

COVID-19 Breakthrough Infections Clark County, Nevada

Date: June 24, 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 54 breakthrough hospitalizations and 8 breakthrough deaths in Clark county, Nevada.

Table 1: Population Characteristics of COVID-19 Breakthrough Hospitalizations

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	54	100
Age (in years)		
25-49	6	11
50-64	7	13
65+	41	76
Gender		
Male	36	67
Female	18	33
Race/Ethnicity		
Hispanic	5	9
White	30	56
Black	12	22
API	4	7
Other	2	4
Unknown	1	2
Travel History		
Yes	4	7
No	44	81
Unknown	6	11
Variant of concern (VOC)		
Gamma	1	2
Unknown	53	98
Death		
Yes	8	15
No	34	63
Unknown	12	22
Vaccine Type		
Pfizer	25	46
Moderna	10	19
Janssen	9	17
Unknown	10	19
Underlying Conditions		
Yes	47	87
No	7	13

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

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	47	100
Diabetes		
Yes	16	34
No	31	66
Hypertension		
Yes	28	60
No	19	40
Chronic Lung Disease		
Yes	11	23
No	36	77
Chronic Heart Disease		
Yes	13	28
No	34	72
Chronic Liver Disease		
Yes	1	2
No	46	98
Chronic Kidney Disease		
Yes	6	13
No	41	87
Neurological Conditions		
Yes	2	4
No	45	96
Immunocompromised		
Yes	5	11
No	42	89
Other conditions		
Yes	29	62
No	18	38
Unknown		
No	47	100

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 .