.S. opioid epidemic. Obtaining accurate and actionable data is vital for effective coordination, strategy development, and community preparedness to face major public health threats.

Currently used data collection methods, such as drug overdose-death data and self-reporting surveys, do not provide adequate understanding of temporal and spatial trends of drug use. Challenges in current data collection, include but are not limited to delayed analysis and interventions. Furthermore, stigma surrounding drug use severely hinder the effectiveness of prevention interventions, strategies, and policies.

Utilizing wastewater data will assist in better understanding and prevention of substance use disorder and overdose deaths and can also early detect pathogenic emerging and re-emerging biological agents that cause serious illnesses and outbreaks in the community. In addition to early detection, tracking and monitoring levels of pathogenic biological agents, wastewater surveillance offers a unique opportunity to gather unbiased and fairly accurate data on narcotics consumption at the community level. Analyzing composite wastewater samples can detect narcotic compounds and can estimates drug consumption prevalence. Wastewater surveillance can also serve as an "emergency indicator" for the presence of most concerning drugs like fentanyl and its analogues, which my enable timely resource allocation and effective emergency response. An additional benefit of wastewater surveillance is the ability to respect individual anonymity while providing near real-time information on drug use in communities.

Providing specific, timely and accurate comprehensive data regarding limited geographic areas such as long-term or acute healthcare facilities, schools, university campuses, airports, train stations, community centers, popular food establishments (e.g., restaurants, bars, nightclubs) to local and state health authorities and policy makers can facilitate informed data-driven decision-making and the timely initiation of targeted interventions and countermeasures to address local drug-related crises.

The comprehensive process of wastewater surveillance for opioids and other illicit narcotics should be used in parallel to early detection of COVID-19 and other newly emerging and re-emerging pathogenic biological agents. Wastewater surveillance is a valuable tool to combat a range of state and national public health and security threats, such as the opioid epidemic and other naturally occurring or human-induced public health threats. The progress attained in developing and enhancing wastewater surveillance is impressive, rendering it as one of the public health most promising and powerful sophisticated disease tracking and surveillance, and disease forecasting tool.

Ensuring access to wastewater surveillance data will enhance our understanding of our community health trends and public health threats particularly around communicable diseases and substance use while providing actionable data for public health interventions. Analysis of wastewater data can identify an emerging drug threat, predict suspected overdoses, and evaluate the effectiveness of harm reduction policies such as the decriminalization of fentanyl test strips. Unlike other currently existing/used surveillance approaches, wastewater surveillance provides the ability to address immediate public health needs while accurately predicting future imminent public health threats and crises.

Respiratory Syncytial Virus (RSV) Vaccines - Updated Recommendations

Respiratory syncytial virus (RSV) is a major cause of respiratory illness and hospitalizations in older adults during fall and winter in the U.S. On June 21, 2023, CDC's Advisory Committee on Immunization Practices (ACIP) issued its first adult RSV vaccination recommendations, stating that adults aged ≥60 years may receive a single dose of RSV vaccine, using shared clinical decision-making with their healthcare provider.

The 2023–2024 RSV season was the first during which RSV vaccination was recommended for U.S. adults aged ≥60 years. However, on June 26, 2024, the ACIP voted to update this recommendation advising a single dose of any Food and Drug Administration–approved RSV vaccine (Arexvy [GSK]; Abrysvo [Pfizer]; or mResvia [Moderna]) is now recommended for all adults aged ≥75 years and for adults aged 60–74 years who are at increased risk for severe RSV disease. Adults who have previously received RSV vaccine should not receive another dose.

The recently updated recommendations are intended to maximize RSV vaccination coverage among persons most likely to benefit from it, by clarifying who is at highest risk and by reducing implementation barriers associated with the previous shared clinical decision-making recommendation. Continued post licensure monitoring will guide future ACIP recommendations.