



COVID-19 Pandemic Response After Action Review

Prepared by: Connor Montgomery, Epidemiologist
October 7, 2022

Executive Summary

This After-Action Review (AAR) focuses on efforts by the Pacific County Health & Human Services Department (PCHHS) and community partners in the COVID-19 response. While COVID-19 mitigation efforts continue, this review covers the time period beginning in March 2020, as the first cases of COVID-19 were identified in Washington, through May 1, 2022. In Pacific County there were 3,859 total cases of COVID-19 with 164 hospitalizations and 55 deaths reported as of May 1st 2022. This AAR provides an overview of efforts to mitigate and respond to the COVID-19 pandemic highlighting areas of success and identifying potential avenues for improvement.

Event Overview

| | |
|------------------------------------|--|
| Event Name | Coronavirus Disease 2019 (COVID-19) Response |
| Event Dates covered in this review | March 2020 - May 1st, 2022 |
| Project Area(s) | All areas of Pacific County |
| Threat or Hazard | COVID-19 is a highly transmissible, infectious respiratory disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) virus. Coronaviruses are highly transmissible diseases that can infect people through aerosol transmission (spreading through the air) and respiratory droplets, especially via coughing, sneezing, and speaking. |
| Performance Measures/Targets | Case rates, mortality, accessibility of services within community, public education and communication, partner support and collaboration, and qualitative comments/trends from community members and partners |
| Objectives | Use quantitative and qualitative data to increase the capacity of PCHHS and community partners to address the current COVID-19 pandemic event and improve response to any future events in Pacific County. |
| Accomplishments | Implemented Incident Response Joint Command with PCHHS, Pacific County Emergency Management (PCEMA), and Shoalwater Tribe. Collaborated with healthcare partners to establish and provide COVID-19 testing clinics, vaccination clinics, and treatment options throughout the county. Pacific County supported partners including schools, healthcare, long term care, and congregate work settings to mitigate outbreaks throughout the pandemic, facilitate PPE distribution, and educate regarding changing state guidelines. PCHHS provided case investigation, contact tracing, and quarantine and isolation support programs for individuals testing positive for COVID-19. With support from media partners, provided regular communications to the public via www.pacificcountycovid19.com , PCHHS |

| | |
|-----------------------------|---|
| | Facebook, Instagram, weekly Status Reports, press release/coverage, weekly data reports and partner and community emails. |
| Next Steps | Following system reviews of strengths and areas of improvement PCHHS will: 1) Provide partners with continued education to improve identification and mitigation of COVID-19 outbreaks in congregate settings such as large employers, schools, long term care, and healthcare. 2) Continue to educate providers and community members regarding best practices to prevent the spread of COVID-19 and steps to take in case of COVID-19 diagnosis including messaging to stay home when sick, testing, isolation and quarantine guidelines, and accessing treatment options if applicable. 3) Continue to share local data and updates in easy to understand formats in both English and Spanish to help the public make informed decisions. 4) Ensure adequate testing, vaccination, and treatment options are available in Pacific County. 4) Continue to support partners including schools, healthcare providers, government partners, business community, and others by providing information and resources to help navigate COVID-19 within their organization or jurisdiction. |
| Participating Organizations | Pacific County Health & Human Services, Pacific County Emergency Management, Shoalwater Tribe & Medical Clinic, Ocean Beach Hospital, Willapa Harbor Hospital, Valleyview Medical Clinic, Cowlitz Family Health Center, Peninsula Pharmacies, South Bend Pharmacy, Raymond Pharmacy, Shoalwater Clinic, Pacific County (Dept of Public Works, Sheriff's Office, General Administration), City of Raymond, City of Long Beach, City of South Bend, City of Ilwaco, Ocean Beach School District, Raymond School District, South Bend School District, Naselle School District, Willapa Valley School District, North River School District, Medical Teams International, Aristo Health, Curative Testing, Pacific County Visitors Bureau, Port of Willapa Harbor, Port of Peninsula, Chinook Observer, Willapa Harbor Herald, Wa State DOH, WA State Dept of Commerce, Willapa Behavioral Health, Fire District 1, Raymond Fire Dept, South Bend Fire Dept, Long Beach Fire Dept. |
| Point of Contact | Katie Lindstrom, Director Todd Strozyk, Emergency Preparedness Coordinator Connor Montgomery, Epidemiologist 7013 Sandridge Road, Long Beach, WA 98631 1216 W Robert Bush Drive, South Bend, WA 98586 |

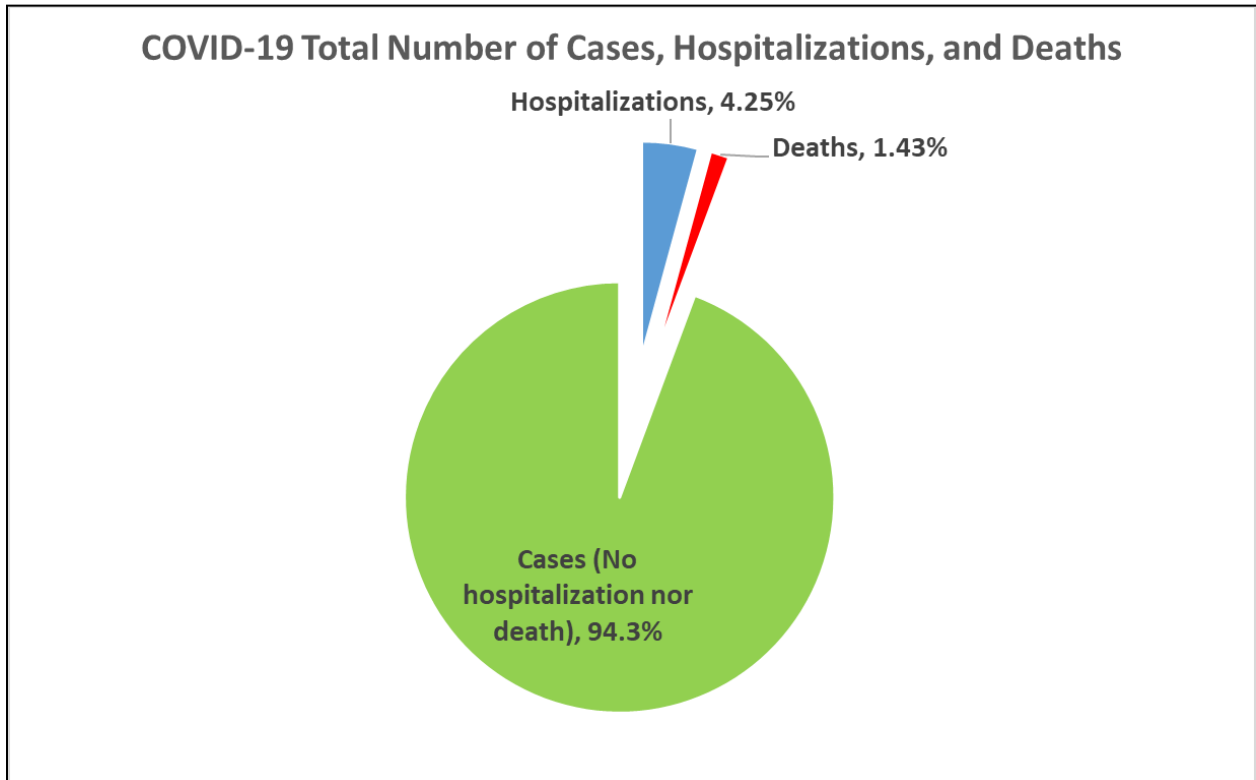
Analysis of Capabilities

| Table 1 Summary of Capability Performance | | |
|---|---|----------|
| Capability | Objectives | Rating |
| Testing | <ul style="list-style-type: none"> • Provide multiple avenues for quick and accessible testing opportunities in both North and South Pacific County • Assist with allotment and distribution of home test kits | S |
| Vaccinations | <ul style="list-style-type: none"> • Provide and assist other health care providers in allotment and distribution of vaccines and boosters to eligible individuals • Promote vaccination opportunities and engage in educational conversations about the safety and efficacy of the different types of COVID-19 vaccines and boosters | P |
| Treatment | <ul style="list-style-type: none"> • Assist providers in establishing COVID-19 treatment programs. • Provide information to the public about available COVID-19 treatments (i.e. monoclonal antibodies and Paxlovid) in North and South Pacific County | S |
| Communications and Data | <ul style="list-style-type: none"> • Communicate current trends with partners and community, updates with federal, state, and local guidelines, and continue meetings with partners through “re-opening” efforts • Share relevant data and information about current COVID-19 case numbers and rates to the community working with multiple media outlets | P |
| PPE Distribution | <ul style="list-style-type: none"> • Act as a “pass through” for Pacific County partners to order PPE from state • Allocate and distribute PPE to partners | P |
| Social Support | <ul style="list-style-type: none"> • Provide support and assistance to those directly affected by COVID (positive cases) • Provide resources and assist with state and federal programs for those indirectly impacted by COVID (rent assistance for those unable to work) | P |
| Outbreak Response | <ul style="list-style-type: none"> • Provide outbreak support including testing, and quarantine/isolation guidance for congregate setting experiencing an outbreak (i.e. Long Term Care, Jail, Schools) | S |

