



**COVID-19 DATA/SURVEILLANCE 2021 UPDATE:
COVID-19 SURGE TRENDS FROM 7/8/2021 TO 9/28/2021
AND DEATH CERTIFICATE/CO-MORBIDITY ANALYSIS**

**OFFICE OF EPIDEMIOLOGY AND RESEARCH & COVID-19 SURVEILLANCE UNIT
GUAM DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
9/29/2021**

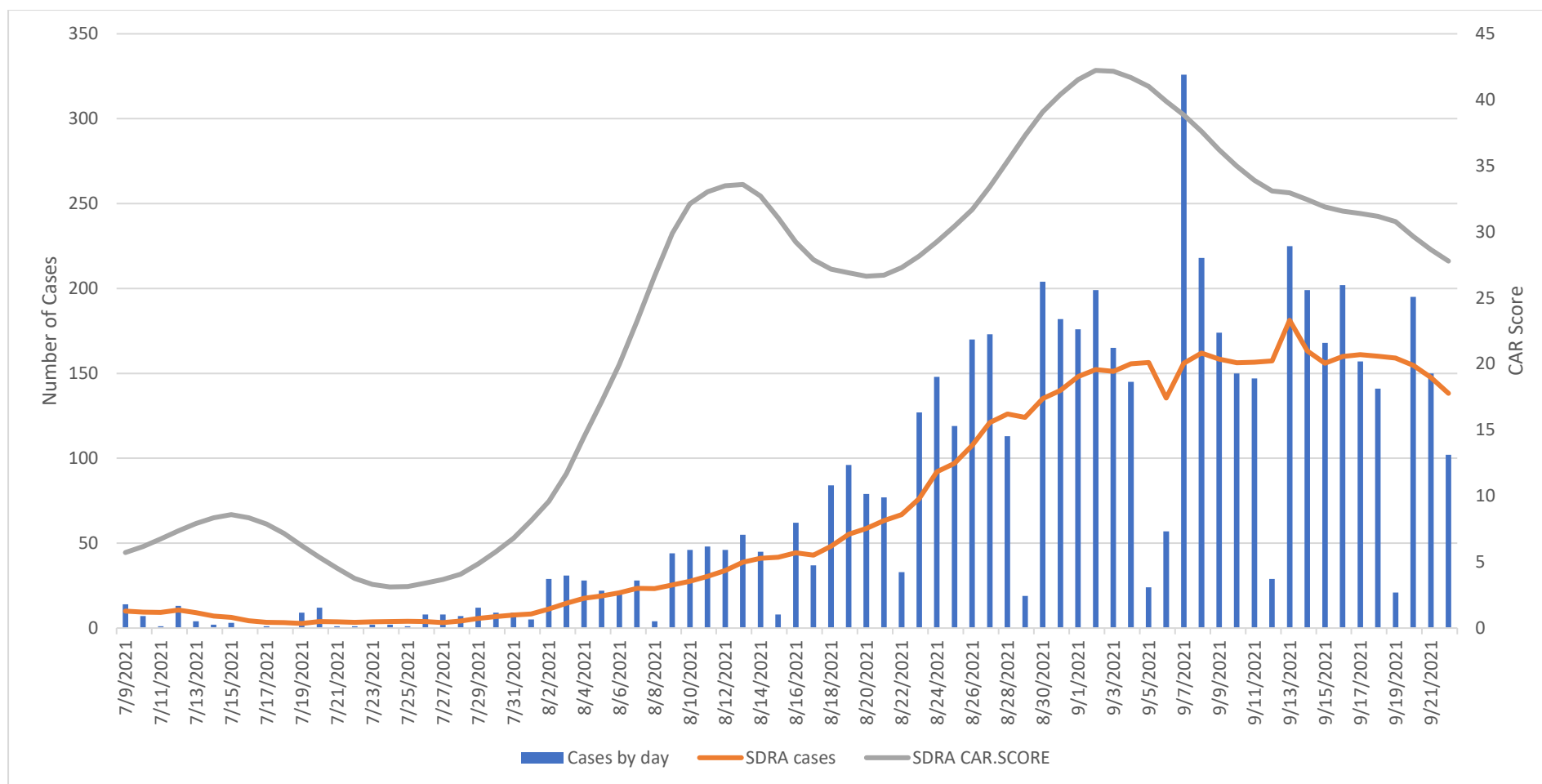


Figure 1 shows the cases by day from July 8 to September 26, 2021. The SDRA has been decreasing after September 13, and the CAR score has also been decreasing. However, we are still observing more than 100 cases per day, which is similar to what was observed back in October and November 2020, during the previous surge. Guam will continue to remain in the current surge until the average daily cases fall to less than 25 per day.

