

COVID-19 Breakthrough Hospitalizations and Deaths

Clark County, Nevada

Date: August 11, 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. 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 225 breakthrough hospitalizations and 49 breakthrough deaths (37 of them were hospitalized) in Clark county, Nevada.

Table 1: Population Characteristics of COVID-19 Breakthrough Hospitalizations

	<i>Overall</i>
	<i>N %</i>
All	225 100
Age (in years)	
18-24	1 0
25-49	18 8
50-64	41 18
65+	165 73
Gender	
Male	133 59
Female	92 41
Race/Ethnicity	
Hispanic	27 12
White	131 58
Black	19 8
API	17 8
Other	11 5
Unknown	20 9
Travel History	
Yes	12 5
No	132 59
Unknown	81 36
Variant of concern (VOC)	
Gamma	1 0
Epsilon	1 0
Delta	18 8
Unknown	205 91
Death	
Yes	37 16
No	86 38
Unknown	102 45
Vaccine Type	
Pfizer	143 64
Moderna	55 24
Janssen	27 12
Underlying Conditions	
Yes	153 68
No	72 32

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

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	153	100
Diabetes		
Yes	52	34
No	101	66
Hypertension		
Yes	80	52
No	73	48
Chronic Lung Disease		
Yes	40	26
No	113	74
Chronic Heart Disease		
Yes	54	35
No	99	65
Chronic Liver Disease		
Yes	4	3
No	149	97
Chronic Kidney Disease		
Yes	22	14
No	129	84
	2	1
Neurological Conditions		
Yes	19	12
No	134	88
Immunocompromised		
Yes	10	7
No	143	93
Other conditions		
Yes	73	48
No	80	52
Unknown		
Yes	2	1
No	151	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 .