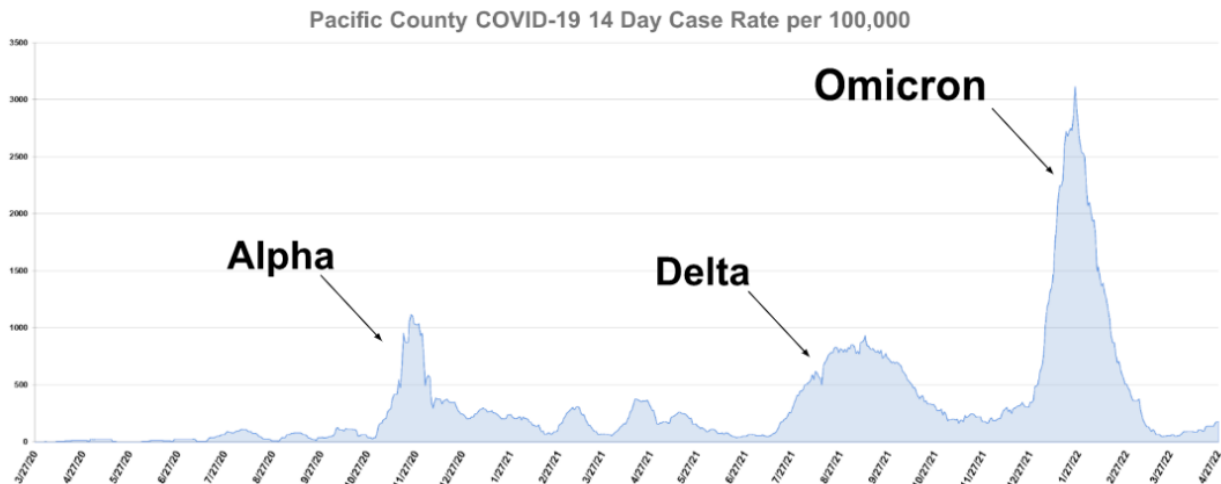
Ratings Definitions: Performed without Challenges (P), Performed with Some Challenges (S), Performed with Major Challenges (M), Unable to be Performed (U)

Case Data

As of May 1st, 2022, there were 3,859 total cases of COVID-19 reported within Pacific County, Washington. This data is from reported cases only. We understand that this is an undercount due to lack of reporting positive cases, especially following the distribution of home test kits beginning early 2022. Out of these county cases, there were 164 hospitalizations and 55 deaths reported. This review uses 2020 population data as a baseline for calculating subpopulation (gender, age group, race, and ethnicity) totals.



The first cases detected in Washington occurred January 2020, and the first reported cases in Pacific County occurred April 2020. Over the following two years, Pacific County utilized a 14 day case rate per 100,000 to help track and report the current trends. Some notable peaks include: the Alpha variant peak of 1,118 per 100,000 between 11/11/20 and 11/24/20, the Delta variant peak of 933 per 100,000 between 8/30/21 and 9/12/21, and the Omicron variant peak of 3,114 per 100,000 between 1/12/22 and 1/25/22. These are illustrated on the trend over time chart below.



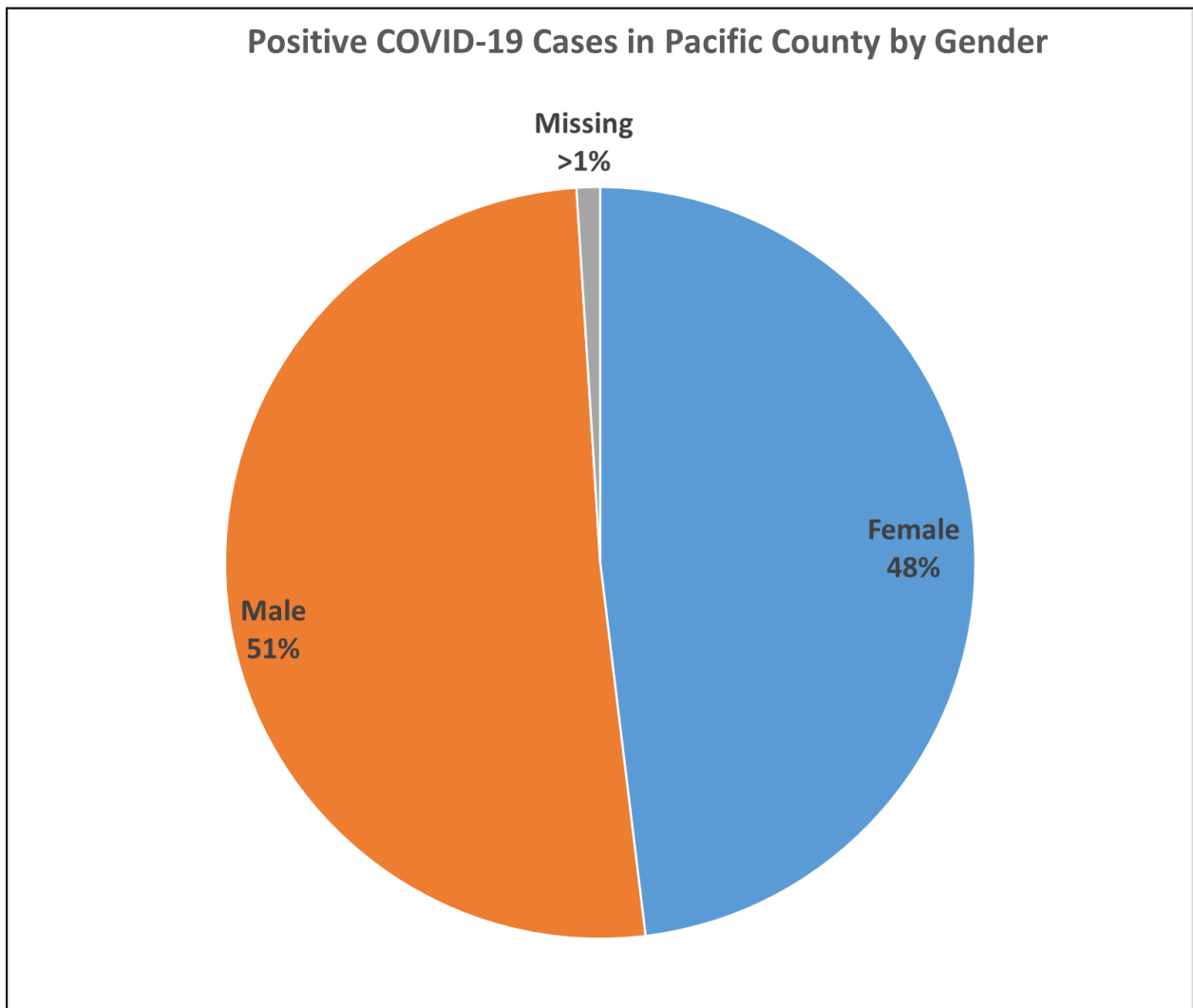
Pacific County tracked COVID-19 cases by Zip Codes, as well, to better understand where cases are being reported from. This is not a representation of where exposure nor transmission has occurred, but allows us to understand trend differences between North and South county areas.