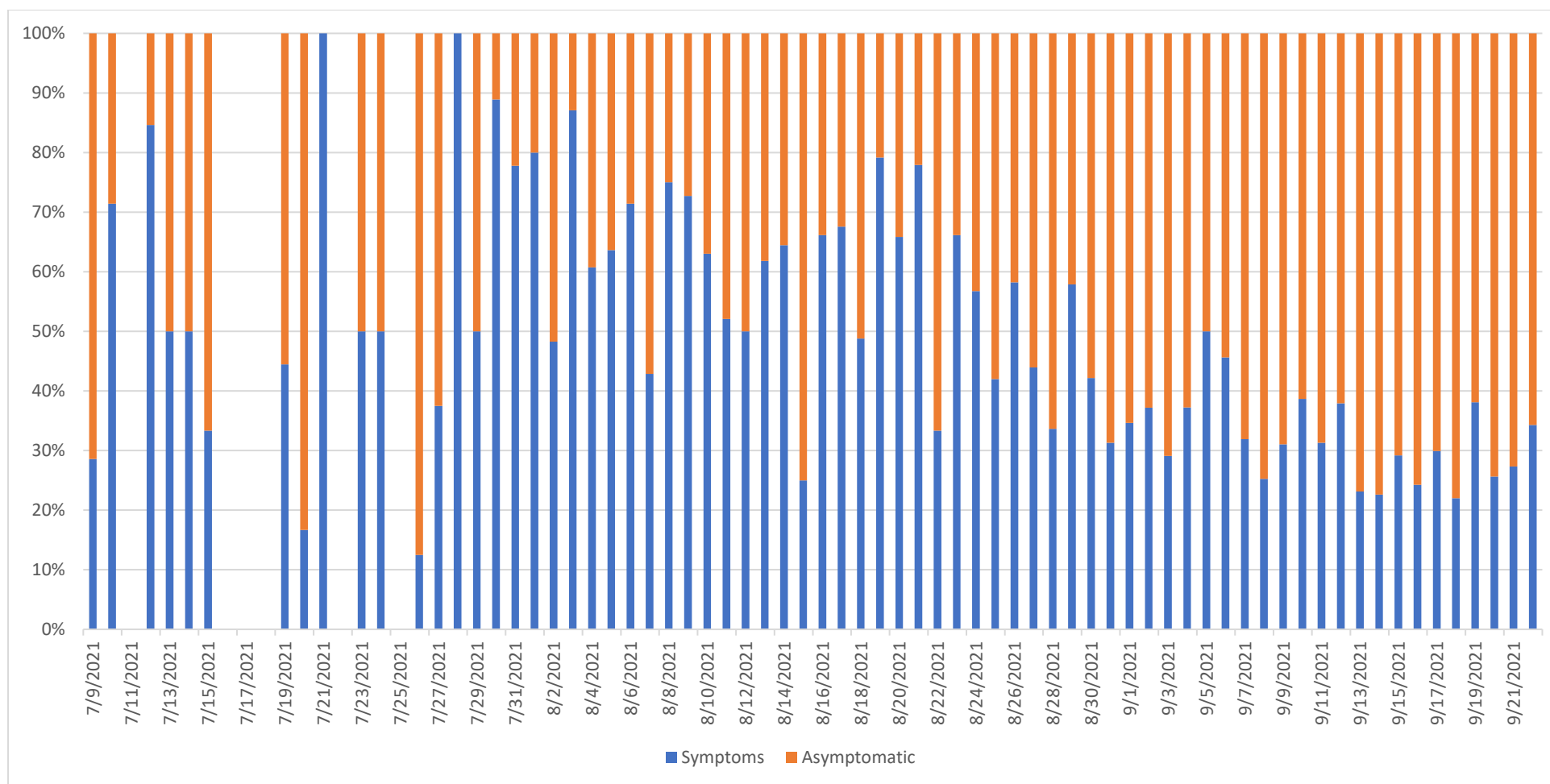


Figure 2 shows the cases by day from July 8 to September 26, 2021 by symptomatology. During the early part of the surge in July and August, there were more symptomatic cases, but this has switched to more asymptomatic cases.

