

## Arizona and COVID-19: The Winter

Dr. Howard J. Eng  
Associate Professor in Public Health (retired)

It has been more 21 months since the United States (U.S.) had declared COVID-19, a pandemic. The new normal is not zero cases, but low number of severe cases, manageable hospitalization numbers, and very low number of deaths. The U.S combats the virus by encouraging the public to practice preventative health behaviors that reduce the risks of getting respiratory infections (e.g., coronavirus, flu, and cold), and using vaccines and therapeutics.

It is expected that COVID-19 cases will rise during the winter. A case can be *mild* (no symptoms), *moderate* (sick, but can recover at home), and *severe* (require hospitalization and/or result in death). Most people recover and do not require hospitalization. Even though the vaccine reduces the chances of getting a severe COVID case, one can still get the virus. There are things you can do to reduce your chances of getting COVID-19. When you are indoors, make sure there is good ventilation and air circulation. If your home has poor air circulation, you can open your windows to improve air circulation and dress warmly. Air filters should be changed frequently.

We need to stay healthy by -- eat healthy; stay hydrated – drink plenty of water; exercise at least 150 minutes at moderate exertion level weekly; and get plenty of sleep and rest to build up your immune system. You should wash your hand frequently and thoroughly; maintain social distancing and wear a face mask in high COVID-19 risk situations; and avoid people who have the coronavirus. To improve your mental health, *every day, you should do something that will make you and someone laugh (e.g., tell a bad joke or watch a very funny movie)*. *High-risk individuals and elderly need to get their flu shot.*

The Arizona weekly cases have decreased in the past week, while Pima County have declined in the past three weeks. The severe cases remain low. Tables 1 and 2 show the state and county total and weekly COVID-19 case, hospitalization, and death numbers during the last five weeks.

Table 1. Arizona Total and Weekly Numbers of COVID-19 Cases, Hospitalizations, and Deaths

Week	Total Cases	Weekly Case	Total Hospital	Weekly Hospital	Total Deaths	Weekly Deaths
11-07 to 11-13	1,211,333	24,856	81,600	848	21,651	243
11-14 to 11-20	1,238,249	26,916	84,242	2,642	21,939	288
11-21 to 11-27	1,262,574	24,325	85,154	912	22,224	285
11-28 to 12-04	1,288,234	25,660	87,517	2,363	22,561	337
12-05 to 12-11	1,312,958	24,724	88,480	963	23,021	460

Source: Arizona Department of Health Services COVID-19 Dashboard. Arizona 2020 population is 7,151,502, April 1, 2020 – U.S. Census.

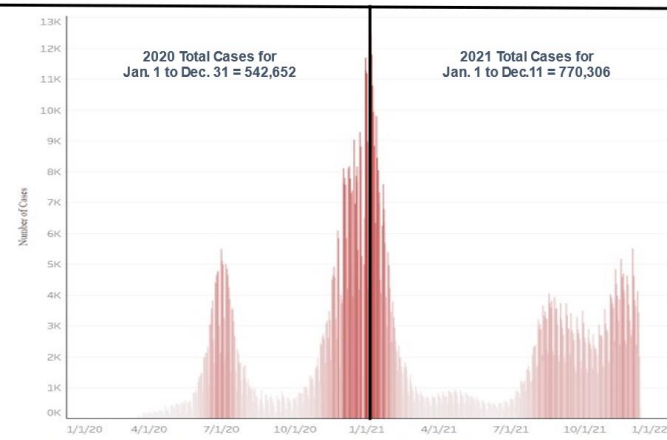
Table 2. Pima County Total and Weekly Numbers of COVID-19 Cases, Hospitalizations, and Deaths

Week	Total Cases	Weekly Case	Total Hospital	Weekly Hospital	Total Deaths	Weekly Deaths
11-07 to 11-13	150,623	3,697	8,896	130	2,807	38
11-14 to 11-20	154,810	4,187	9,236	340	2,844	37
11-21 to 11-27	158,624	3,814	9,374	138	2,883	39
11-28 to 12-04	161,873	3,249	9,680	306	2,928	45
12-05 to 12-11	165,066	3,193	9,802	122	2,983	55

Source: Arizona Department of Health Services COVID-19 Dashboard. Pima County 2020 population is 1,043,433, April 1, 2020 - U.S. Census.