| Case Count by Zip Code | | | |
|------------------------|-----|---------------------|------|
| Bay Center (98527) | 37 | Ocean Park (98640) | 488 |
| Chinook (98614) | 55 | Oysterville (98641) | 12 |
| Ilwaco (98624) | 182 | Seaview (98644) | 98 |
| Long Beach (98631) | 465 | Raymond (98577) | 1515 |
| Lebam (98554) | 12 | South Bend (98586) | 502 |
| Naselle (98638) | 250 | Tokeland (98590) | 46 |
| Nahcotta (98637) | 6 | Grayland (98547) | 53 |

Incomplete/Missing Data = 138

Gender

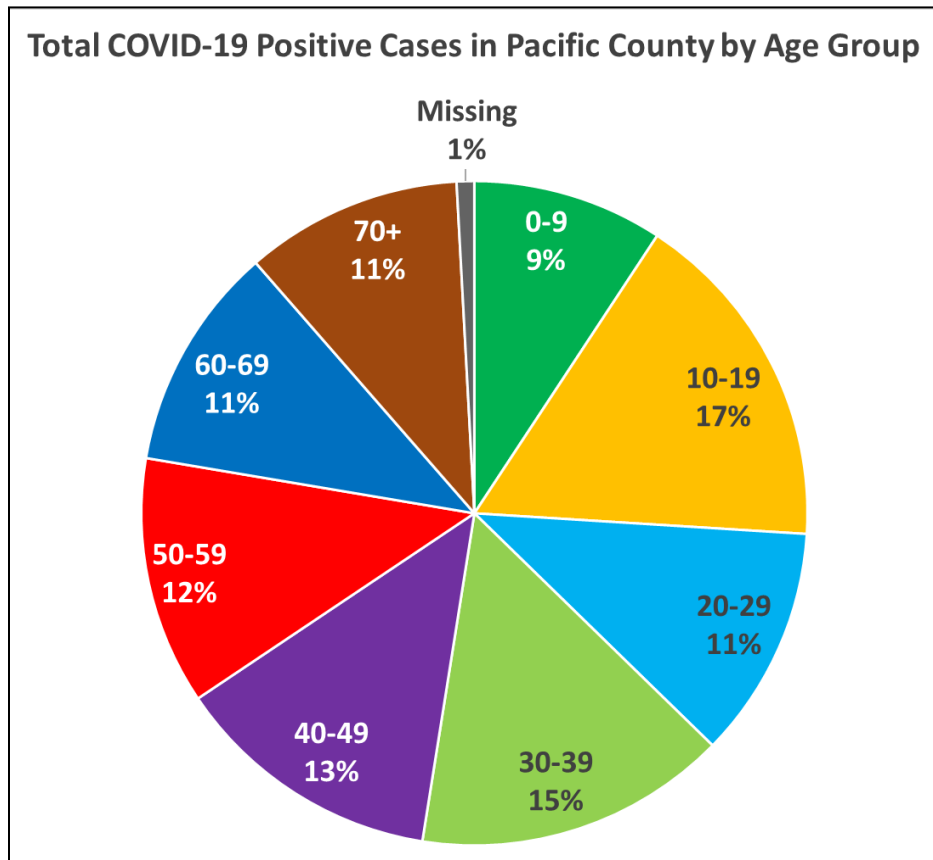
Out of the 3,859 reported cases, 1,855 (48.1%) were reported as female. There were 65 hospitalizations and 22 deaths reported for a mortality rate of 207 per 100,000 in the female population. As for males, 1,965 (50.9%) cases were reported. There were 73 hospitalizations and 31 deaths reported for a mortality rate of 277 per 100,000 in the male population. Pacific County “Unknown” gender data accounted for 39 (1.01%) cases. In these cases, 26 hospitalizations and 2 deaths were reported. The figure below illustrates this data.



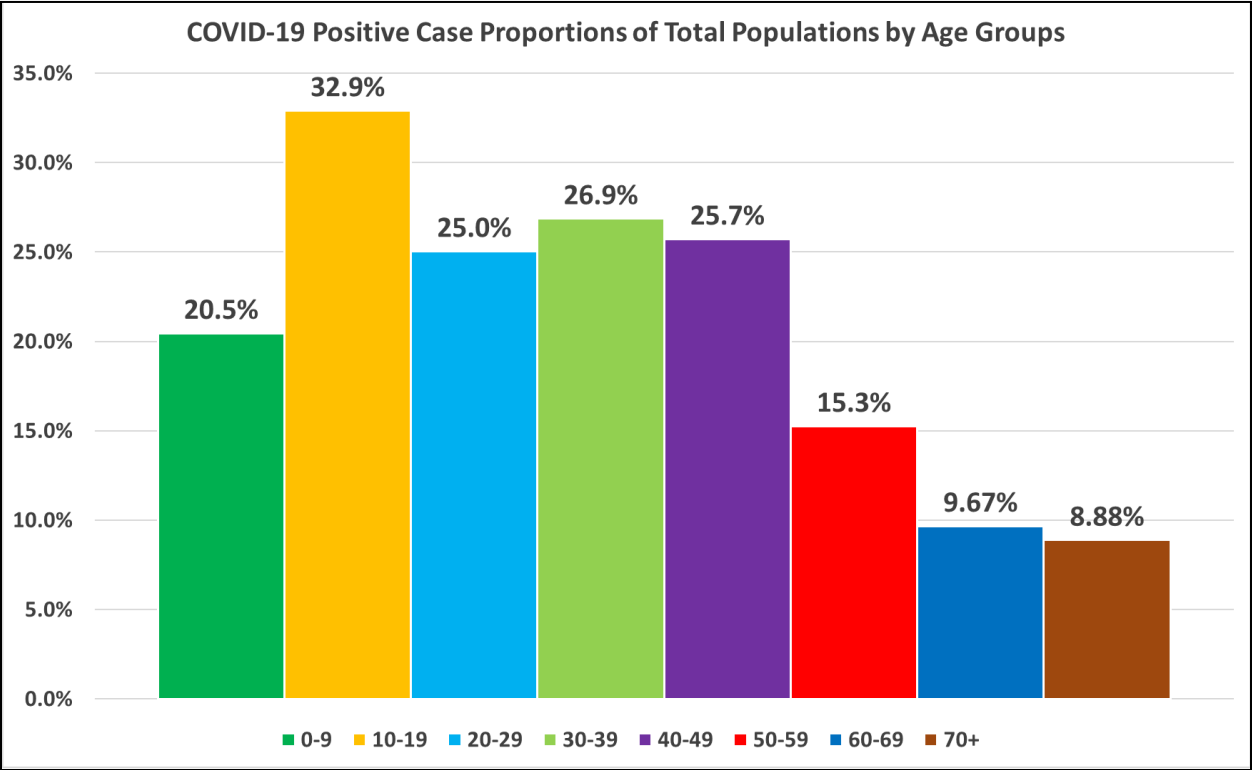
Age groups

Perhaps one of the most impactful demographic attributes when evaluating COVID-19 risk is the age of the individual who has contracted the virus. There are many factors that influence the risk of contracting COVID-19. For example, the necessity of regular gatherings in highly occupied indoor spaces like work and school settings can contribute to an increased risk of transmission and the potential for outbreaks. While the younger age groups have a larger proportion of their age group contracting the virus, they tend to have lower risk for hospitalization or mortality. Individuals aged 30-50 who are typically exposed from their place of employment, children, and other daily life activities may be the group most susceptible to more severe symptoms and even increased mortality risk compared to their younger cohorts. Finally, it is well established that the oldest age group cohorts carry the highest risk of mortality, but associating an increased mortality risk with only those who are 60 years of age or older would be a mistake.

The pie chart below helps visualize the number of cases in each age group and the percentage of that group within the total case count. Age group 10-19 was the largest portion of cases with 646 (17%). Age group 0-9 was the smallest portion of cases with 357 (9%).