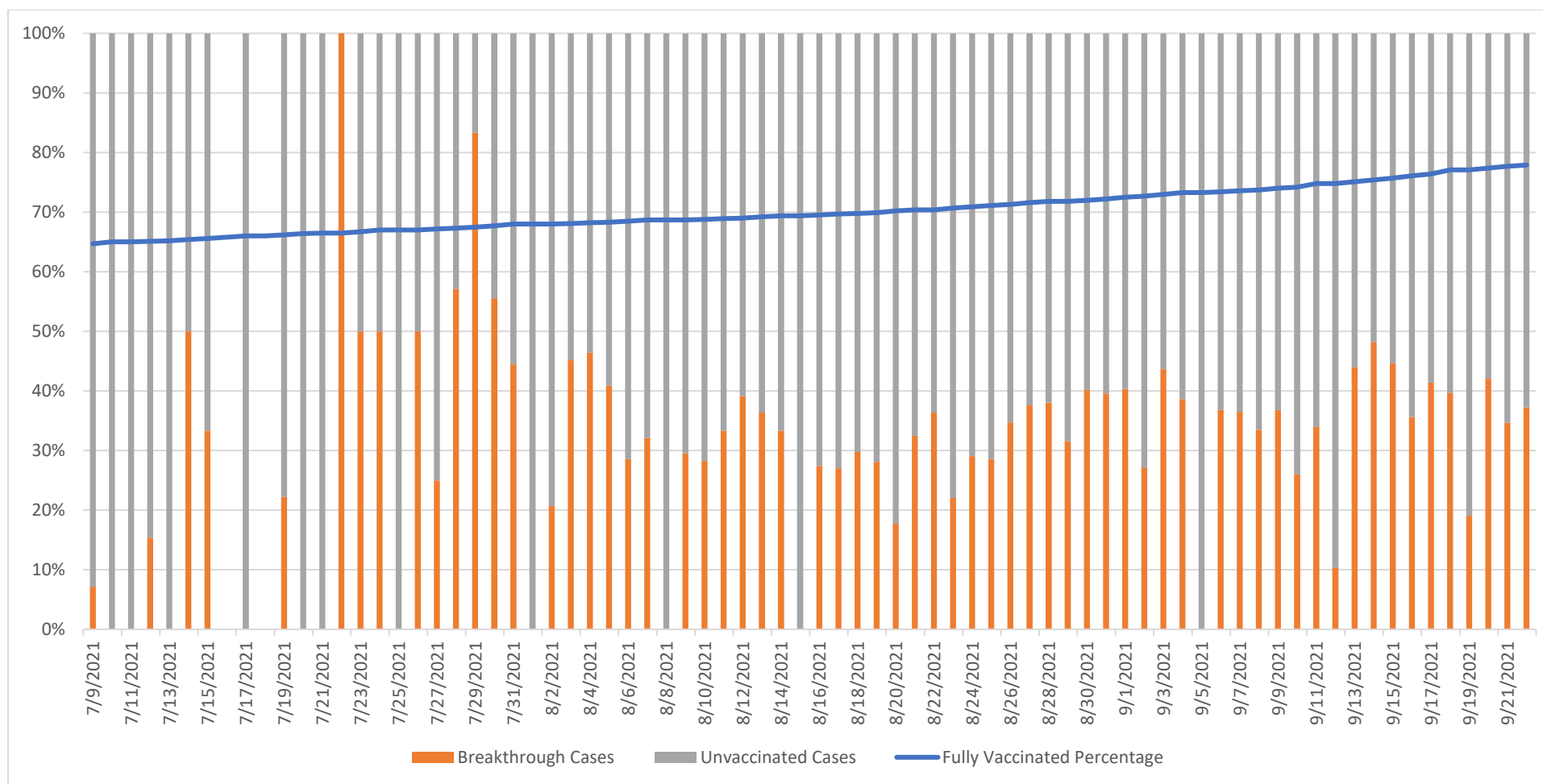


Figure 3 shows the cases by day from July 8 to September 26, 2021 by vaccination status. While there were more breakthrough cases among fully vaccinated persons in July, this has fallen to about 30-40% of cases. The majority of cases are among the unvaccinated.

