

COVID-19 Breakthrough Hospitalizations and Deaths

Clark County, Nevada

Date: August 19, 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 304 breakthrough hospitalizations and 87 breakthrough deaths (72 of them were hospitalized) in Clark county, Nevada.

Table 1: Population Characteristics of COVID-19 Breakthrough Hospitalizations

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	304	100
Age (in years)		
18-24	1	0
25-49	26	9
50-64	53	17
65+	224	74
Gender		
Male	181	60
Female	123	40
Race/Ethnicity		
Hispanic	35	12
White	170	56
Black	39	13
API	26	9
Other	13	4
Unknown	21	7
Travel History		
Yes	12	4
No	175	58
Unknown	117	38
Variant of concern (VOC)		
Gamma	1	0
Epsilon	1	0
Delta	20	7
Alpha	1	0
Unknown	281	92
Death		
Yes	72	24
No	92	30
Unknown	140	46
Vaccine Type		
Pfizer	190	63
Moderna	73	24
Janssen	41	13
Underlying Conditions		
Yes	203	67
No	101	33

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

	<i>Overall</i>	
	<i>N</i>	<i>%</i>
All	203	100
Diabetes		
Yes	72	35
No	131	65
Hypertension		
Yes	117	58
No	86	42
Chronic Lung Disease		
Yes	59	29
No	144	71
Chronic Heart Disease		
Yes	68	33
No	135	67
Chronic Liver Disease		
Yes	4	2
No	199	98
Chronic Kidney Disease		
Yes	32	16
No	169	83
	2	1
Neurological Conditions		
Yes	28	14
No	175	86
Immunocompromised		
Yes	14	7
No	189	93
Other conditions		
Yes	92	45
No	111	55
Unknown		
Yes	2	1
No	201	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 .