The bar graph below visualizes the estimated proportion of those affected within their age group's total population. This risk of COVID-19 infection in each age group is called "cumulative incidence." These proportions are considered lower than the expectation due to under reporting of cases. Age group 10-19 continues to be the greatest proportion of those at risk when observing total population numbers. While proportions can be easily distorted by large differences in the group total, interestingly, the 10-19 age group has very similar population numbers compared to the 30-39 and 40-49 year old groups. This will be important in the following figure when comparing mortality between ages. Thankfully, the most susceptible groups, ages 60 and older, had overall lower cumulative incidence compared to the other age groups.

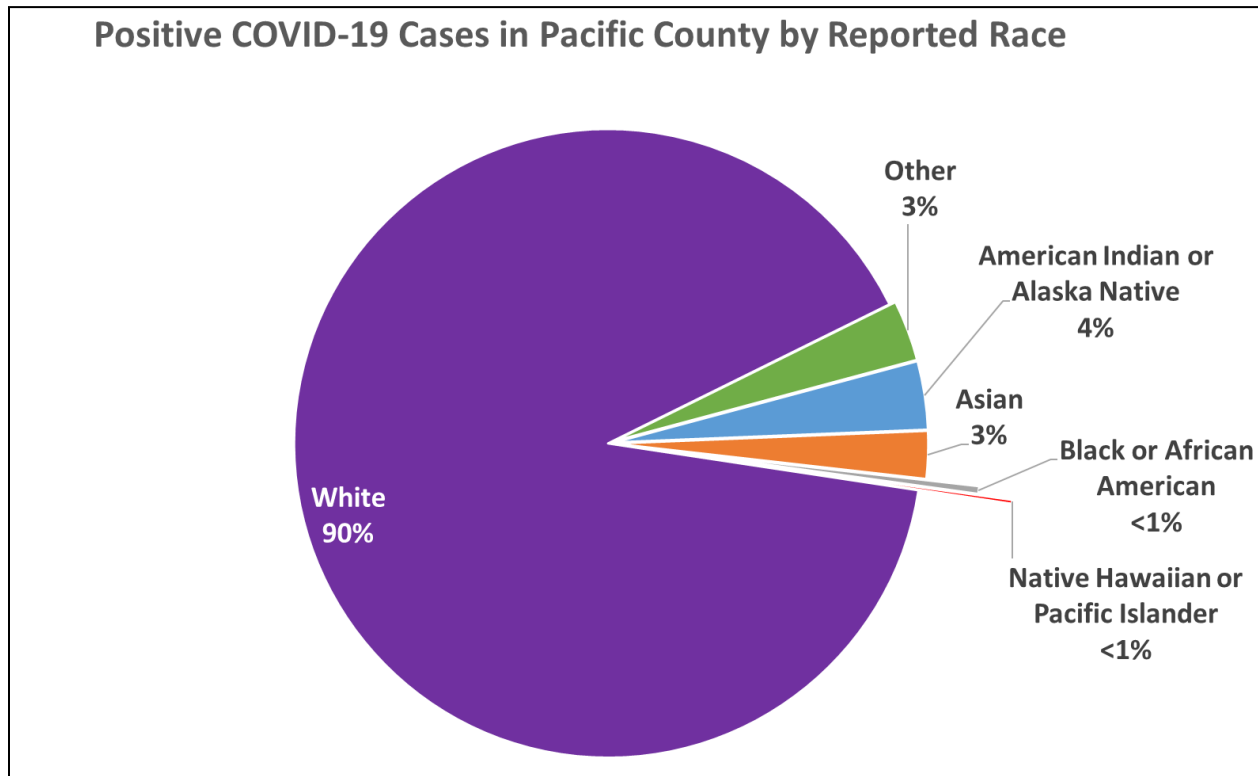


The table below is a summary of the number of cases in each age group, the percentage of that group within the total case count (n=3,859), and the estimated proportion of those affected within their age group's total population. With very low numbers of reported reinfections, the proportion would be a very rough estimate of how many individuals were impacted from each age group. Again, this data is from reported cases. Along with missing age information, the total number of cases have been underreported.

| Age | Cases (reported) | % of total cases | Proportion of age group total |
|-----------------|------------------|------------------|-------------------------------|
| 0-9 | 357 | 9.25% | 20.5% |
| 10-19 | 646 | 16.7% | 32.9% |
| 20-29 | 437 | 11.3% | 25% |
| 30-39 | 586 | 15.2% | 26.9% |
| 40-49 | 505 | 13.1% | 25.7% |
| 50-59 | 466 | 12.1% | 15.3% |
| 60-69 | 522 | 10.9% | 9.67% |
| 70+ | 407 | 10.6% | 8.88% |
| Incomplete data | 33 | .86% | n/a |

