WASHOE COUNTY HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

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EPI-NEWS

Public Health

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# COVID-19 OUTBREAK IN WASHOE COUNTY (1)
# Epidemiological Findings from the First 115 Cases

## Introduction

Since January 21, 2020, the first case of COVID-19 was reported in the United States, the situation has been evolving rapidly. On March 11, the World Health Organization (WHO) declared COVID-19 pandemic.

The following table provides an overview of COVID-19 pandemic from the global perspective to the local perspective.

| Region | No. Cases | No. Deaths | Case Fatality Rate | Data Source (as of date)* |
|---|---|---|---|---|
| World (202 countries or regions) | 972,303 | 75,853 | 5.2% | WHO (4/3)[1] |
| U.S | 239,279 | 5,443 | 2.3% | CDC (4/2)[2] |
| Nevada | 1,514 | 43 | 2.8% | NHHS (4/3)[3] |
| Washoe County | 184 | 4 | 2.2% | WC (4/3) [4] |

The Washoe County Health District (WCHD) reported the first case of COVID-19 on March 5, 2020. Since then, more than 200 cases have been reported. The epidemiological investigations and contact tracing are very labor-intensive. Many investigations are still ongoing. This newsletter will provide an overview of epidemiological findings for first 115 cases reported by March 31 to characterize these cases and further understand the epidemiological profiles among local cases. The majority of cases reported on March 29 or forward have not been entered into the tracking database yet. Future newsletters about local findings will be available when more data become available.

## Methods

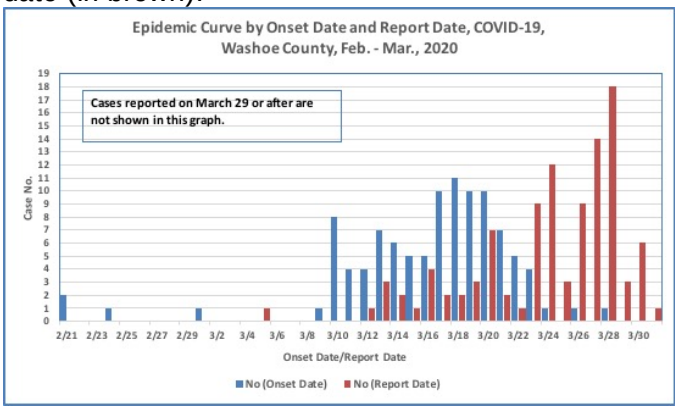
A case is defined as a person who had compatible symptoms with COVID-19 and was tested positive for SARS-CoV-2 or a close contact to a case who was tested positive for SARS-CoV-2, the causative agent for COVID-19. Epidemiological information was obtained primarily from phone interview conducted by WCHD staff members and/or online risk assessment completed by cases. The CDC's 2019-nCoV real-time RT-PCR diagnostic panel was performed by the Nevada State Public Health Laboratory (NSPHL). However, the cases reported from hospitals or healthcare providers may have tests performed by commercial labs and those cases were also included in this analysis.

## Descriptive Statistics

The median age of cases is 51 years (range: 10-81 years). Sixty-four percent (64%) of cases are under 55 years of age and 36% are above 55 years of age. One case is a child. Fifty-four percent (54%) are male. Race/ethnicity is missing for the majority of cases therefore not included. Reno accounts for 62% of cases, Sparks 32%, rest of county 6%. Of 76 cases with known occupation, people who work in a healthcare setting account for 18%, not all are working directly with patients. Two of the 53 female (3.8%) cases are pregnant.

## Epidemic Curve by Onset Date and Report Date

The following epidemic curves show the frequency of cases numbers by onset dates (in blue) and by report date (in brown).




