

COVID-19 Breakthrough Infections Clark County, Nevada

Date: July 1, 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 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 70 breakthrough hospitalizations which includes 11 breakthrough deaths in Clark county, Nevada.

Table 1: Population Characteristics of COVID-19 Breakthrough Hospitalizations

	<i>Overall</i>
	<i>N %</i>
All	70 100
Age (in years)	
25-49	8 11
50-64	10 14
65+	52 74
Gender	
Male	44 63
Female	26 37
Race/Ethnicity	
Hispanic	7 10
White	41 59
Black	12 17
API	6 9
Other	2 3
Unknown	2 3
Travel History	
Yes	4 6
No	54 77
Unknown	12 17
Variant of concern (VOC)	
Gamma	1 1
Unknown	69 99
Death	
Yes	11 16
No	40 57
Unknown	19 27
Vaccine Type	
Pfizer	36 51
Moderna	13 19
Janssen	11 16
Unknown	10 14
Underlying Conditions	
Yes	57 81
No	13 19

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

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	57	100
Diabetes		
Yes	21	37
No	36	63
Hypertension		
Yes	32	56
No	25	44
Chronic Lung Disease		
Yes	17	30
No	40	70
Chronic Heart Disease		
Yes	17	30
No	40	70
Chronic Liver Disease		
Yes	1	2
No	56	98
Chronic Kidney Disease		
Yes	9	16
No	48	84
Neurological Conditions		
Yes	2	4
No	55	96
Immunocompromised		
Yes	5	9
No	52	91
Other conditions		
Yes	37	65
No	20	35
Unknown		
Yes	1	2
No	56	98

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 .