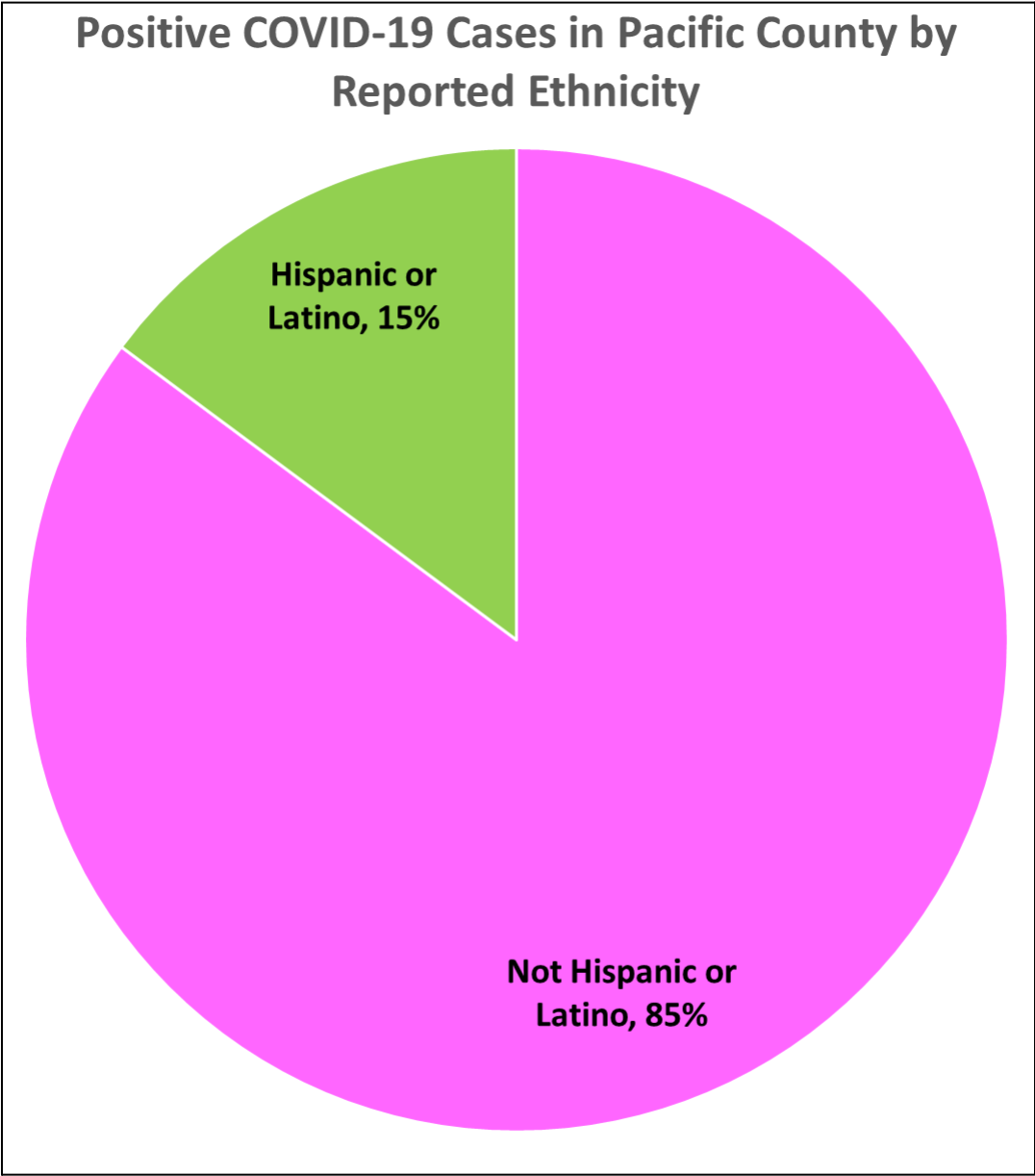
Cases by Race

A significant limitation to our data collection and analysis is understanding differences in racial groups affected by COVID-19. Historically, minority racial groups, such as Hispanic, American Indian, and African American groups, are disproportionately impacted by many diseases due to health inequities. At the time of analysis, local data shows that approximately 2,800 cases had incomplete race data available. Race and ethnicity were not consistently collected and reported from positive COVID-19 cases until 8/16/21, which contributes to approximately 1,300 cases missing race/ethnicity data. This means that out of the approximately 1,000 cases we do have racial data for, “White” individuals made up the majority (90.3%) of COVID-19 cases with 924 reported. “American Indian/Alaskan Native” individuals were the next largest racial group with 36 reported cases (3.52%), followed by the “Multi-racial” group with 32 reported cases (3.13%), and the “Asian” grouping reported 25 cases (2.44%). “Black or African American” and “Native Hawaiian or Pacific Islander” groups made up the remaining COVID-19 cases with less than 1% (0.39%, 0.20%).



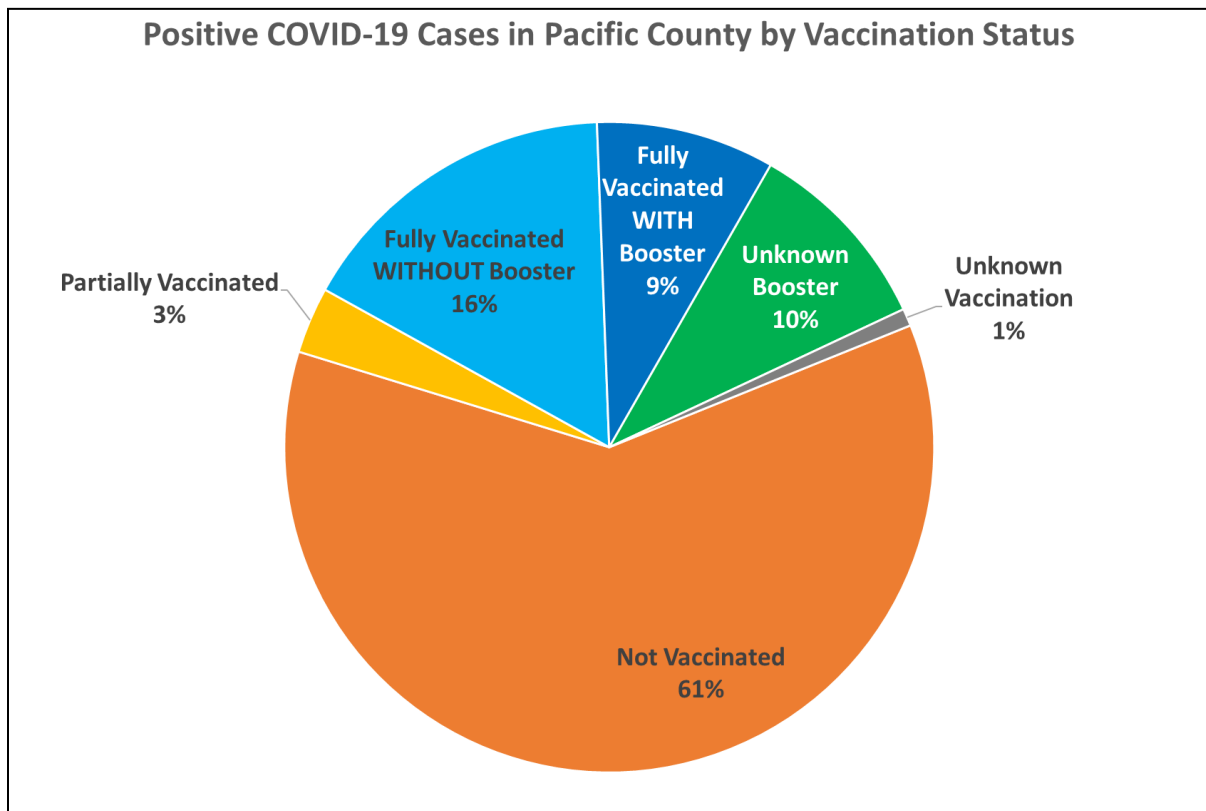
Cases by Ethnicity

Again, a large portion of the reported ethnicities are missing from local demographic data. We currently have ethnicity information on approximately 1000 cases, which shows that a majority of the reported cases (85.1%) are not Hispanic or Latinx. The remainder of these cases (14.9%) were reported as Hispanic or Latinx.



Cases by Vaccination Status

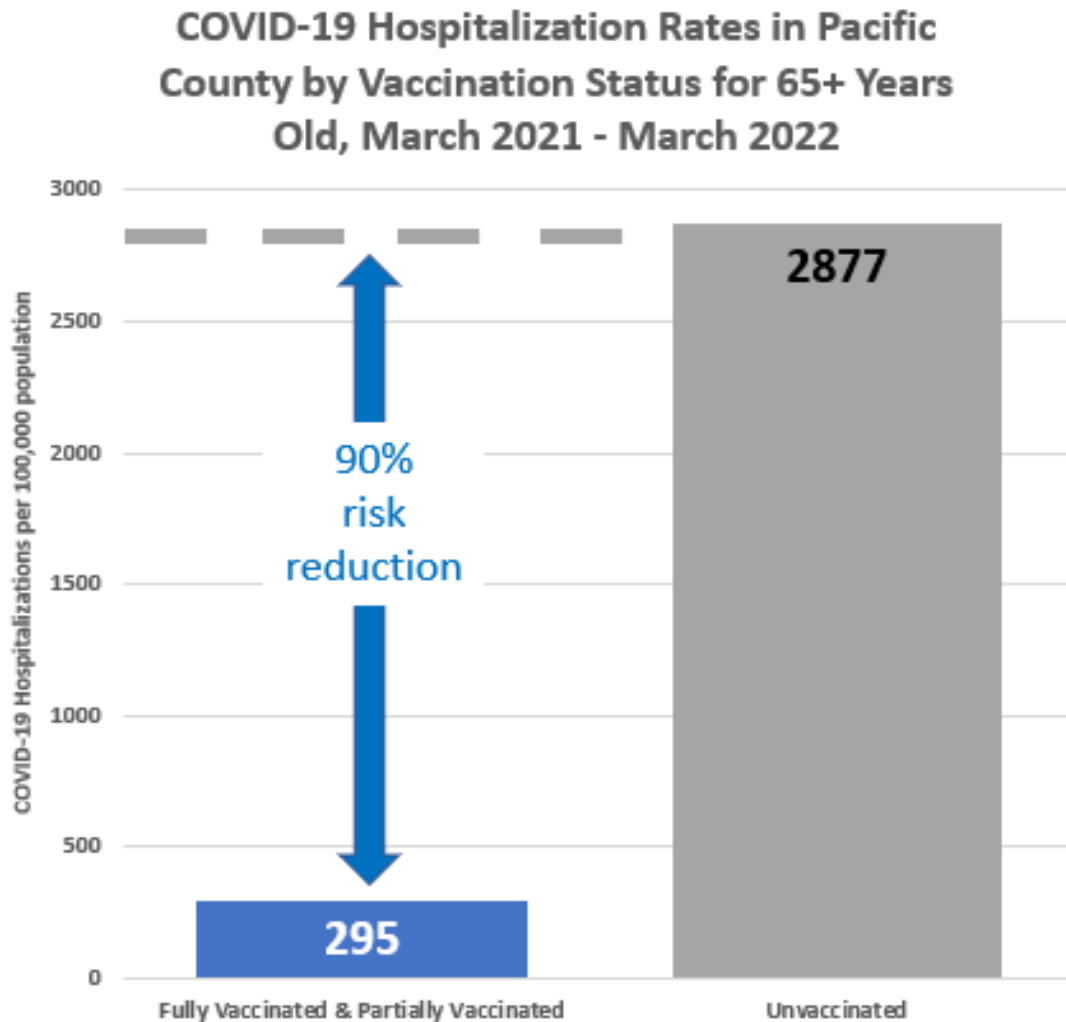
Prior to vaccine availability, with the earliest date being 1/1/21, 616 cases were recorded. The chart below does not include cases from before the vaccine was available. If this adjustment was not made, and cases from prior to 1/1/21 were included, the “Not vaccinated” category would account for approximately 67.0% of Pacific County’s reported COVID-19 cases. This chart shows raw case counts by vaccination status only. We estimate that the “relative risk,” the odds of something happening to one group compared to another, with testing positive for COVID-19 in Pacific County for unvaccinated individuals is 2.33 times more likely than vaccinated individuals without a booster and 6.85 times more likely than vaccinated individuals with a booster.