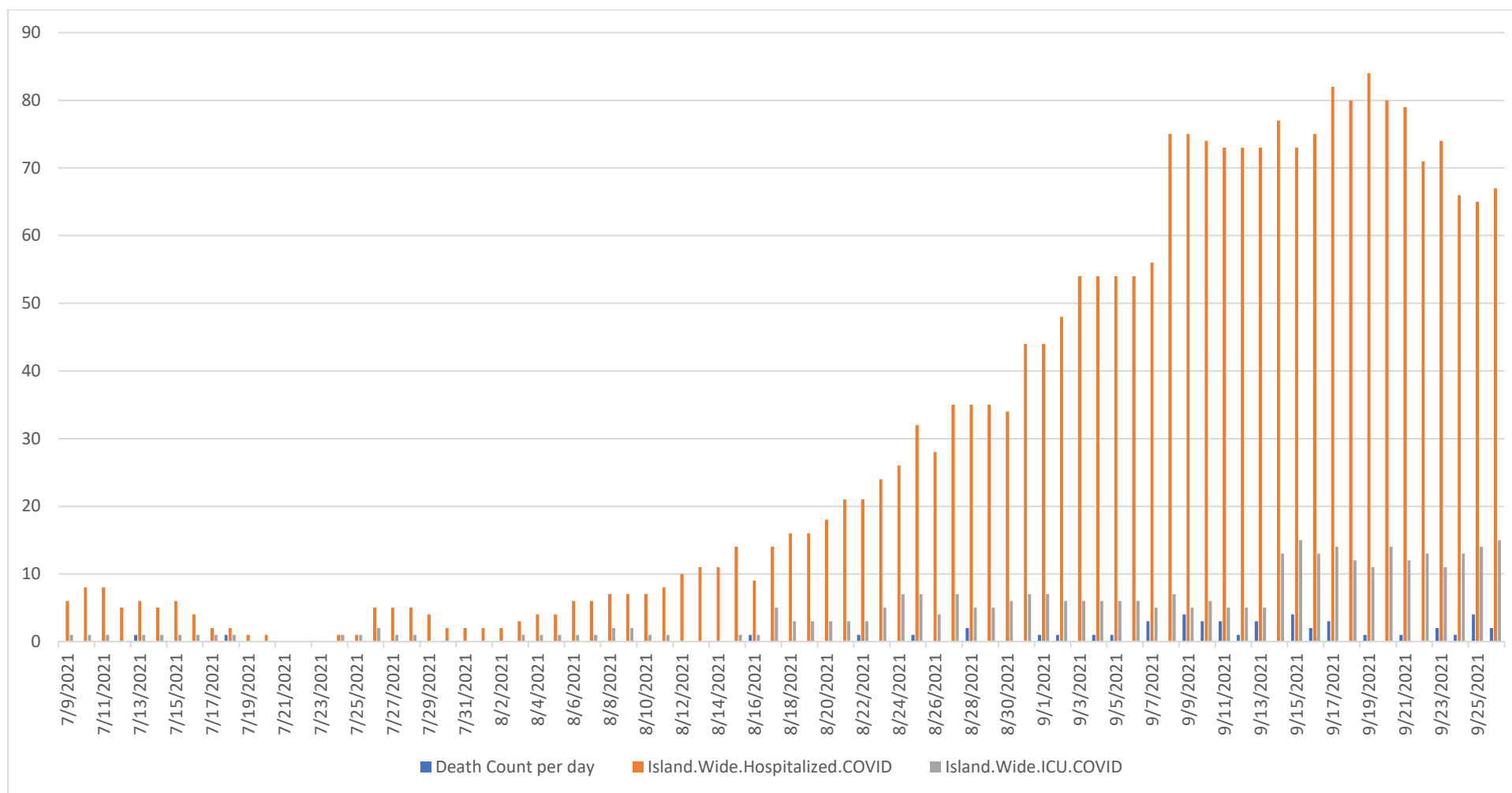


Figure 4 shows the hospitalized cases and island-wide ICU cases and the death count by day from July 8 to September 26, 2021. As can be noted, while there has been a slight decrease in hospitalizations, there has not been a decrease in ICU use, there has been an increase.