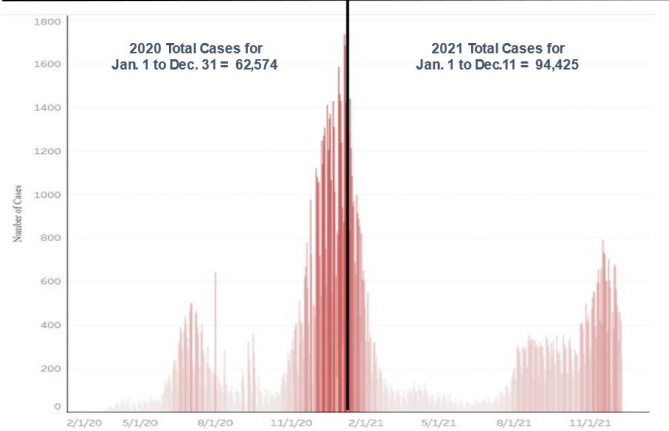
In 2021, there are more Arizona and Pima County COVID-19 cases than in 2020. Figures 1 and 2 shows the daily number of cases in 2020 and 2021 for Arizona and Pima County.

Figure 1. Arizona Daily COVID Cases: January 1, 2020 to December 11, 2021



Source: Arizona Department of Health Services Data Dashboard Arizona Daily COVID Cases on December 11, 2021

Figure 2. Pima County Daily COVID Cases: February 1, 2020 to December 11, 2021



Source: Arizona Department of Health Services Data Dashboard Pima County Daily COVID Cases on December 11, 2021

On December 11, 2021, Johns Hopkins reports 265,387,764 total cases and 5,301,795 deaths associated with COVID-19 in the world. There has been an increase of 4,357,693 cases during the past week (Dec. 5 to 11). The U.S. has the highest total numbers of cases (49,884,588) and deaths (797,179) in the world. In the previous week, there has been an increase of 833,439 U.S. cases. Of the 49,716,825 cases (Dec. 3), there are 19.2% active infections, 79.2% recoveries, and 1.6% deaths. More than 680.4 million COVID-19 tests have been done (Dec. 11), and the 7-day positivity rate is 7.64% (CDC). The Arizona and Pima County positivity rates are 12% and 11% on December 5 (AzDHS).

There are more than 8.37 billion vaccine doses have been administered in the world reported by Johns Hopkins on December 10. The Centers for Disease Control and Prevention (CDC) reports 238,143,066 individuals (71.7% of the U.S. population) receive 1-2 vaccine shots (Dec. 10). There are 201,279,582 (60.6% of population) who are fully vaccinated in the United States. 87.1% of the senior (65+) population (47,726,386) are fully vaccinated, and 24,043,915 received the booster.

As more people have COVID-19 immunity, the numbers of cases, hospitalizations, and deaths will be low. There have been more than 9.29 million COVID-19 vaccine doses have been administered in Arizona (AzDHS – Dec. 10). There are 3,903,595 (54.6%) in Arizona and 623,178 (59.7%) in Pima County who are fully vaccinated. 98.4 percent in the state and 101.0 percent in the county adults 65 and older have received 1 or 2 vaccine shots.

In the new normal, there are people not vaccinated (never had the virus) who are vulnerable to COVID-19 and its variants (e.g., Delta and Omicron). We have not reached herd immunity. Those who are at high risk in getting a severe case need to be vaccinated. The Pfizer-BioNTech is the only COVID-19 vaccine that is fully Food and Drug Administration (FDA) approved to be given to persons aged 16 years of age and older. Those vaccinated who are immune compromised; have severe medical conditions; adult 65 and older; and working in high-risk settings need to get the booster vaccine to extend their immunity protection.

The numbers of severe COVID-19 cases and deaths in Arizona and Pima County are expected to be low because of the high numbers of high-risk individuals and elderly have been vaccinated and the availability of drugs (e.g., remdesivir, imdevimab, and tocilizumab) for treating the virus.

Be safe, and stay healthy, calm, and positive.

12-11-21 hje