The first three cases acquired the infections while they were traveling in foreign countries or in hot spot area in the US. From the onset date to the report date, the

[1] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/
[2] https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html
[3] https://app.powerbigov.us/view?r=eyJrIjoiMjA2ZThiOWUtM2FlNS00MGY5LWFmYjUtNmQwNTQ3Nzg5N2I2IiwidCI6ImU0YTM0MGU2LWI4OWUtNGU2OC04ZWFhLTE1NDRkMjcwMzk4MCJ9
[4] https://covid19washoe.com

median is 7 days (range: 1-31 days). The peak of reported cases from onset date to report date appears to be 10 days apart. It is reasonable to conclude there may be a 7-10 day lag from illness onset to the date by which WCHD is notified and able to arrange testing. This may be shorter than two weeks reported by other jurisdictions. The downward trend is not a true representation as the majority of cases reported from March 29 and forward have not been included in this graph yet. Based on the projections here, https://covid-19.direct/US, as of April 3, the U.S. doubles the reported case number almost every 5 days, which means that observed reproductive number is around 2.5. Washoe County has a similar doubling time, i.e., 4.9 days. The outbreak will become manageable by local resources when doubling time equals 10 days and when the reproductive number is close to 1. It is projected that the peak of reported cases in Washoe County may occur around April 15-20; however, this projection is subject to change based on new reports received in the coming days.

## Symptomology

The reported symptoms are compatible with COVID-19. But the symptomology of 115 local cases of COVID-19 appears to be different with a published study from China. [5] Here is the distribution of symptoms: cough 76%, elevated measured fever or subjective fever 70%, muscle ache or severe joint pain 66%, headache 64%, chills 61%, diarrhea 47%, sore throat 38%, sore throat 38%, short of breath 30%, fatigue 23%, abdominal pain 19%, runny nose 16, vomiting 16%, and loss of taste or smell 12%. Two of 115 cases (1.7%) are asymptomatic, which was identified from testing those with possible exposures or close contacts to known cases. It is important to remember that 30% of cases may not present with a fever.

## Severity and Outcomes

Approximately 37% (43/115) of cases utilized fever-reducing medications and 26% (30/115) of cases sought medical care due to COVID-19. Of 12 cases who sought medical care, 7 (58%) went to Urgent Cares, 4 (33%) went to the ER, and 1 (8%) went to a primary care physician. Seventeen percent (17%, 19/115) of cases were hospitalized; 8.7% (10/115) admitted to ICU; 4.4% (5/115) used ventilators, 2.61% (3/115) deceased. Among three deceased cases, two were under 55 years of age and one was >80 years of age. Two had underlying conditions and one had dementia. One traveled to New York and other two cases had no documented exposures. From onset to recovery, the median length was 16 days (range 11-17 days). Of 115 cases, the recovery rate is 19.1% (22/115).

## Underlying Conditions

Of 115 cases, 22 (19%) cases had no underlying conditions. Among cases with reported underlying chronic conditions, the most frequently reported conditions are diabetes, cardiovascular diseases, chronic lung disease, kidney disease, autoimmune disorders, and others. About one quarter of cases received seasonal influenza vaccination.

## Exposures

Among 115 cases, 63 (55%) cases had documented exposures. Sixty-three cases had following possible exposures during their incubation period: domestic travels 49%, international travel 37%, contact to COVID-19 cases 10%, had been on a cruise ship 3.2%, and local exposure 1.6%. One cluster of 14 cases associated with a workplace was investigated. Based on this analysis, community-wide transmission was less likely among first 115 cases. However, these proportions are subject to change in the coming weeks.

## Recommendations for Healthcare Providers

1. Check out CDC's website **https://www.cdc.gov/coronavirus/2019-nCoV/hcp/index.html** for patients' evaluation, testing, clinical care, and infection control. Eighteen percent of 115 local cases are healthcare workers, it is imperative to comply with infection control when dealing with the patients with COVID-19 like illness.

2. Based on laboratory testing data reported to Nevada State, of 14,532 persons who received laboratory tests in Nevada for SARS-CoV-2, 1,514 (10.4%) are positive, which means that nearly 90% of persons who had influenza like illness may have other respiratory diseases, NOT COVID-19. It is important to note that 21, 13, 6 of 115 cases received influenza, strep, and other respiratory viral panel testing, respectively, none of them are positive for flu, strep, and other viruses.

3. To report a positive COVID-19 case, please call 775-328-2447 or fax your report to the WCHD at 775-328-3764.

***We are grateful to all health care providers, infection control practitioners and laboratory staff for their reporting and collaboration with this COVID-19 pandemic response.***

[5] DOI: 10.1056/NEJMoa2002032