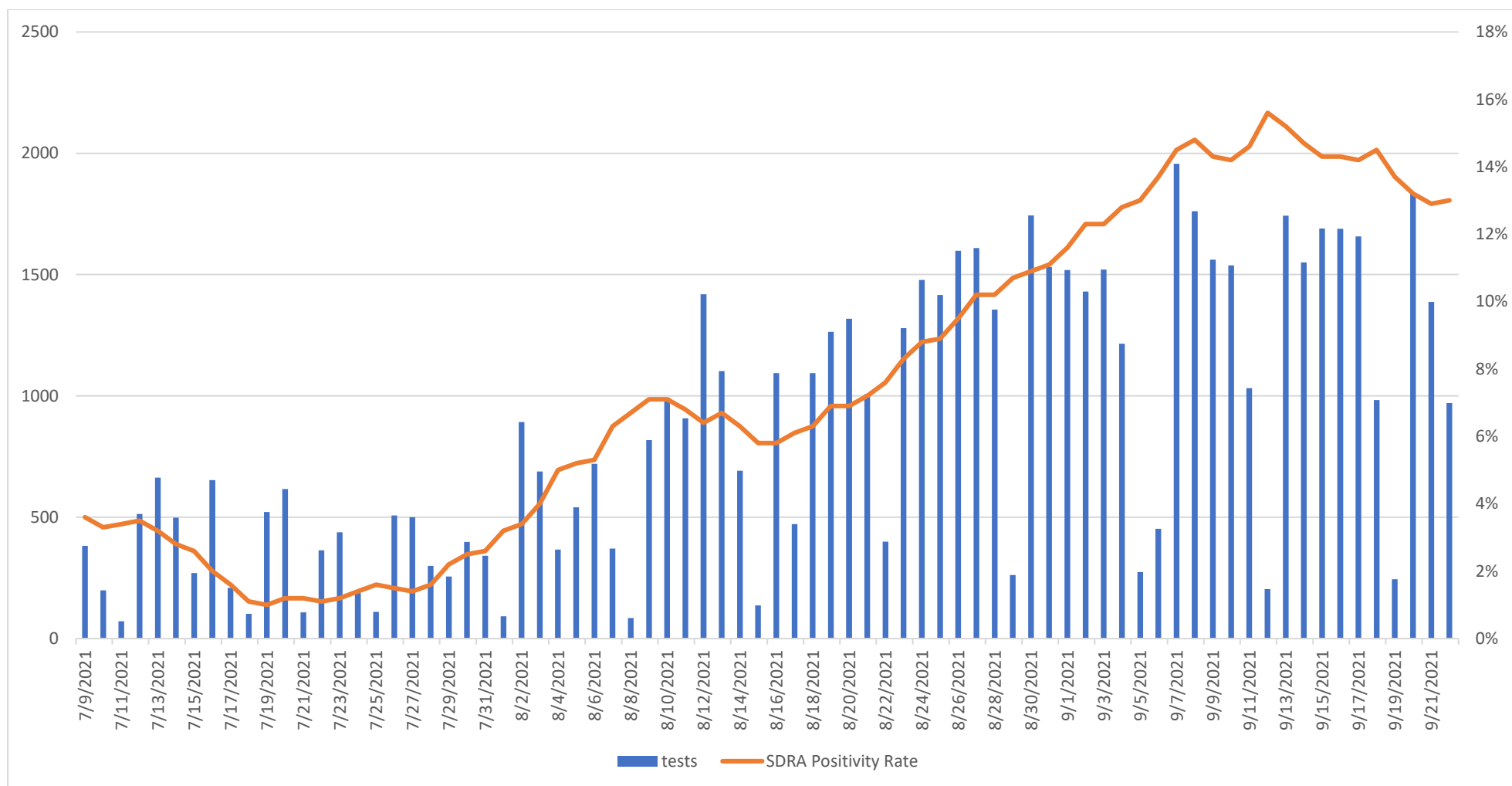


Figure 5 shows the number of tests performed and the SDRA of the test positivity rate from July 8 to September 26, 2021.

