



Date: August 25, 2020

To: Nevada State Board of Health

Through: Richard Whitley, Director DHHS
Lisa Sherych, Administrator, DPBH

From: Ihsan Azzam, PhD, MD, MPH, Chief Medical Officer

Re: Report to the Board of Health for September 04, 2020 Meeting

COVID-19 Update

Introduction

It is almost eight months since the start of the SARS-CoV-2 global pandemic, and an extraordinary body of knowledge has been collected about the causal virus characteristics, mode of transmission, pathogenicity, natural history, hospitalization management, and mortality due to this infection. However, many issues are still not clear such as why some people contract the infection, while others do not, and much is still needing to be explained regarding immunogenicity and potential for reinfection; short- and long-term complications, prognosis, prophylaxis; primary and secondary prevention strategies.

At the beginning of the SARS-CoV-2 Pandemic, dangers and medical; epidemiological, financial and societal burdens were grossly under-estimated, and the collective global and national ability to control this newly emerging biological agent was over-estimated.

Current Situation

According to the Johns Hopkins University, Coronavirus Resource Center, there have been more than 23 million confirmed cases and almost 816 thousand deaths due to of COVID-19 around the world. And, as of the time of preparing this report, 5,716,000 COVID-19 cases were confirmed in the U.S. with almost 177,000 deaths due to this infection. So far 66,413 COVID-19 cases were diagnosed and 1,230 patients died from complications related to this infection in Nevada. 819,782 molecular tests were completed since the beginning of the pandemic, with a daily increase that ranges between 4,000 to 17,000 tests per day. The cumulative relatively-high test positivity rate (10.6% on August 25), and the daily positivity rate (11.8%) continue to slowly and steadily decrease. And, for the most recent 7-day period, the case-load is growing at a slower rate. Hospitalization due to COVID-19 continue also to decrease, and as of August 25th Nevada has 772 (confirmed and suspected) hospitalized COVID-19 patients, with a statewide hospital occupancy

rates below 73%, while intensive care units (ICU) are at an occupancy rate of about 60%, with less than 39% of the statewide ventilators are in use for all ICU patients.

<p>Total Tests (molecular)</p> <p>819,782 + 4,989</p> <p>Confirmed Cases</p> <p>66,413 + 403</p> <p>Deaths</p> <p>1,230 +30</p>	<p>Tests per 1,000 per week*</p> <p>14.2</p> <p>Daily Positivity Rate*</p> <p>11.8%</p> <p>Cumulative Positivity Rate*</p> <p>10.6%</p> <p><small>Please reference technical notes page for updated methodology.</small></p>	<p>Current Hospitalizations</p> <table border="0"> <tr> <td>Confirmed</td> <td>Suspected</td> </tr> <tr> <td>652</td> <td>120</td> </tr> <tr> <td>+6</td> <td>-5</td> </tr> </table> <p>Intensive Care Unit (ICU)</p> <p>216 -13</p> <p><small>Hospitalization data are not updated on Sundays.</small></p>	Confirmed	Suspected	652	120	+6	-5
Confirmed	Suspected							
652	120							
+6	-5							

Nevada Dashboard August 25, 2020

Estimated Herd Immunity Rate and Vaccine Development

The official COVID-19 case-count in the U.S. is a significant under-representation of the magnitude of this pandemic. A recent CDC study of ten cities and states suggested that between 10 to 20% of Americans (nearly 30 to 60 million people) have already been infected with coronavirus. This CDC data comes from late April and early May, and since then the virus has spread even further. Effective Herd Immunity rates needed to reduce the active spreading of COVID-19 are estimated to be between 50 to 70%.

Despite some anecdotal reports from Asia and Europe, scientists have not confirmed any repeat COVID-19 cases in the U.S. However, according to CDC recent reports there is a reasonable chance that people could have more than one infection with COVID-19.

Progress toward COVID-19 vaccines has been made in a record time, and seven vaccines are in the course of completing phase III clinical trials to demonstrate safety and effectiveness. Mass vaccination campaigns could begin as soon as about a year after the discovery of this new virus. This constitutes a great progress in vaccine development.

COVID-19 Infections among Children

Unlike the elderly COVID-19 patients - where many required hospitalization and intensive care due to pneumonia and other organ failures - children seemed early in the pandemic to be “immune” to this virus, and youth who contracted the infection seemed to be at low risk for developing severe symptoms or complications. It even seemed that children did not contract the infection at the same rate as adults. While deaths rates among children and teens remain very low, they are

not invulnerable, and recent data demonstrates that children are probably contracting- and contributing to spreading the infection as much as adults.

