

## COVID-19 Breakthrough Infections Clark County, Nevada

**Date:** July 8, 2021

Breakthrough cases are U.S. residents with a SARS-CoV2 RNA or antigen detected on respiratory specimen collected greater than or equal to 14 days after completing the primary series of an FDA authorized COVID-19 vaccine (i.e., complete vaccination). Complete vaccination is two doses of the Pfizer or Moderna vaccine or one dose of the Johnson and Johnson (Janssen) vaccine.

Exclusion Criteria: The persons who were recently positive for COVID-19, defined as a positive <45 days prior to the current positive test under investigations were excluded.

Given the large number of people being vaccinated in the United States and the high level of ongoing SARS-CoV-2 circulation, thousands of symptomatic vaccine breakthrough cases are expected, even if the vaccines remain as effective as demonstrated during the clinical trials.

The Centers for Disease Control and Prevention (CDC) recently updated guidance on reporting of breakthrough infections to only report those that have been hospitalized and contacted by public health and an interview is performed or are a recorded COVID-19 death. As with other metrics related to COVID-19 disease investigation and contact tracing, this information is self-reported by the individual. Due to the small number of associated deaths, further breakdowns are not provided at this time to protect privacy and confidentiality. Data is considered preliminary and subject to change.

As of today, Southern Nevada Health District is reporting a total of 92 breakthrough hospitalizations and 13 breakthrough deaths (12 of them were hospitalized) in Clark county, Nevada.

**Table 1: Population Characteristics of COVID-19 Breakthrough Hospitalizations**

	<i>Overall</i>
	<i>N %</i>
<b>All</b>	<b>92 100</b>
<b>Age (in years)</b>	
25-49	12 13
50-64	15 16
65+	65 71
<b>Gender</b>	
Male	59 64
Female	33 36
<b>Race/Ethnicity</b>	
Hispanic	11 12
White	51 55
Black	15 16
API	8 9
Other	4 4
Unknown	3 3
<b>Travel History</b>	
Yes	7 8
No	72 78
Unknown	13 14
<b>Variant of concern (VOC)</b>	
Gamma	1 1
Unknown	91 99
<b>Death</b>	
Yes	12 13
No	50 54
Unknown	30 33
<b>Vaccine Type</b>	
Pfizer	48 52
Moderna	20 22
Janssen	14 15
Unknown	10 11
<b>Underlying Conditions</b>	
Yes	76 83
No	16 17

**Table 2: Breakdown of COVID-19 Breakthrough Hospitalizations according to Underlying conditions**

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
<b>All</b>	<b>76</b>	<b>100</b>
<b>Diabetes</b>		
Yes	28	37
No	48	63
<b>Hypertension</b>		
Yes	43	57
No	33	43
<b>Chronic Lung Disease</b>		
Yes	23	30
No	53	70
<b>Chronic Heart Disease</b>		
Yes	22	29
No	54	71
<b>Chronic Liver Disease</b>		
Yes	3	4
No	73	96
<b>Chronic Kidney Disease</b>		
Yes	11	14
No	64	84
	1	1
<b>Neurological Conditions</b>		
Yes	7	9
No	69	91
<b>Immunocompromised</b>		
Yes	7	9
No	69	91
<b>Other conditions</b>		
Yes	45	59
No	31	41
<b>Unknown</b>		
Yes	1	1
No	75	99

**Notes:**

\* White, Black, Asian, and AEA are non-Hispanic

\* AEA=American Indian/Eskimos/Alaskan Natives API=Asian Pacific Islander

\* There are a limited number of specimens for sequencing of VOCs compared to the total number of all COVID-19 cases; 'Unknown' does not necessarily mean cases were not VOC

\* The report does not include breakthrough hospitalizations from State approved facilities as State is responsible for their investigation.

\* Given the low number of breakthrough deaths, detailed information is not provided to protect confidentiality of the cases .