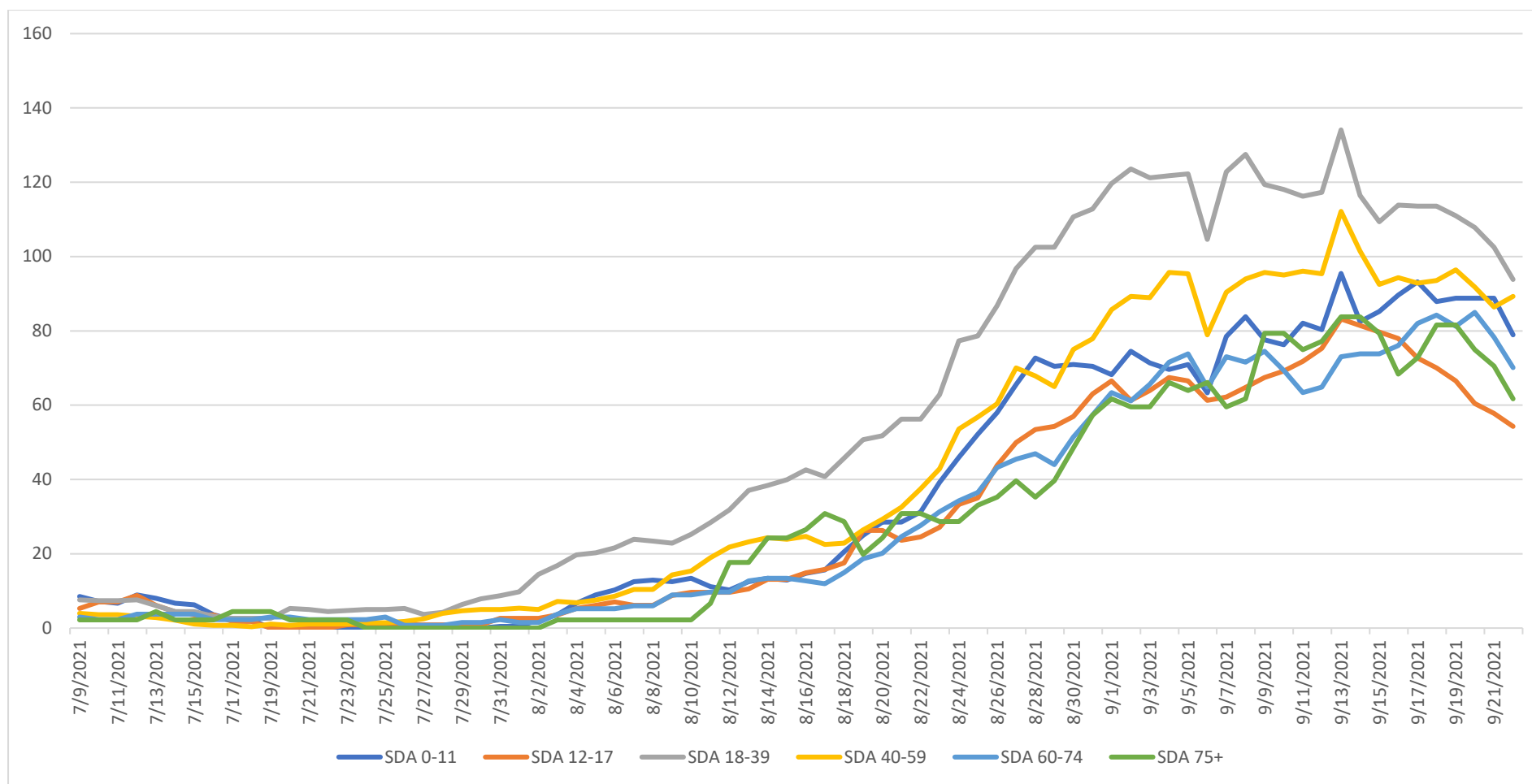


Figure 6 shows the cases by day from July 8 to September 26, 2021 by age. All ages show a decrease in the past week, but the highest number of cases continues to be those aged 18-39 years, followed by 40-59 years and then 0-11 years.