Another caveat to the data collected and displayed above, while COVID-19 vaccination “Booster” status is reported, the amount of time since booster is unknown (i.e. more than 6 months since booster or less than 6 months). This can be improved in data collection by phrasing questions regarding booster status as “up-to-date” booster vaccinations in future events.

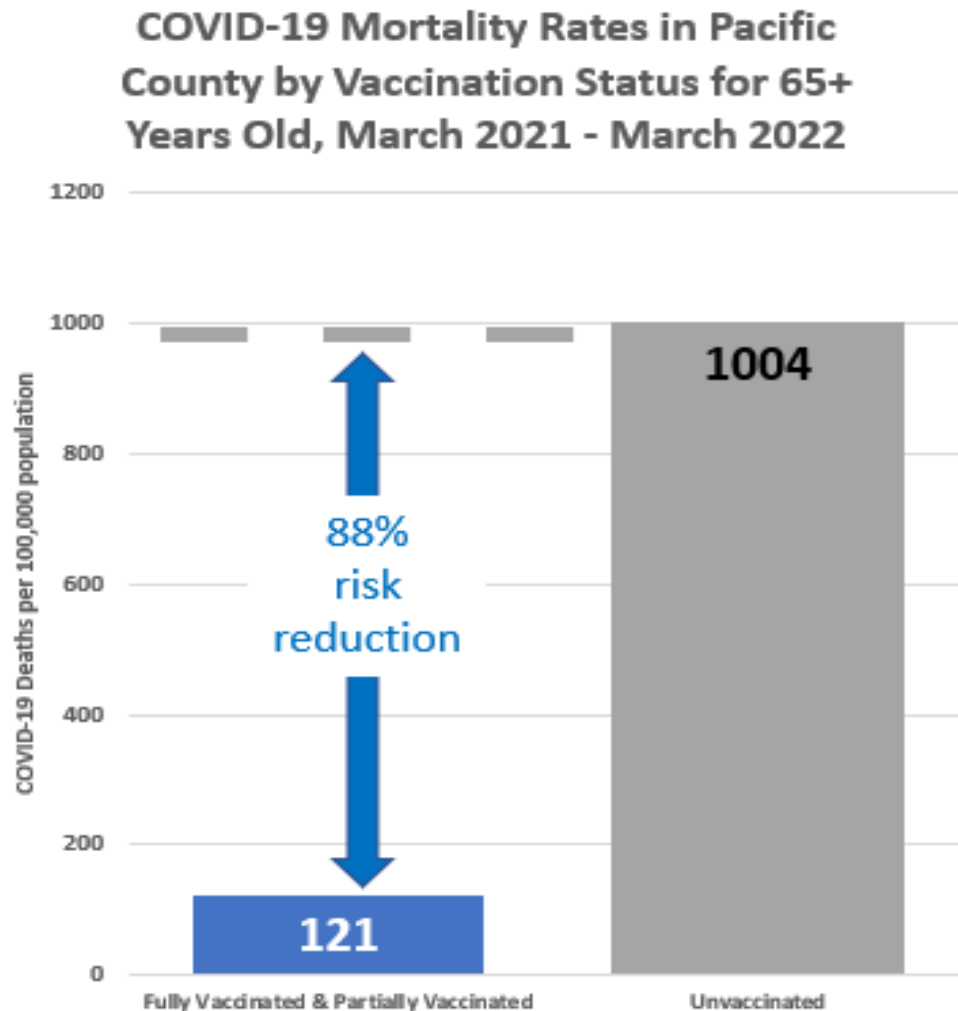
Hospitalizations by Vaccination Status

The bar chart below shows the hospitalization rates for those at an increased risk due to their age and stratified by their vaccination status. Overall, fully vaccinated and partially vaccinated individuals aged 65 and older were approximately 90% less likely to be hospitalized compared to those who were unvaccinated. The graph below shows a comparison of the mortality rates since the initial widespread availability of vaccines for older individuals, early 2021, in Pacific County.



Deaths by Vaccination Status

When observing the occurrence of death in these same groupings, individuals who are fully vaccinated and partially vaccinated in the 65+ years old age group were approximately 88% less likely to die from COVID-19 compared to unvaccinated individuals in their age group. Again, the graph below shows a comparison of the mortality rates beginning after the initial availability of vaccines in Pacific County.

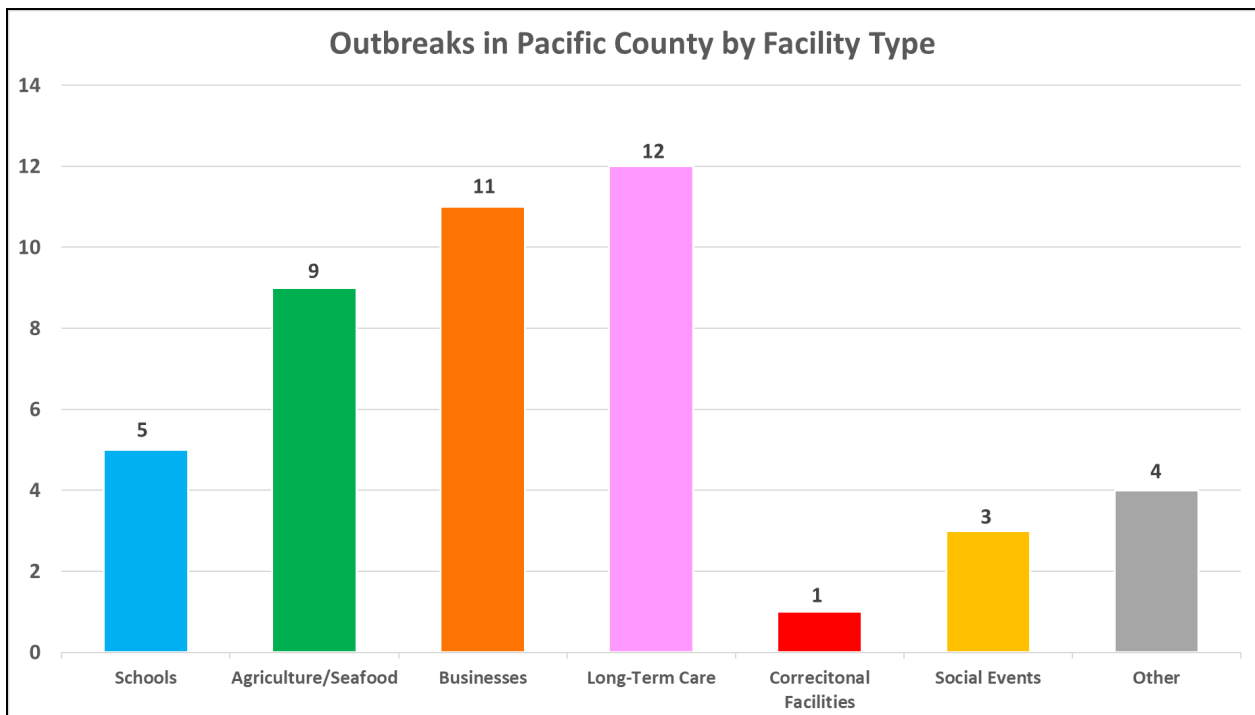


The key takeaway from these graphs is that vaccination can be a strong protective measure against not only severe symptoms, but also death in older populations. This information also supports the notion that tiered vaccination distributions based on age would be important for mitigating the impact that another pandemic would have on overall mortality, along with the impact of hospital systems and easing the burden on those healthcare providers. We believe this is a strength that should be built upon for future emergency planning from the national to local levels.