Early closure of schools in March 2020, and reduced interactions among children coupled with very limited testing availability, could have contributed to such low initially observed infection rates among children. However, there has been a recent significant increase of 90% in the number of COVID-19 cases among children in the U.S., as almost 180,000 new COVID-19 cases among American children were confirmed in a four-week period (between July 9 and August 6). Currently, more than 443,000 (about 9%) of all COVID-19 cases in the U.S. are among children.

While hospitalization rates among children with COVID-19 remain low, recently observed trends showed that one in three children hospitalized with the infection may require intensive care. The highest rate of hospitalizations in children was among those under two years of age. And like adults, children with comorbidities or other health conditions such as obesity or asthma are at higher risk for developing systemic complications that require hospitalization. Additionally, and most alarming is that a small proportion of children infected with COVID-19 seem to develop a serious complication called the Pediatric Multisystem Inflammatory Syndrome which seems to occur between two to four weeks after a symptomatic or an asymptomatic COVID-19 infection. Fortunately, most children who developed this syndrome recovered.

Recent studies demonstrated that childhood all-vaccines-intake had unfortunately decreased since the onset of this COVID-19 Pandemic, leaving many vulnerable; under- or unvaccinated children without any protection against prevalent childhood infections. Ensuring routine vaccination services for children as well as for adults during the COVID-19 pandemic is an important way to prevent the spread of serious illnesses, and hospitalizations that impose further strains on the healthcare system.

Seasonal Influenza Update

As we start moving into the fall and winter, it is more than certain to be facing a continuation of this COVID-19 severe community spread, that can be synergized by the possibility of a widespread outbreaks of influenza which would make this severe pandemic even worse. Even a mild influenza season could overwhelm the already-stressed hospitals who are currently treating large numbers of severe and critical COVID-19 patients.

Influenza viruses and COVID-19 will co-circulate, and individuals can be co-infected with both influenza and COVID-10 at the same time. It is still unclear what impact the ongoing COVID-19 pandemic will have on the upcoming influenza season in Nevada and nationwide. The presence of COVID-19 and influenza at the same time could place a tremendous burden on the health care system and can result in more illnesses, hospitalizations, and deaths.

According to CDC, each year in the U.S., 39 to 56 million Americans are expected to contract the flu, with about 500,000 of them developing serious complications that require hospitalization; resulting in 12,000 to 59,000 deaths. Despite this very concerning burden of the seasonal influenza, less than a half of the U.S. population usually gets vaccinated for the flu.

Increasing influenza vaccination coverage will reduce the stress on the health care system; decrease the need for medical care and hospitalizations, and reduce the need for influenza diagnostic testing.

Influenza vaccination is the most effective measure to reduce the spread of influenza viruses and protect individuals from developing severe complications. Annual flu vaccination can reduce the risk for widespread outbreaks, negative health outcomes, hospitalizations and death.

This fall it will be vital for Nevada residents to get vaccinated for the flu in order to reduce the overall burden of respiratory illness, protect Nevada's most vulnerable populations, and decrease the burden on the healthcare system. The Division of Public and Behavioral Health (DPBH) is urging everyone in Nevada to get vaccinated and protected from influenza complication in order to lessen the potential burden on hospitals and the already strained health care system.

In preparation for this upcoming seasonal influenza the DPBH is coordinating with the CDC, community partners and leaders, local health authorities, and community healthcare providers and professional to conduct mass influenza vaccination campaigns with a major focus on high risk individuals and those with underlying medical conditions. Priority vaccinations will include staff and residents at long-term health care facilities; underserved minority groups (i.e., African Americans, Hispanics, Native Americans and Asians); schools, residential facilities and nursing home. Additionally, the DPBH is partnering with the Nevada Department of Corrections (NDOC) to ensure that vulnerable inmates are immunized for influenza.

Due to an increased intake of the influenza vaccine, countries in the southern hemisphere where winter is ending, are reporting that the flu season has been mild this year. Based on that observation, it is possible that this year's flu season will not be as severely widespread also because of the physical distancing measures and reduced social interactions; adherence to face mask wearing and face coverings, regular hand-hygiene, environmental disinfection and other prevention measures already in place to control COVID-19.