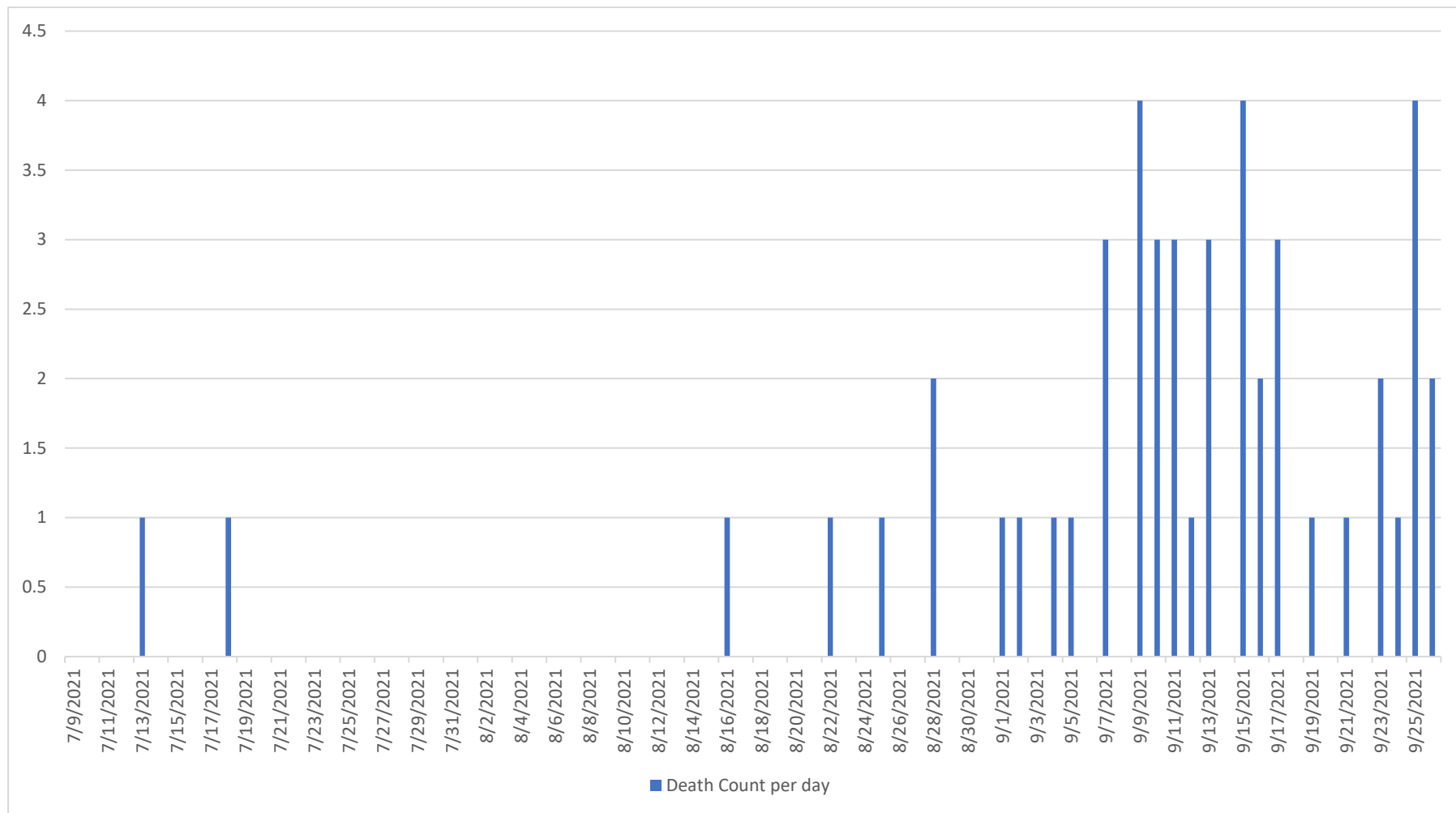


Figure 7 shows the death counts by day from July 8 to September 27, 2021.