Outbreaks

A large contribution to the spread and increase in cases can be attributed to outbreaks. The DOH defined an outbreak as two or more positive COVID-19 cases with at least two of the cases having symptoms onset dates within 14 days of each other and plausible evidence of transmission in a shared location (other than within a household). The first recorded outbreak occurred in June 2020. Over the next two years there would be over 500 individuals who were directly connected with outbreaks in Pacific County. Specific counts were difficult to track as many outbreaks occurred in quick succession for many facilities and particularly in schools or there was limited information for proving an epidemiological linkage in some instances. This could mean that some outbreaks were not considered to be from the same cluster of cases, but were tracked as individual outbreaks due to differences in reporting positive results. Pair these factors with underreporting of cases to help track and identify outbreaks, we consider these to be a very conservative estimate for the actual number of outbreaks and individuals impacted.

Due to the proximity and density of individuals within schools, long-term care (LTC) facilities, and correctional facilities, these locations became points-of-interest initially for high-likelihood of outbreaks occurring. As reopening of many other facilities began, other sites of interest included agricultural settings, general businesses, and social gatherings. Below is a breakdown of the types of facilities where cases that led to potential outbreaks were linked or directly reported.



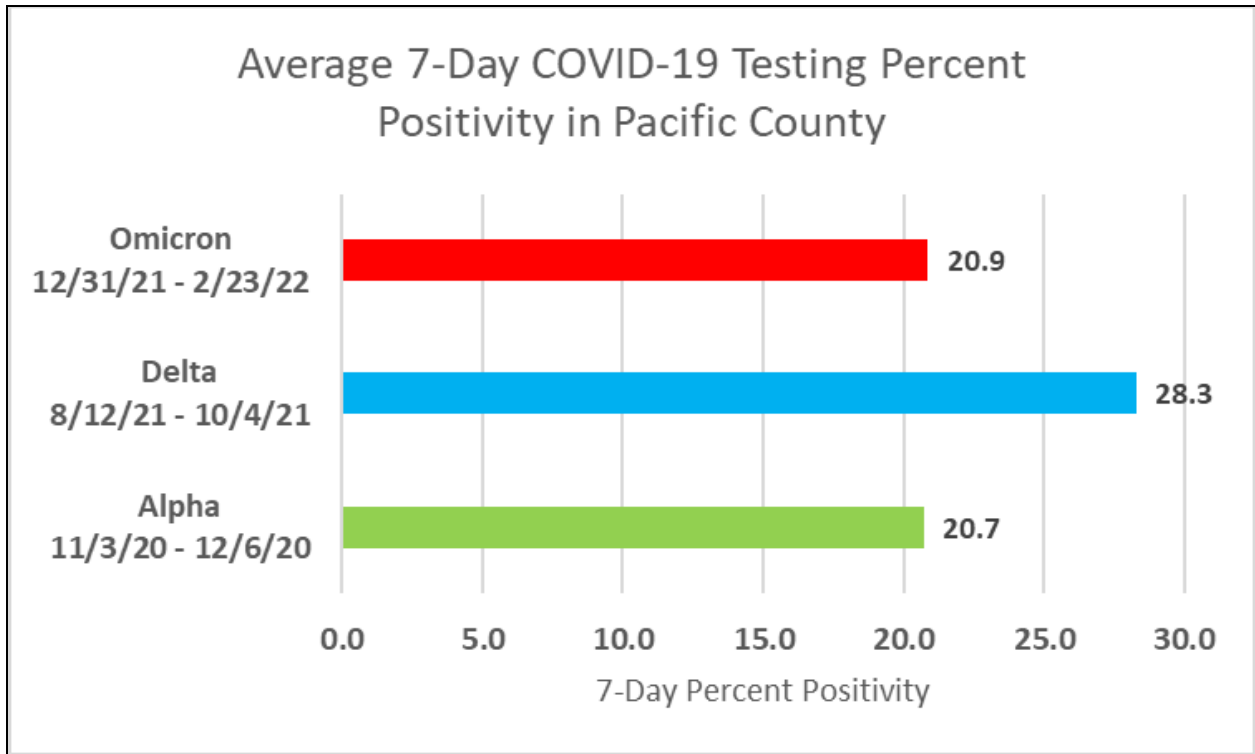
The greatest number of potential outbreaks occurred in long-term care facilities, such as nursing homes. Businesses, like restaurants and general services, were the next largest proportion. Finally, agriculture sites, such as canneries, processing facilities, etc., contributed the third highest proportions of outbreaks.

It's important to mitigate the spread of potential outbreaks as much as possible to reduce the risk of extended transmission to individuals who do not reside within these spaces. When counties, such as ours, are neighboring other states' counties, this potential issue can be exacerbated due to gaps in communication or data sharing between states and then the lag that has been typical with reporting potential outbreaks outside of typical surveillance systems. A great example of this includes one of the first outbreaks Pacific County was notified of by another county in Oregon back in May of 2020. This outbreak occurred within an Oregon county, but Pacific County residents worked at the facility and brought the virus back into their homes across the state line. This could have potentially led to others within the county to become infected and makes controlling the negative impact of outbreaks more difficult. Improving the way that neighboring counties communicate with each other about positive cases and potential outbreaks will be another area for improvement in future planning.

Testing

While vaccinations have become a longer term solution, testing for COVID-19 has been both a powerful tool to help stop the spread of COVID-19 as well as helping us understand where and when cases are occurring since the beginning of the pandemic. However, there were plenty of challenges to COVID-19 testing. Pacific County benefited from strong partnership between hospital, primary care, and pharmacy providers who came together to meet testing demand throughout the pandemic. During the initial months, all forms of testing supplies were extremely limited statewide. Testing became more widely available early summer of 2020. Drive-through testing clinics were adopted early to help safely and efficiently test multiple individuals in a single day and to help ease the testing burden felt in primary care and emergency room settings. Site-based testing (through places of employment and schools) was also used for large numbers of individuals that required regular testing for precautionary measures or reactionary reasons, such as outbreak control. Eventually, streamlined processes and home-based testing provided plenty of opportunities for testing. Although testing supply issues were largely solved within the first year of the pandemic, Pacific County Health and Healthcare partners continued to struggle with staff capacity necessary to meet testing demand, especially during surges in cases.

Washington State Department of Health (DOH) reported 35,381 tests administered in Pacific County between 3/6/2020-5/1/2022. There were 3,847 positive tests and 31,484 negative tests for a percent positivity of 12.4% overall during this time period. Again, this would be a significant undercount as this does not include at-home tests that were not reported or individuals who had COVID-19 but never tested. Not all providers reported negative results, especially following changes in guidelines and requirements for reporting from different facilities over the years. Typically, there is up to a 7 day delay in case data reported to DOH, so we found this discrepancy (0.003%) between our local and state case data for Pacific County to be acceptable. The average 7-day percent positivity was 8.14%. Notable times that we have seen percent positivity rise above this average are during surges of different COVID-19 variants.