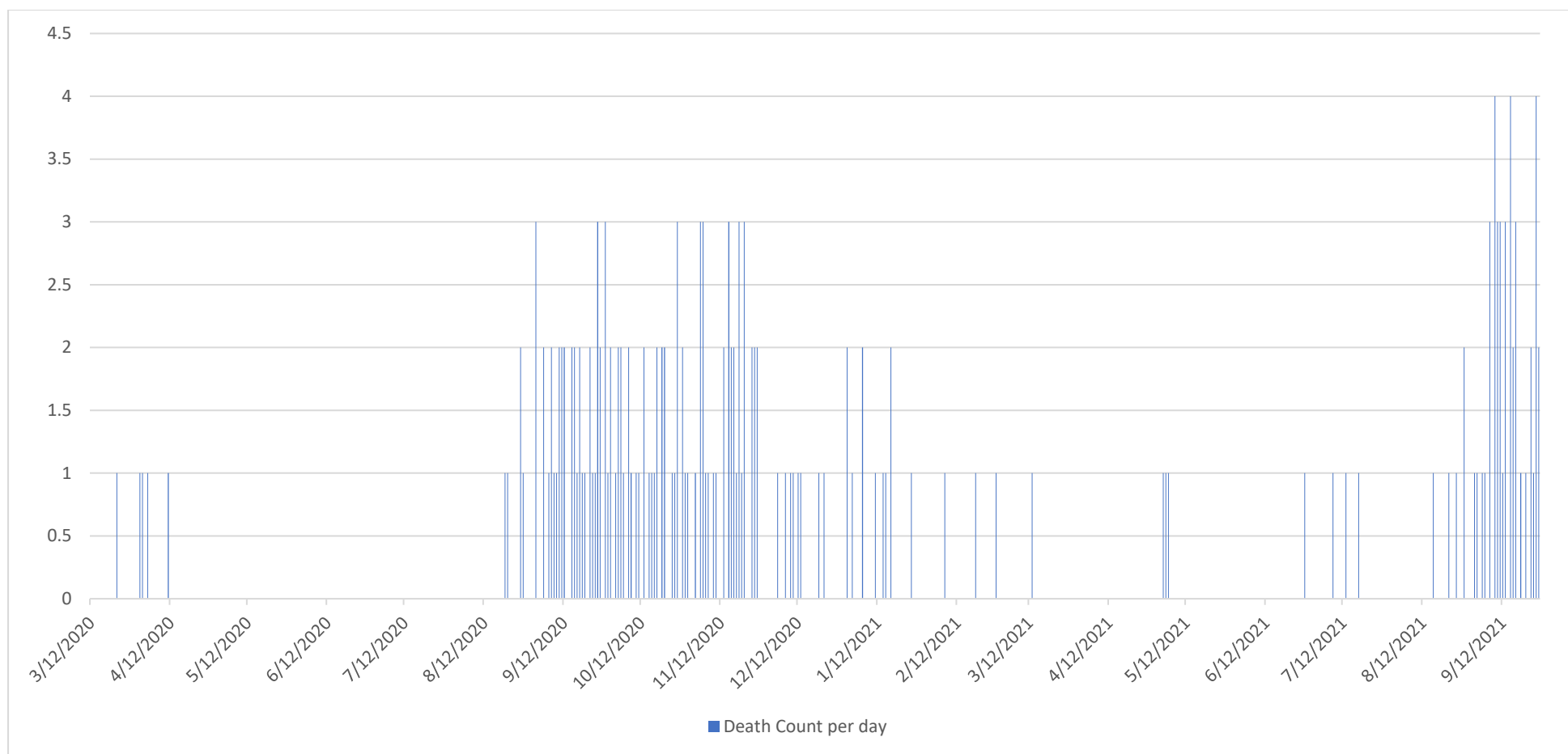


Figure 8 shows the death counts by day from the beginning of the pandemic to September 27, 2021. The most recent surge has seen a higher number of deaths per day than the previous surge, and we are still observing these preventable deaths during the current surge.

FIGURE 9. CAUSES OF DEATH AMONG COVID-19 RELATED DEATHS 2020 & 2021	Immediate	Additional	Underlying	Contributory	Underlying conditions from MD notes or line list
Respiratory [e.g. ARDS, respiratory failure, and pneumonia]	113	26	51	11	0
Cardiovascular [e.g. cardiac arrest, cardiopulmonary arrest]	19	4	6	22	35
Hypertension/CVD	0	2	1	39	89
Complications of COVID-19 infection	12	4	26	12	0
Diabetes mellitus (or complications)	1	5	2	42	78
Critical bleeding conditions	3	1	1	11	0
Renal (kidney conditions), including ESRD	3	5	2	23	27
Multi-organ failure	4	1	1	0	0
Sepsis	4	3	4	5	0
Infections [e.g. bacteremia]	0	0	1	2	0
Morbid obesity	0	0	0	19	13
Tobacco	0	0	0	0	9
Chronic lung disease	1	0	1	3	16
Other chronic diseases	1	0	1	11	23
Other	4	1	2	18	5
UNKNOWN PENDING DEATH CERTIFICATE	27	NA	NA	NA	NA
total	165	71	117	218	313
n=192 as of 9/27/2021					

Figure 9 shows the causes of COVID-19 related deaths in 2020 and 2021 where a death certificate has already been issued.

There have been a total of 192 COVID-19 related deaths from March 12, 2020 to September 27, 2021.

There are currently 165 COVID-19 related deaths with available death certificates, all of which include COVID-19 as one of the immediate, additional, underlying or contributory causes of death.

The vast majority of people who have died from COVID-19 have had causes of death related to:

(1) respiratory conditions (in blue font on the graph) such as acute respiratory distress syndrome or ARDS, respiratory failure or COVID-19 pneumonia, complication of COVID-10 or

(2) cardiovascular conditions or events (e.g. cardiac arrest or cardiopulmonary arrest).

There are many of the deaths which have included hypertension (high blood pressure) or cardiovascular disease as a cause of death, along with diabetes and chronic renal conditions, including end-stage renal disease (ESRD).

In Figure 9 are also listed risk factors (in red font) or co-morbidities that were included on the physician or hospital notes or on the laboratory form.

The vast majority of these co-morbidities or risk factors are hypertension and cardiovascular disease, diabetes and chronic renal conditions, including ESRD.

Additional analysis is pending receipt of death certificates.

From 7/8/2021 to 9/27/2021 there were 50 COVID-19 related deaths.

Of these recent deaths, one half (50%) were Dead on Arrival (DOA) to one of Guam's hospitals.

Only 6 out of 50 were fully vaccinated (12%), and all were elderly or had multiple co-morbidities.

The vast majority of recent deaths were male (70%), with 30% female.

CHRONIC CONDITIONS FROM LINE LISTING:	CASES (n=14,537) (%)	DEATHS (n=192) (%)	Estimated 2019 BRFSS crude population prevalance estimates (%)
Diabetes (excluding pregnancy related and pre-diabetes)	6.7	40.6	11.7
Chronic Renal Disease/ESRD	0.8	14.1	2.1
Hypertension/HBP	9.4	46.4	30.3
Cardiovascular disease	2.2	24.5	2.9
Obesity	1.7	7.3	33.6
Chronic lung disease	3.3	9.4	4.2

A comparison in the proportions of chronic conditions among cases, deaths and the estimated prevalence in Guam's population shows:

- (1) Low proportions among COVID-19 cases for co-morbidities such as diabetes and hypertension, some of which is expected since the estimated population prevalence of such conditions is limited to adults on the BRFSS;**
- (2) Disproportionately high chronic conditions among COVID-19 deaths, including diabetes, hypertension, cardiovascular disease and chronic lung conditions;**
- (3) All risk factors related to tobacco, obesity and other risk factors (e.g. substance abuse) are very low among cases and deaths, but tend to be underreported among cases and deaths.**

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