Testing placed a large strain on healthcare systems across the state and Pacific County was no exception. Pacific County Health and Human Services would like to thank our partners for their much needed assistance, especially during surges and peak periods of increased need early in the pandemic response. Support from external entities, such as Medical Teams International and Curative, were instrumental during these times. Local partners like the Port of Willapa Harbor, City of Long Beach, City of South Bend, Pacific County Sheriff’s Office, fire departments, school districts, and the Pacific County community were all extremely helpful in testing efforts across the county. These partnerships provided spaces for us to coordinate and hold drive-through testing clinics. Other local entities, such as the Department of Public Works along with a multitude of community volunteers, were essential in planning logistics and traffic control and logistics support during these events. Thanks to all of these groups, PCHHS drive-through testing was able to administer over 2,000 tests from January 2021 - May 2022. Local healthcare providers, Ocean Beach Hospital, Willapa Harbor Hospital, ValleyView, Shoalwater Clinic, and Family Health Center Clinics were an extremely valuable resource for emergency and urgent care testing. Both hospitals along with Valley View, Family Health Center, Shoalwater Clinic, and many others also provided testing to established patients. Peninsula Pharmacy stood up daily and then weekly drive through testing in South Pacific County starting late 2021 through 2022 and Willapa Harbor Hospital also provided daily and then weekly drive through testing in

South Bend throughout the majority of the pandemic providing over 5,300 tests given in 2020 and another 1,617 administered in 2021 for a total of 6,928 over those two years.

Throughout the following years, bordering counties within Washington, such as Grays Harbor and Lewis, and bordering counties outside of Washington, such as Clatsop, OR, would collaborate with one another to report cases when non-local residents sought out care outside of their home county. This was extremely helpful to keeping more accurate records of who from our community may be impacted at any given time.

Following the initial year of the response, resources began catching up with the testing demands. Pacific County was able to distribute over 1,400 Everly Well PCR home test kits through most of 2021. Testing was also provided through school districts participating in WA “Learn to Return” program during a majority of the 2021-22 school year with districts collectively providing thousands of tests to students and families.

Finally, testing became much more accessible and convenient through the widespread distribution of home-based test kits starting early 2022. Home rapid test kits were distributed through the Federal and WA state programs. In addition, PCHHS implemented a local test kit distribution program with support from community partners like the Timberland Regional Library, the cities of Long Beach and Raymond, Shoalwater Bay Wellness Center, Ocean Beach Hospital, Willapa Harbor Hospital, and the Olympic Area Agency on Aging who served as distribution sites, so county residents could more easily access these home tests. With our local partners and community’s help, we were able to distribute over 18,000 tests total through May 1, 2022.

Contact tracing and quarantine/isolation support was another COVID-19 response measure taken with testing. While automated systems, such as Apple’s exposure notifications on iPhones, exist now for those who opt into these services to help individuals stay informed about potential exposures through proximity location data, the initial stages of the pandemic response also required a large effort and dedication of time from PCHHS nurses and surge support staff: retired volunteer nurses, medical providers, PCHHS staff, and other county employees and community volunteers. There were over 3,800 case investigations conducted between April 2020 and May 2022. Approximately 10% of these respondents received quarantine/isolation support in a variety of methods, which are further outlined in the “Social Support” section of this report.

We recognize that there were many challenges that PCHHS and our partners faced during this time. Being a smaller county with relatively limited providers, PCHHS and partners were doing all they could to meet the demands of early COVID-19 emergency response. When surveying the community, individuals stated that they would have liked

more testing options especially early on, but understood that there were limited resources. Many individuals expressed confusion about reporting positive and negative results, and those who reported results early noted the limitations of having to call in to report test results. Suggestions for online reporting to become the new standard should be taken into consideration for future planning. When surveying our partners, they were very understanding of our challenges in the beginning. They appreciated site-based testing when available to help ensure the safety of their workers. Both the community and partners expressed gratitude for the home test options.

Vaccinations

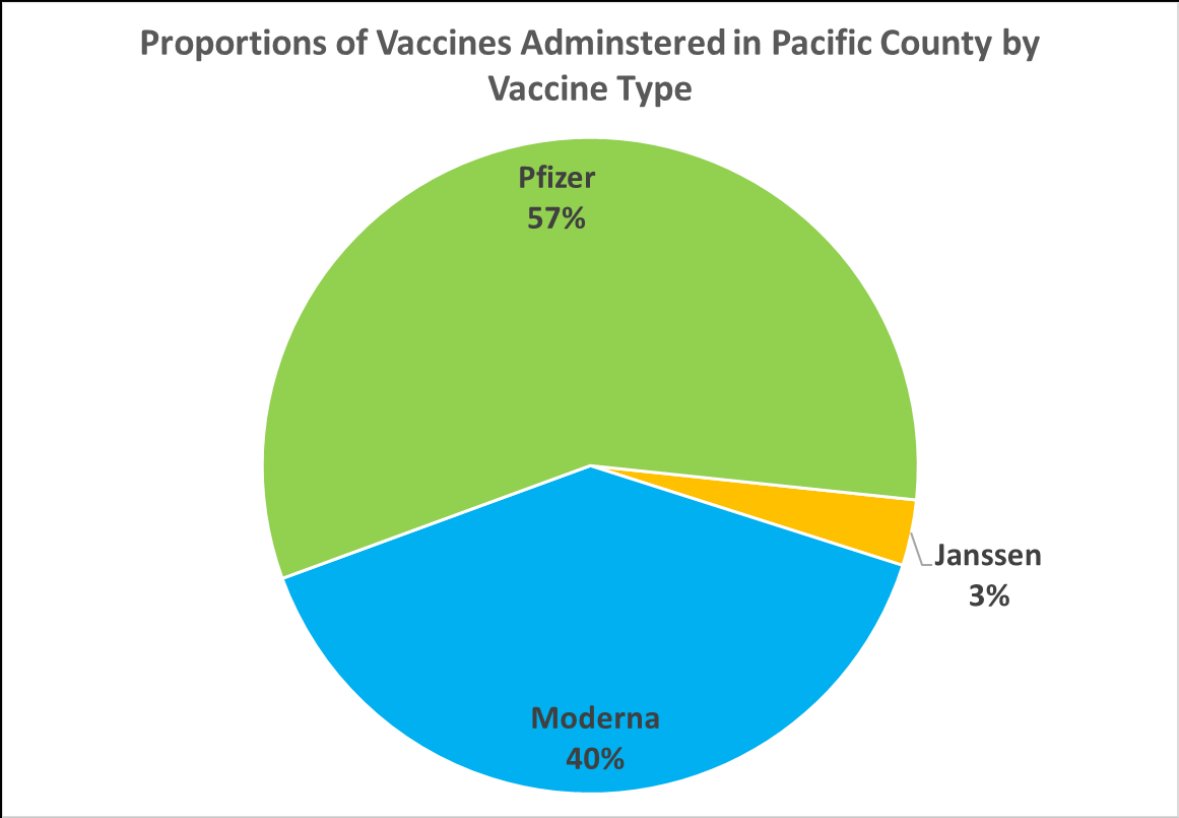
As previously mentioned, vaccinations continue to be a long term solution to prevention of severe COVID-19 infections and a protective factor against hospitalization and death. PCHHS would like to acknowledge all of the help from partners and those involved in the vaccination process including: Ocean Beach Hospital, Willapa Harbor Hospital, Shoalwater Bay Medical Clinic, Family Health Center Klipsan, Valley View Health, Peninsula Pharmacies, South Bend Pharmacy, Raymond Pharmacy, and Aristo Health. In addition to our provider partners, we'd also like to acknowledge and thank the many volunteer and agency partners who assisted with mass vaccination clinic logistics throughout 2021 including: City of Long Beach, Port of Willapa Harbor, South Bend Fire Department, Long Beach Fire Dept, Ocean Park Fire District, South Bend, Ocean Beach, and Raymond School Districts, Pacific County Depts of General Admin and Public Works, and Pacific County Sheriff's office among many others.

Washington DOH reported that 43,157 vaccines had been allocated for Pacific County as of 5/1/22. Of the total allocated vaccines, 42,027 (97.4%) were distributed for administration through May 2022. 38,012 (90.4%) of the distributed vaccines were administered. A breakdown of the three vaccines available and the facilities that provided vaccinations are listed below. It should be noted that all vaccine data provided in this section includes only vaccines that were provided within Washington State. Being a border county with Oregon, we are aware that many Pacific County residents received COVID-19 vaccines out of state. From counts of vaccinations administered in Oregon as of December 2021, we estimate an additional 4-9% of Pacific County residents received vaccinations in Oregon but are not included in the data below.

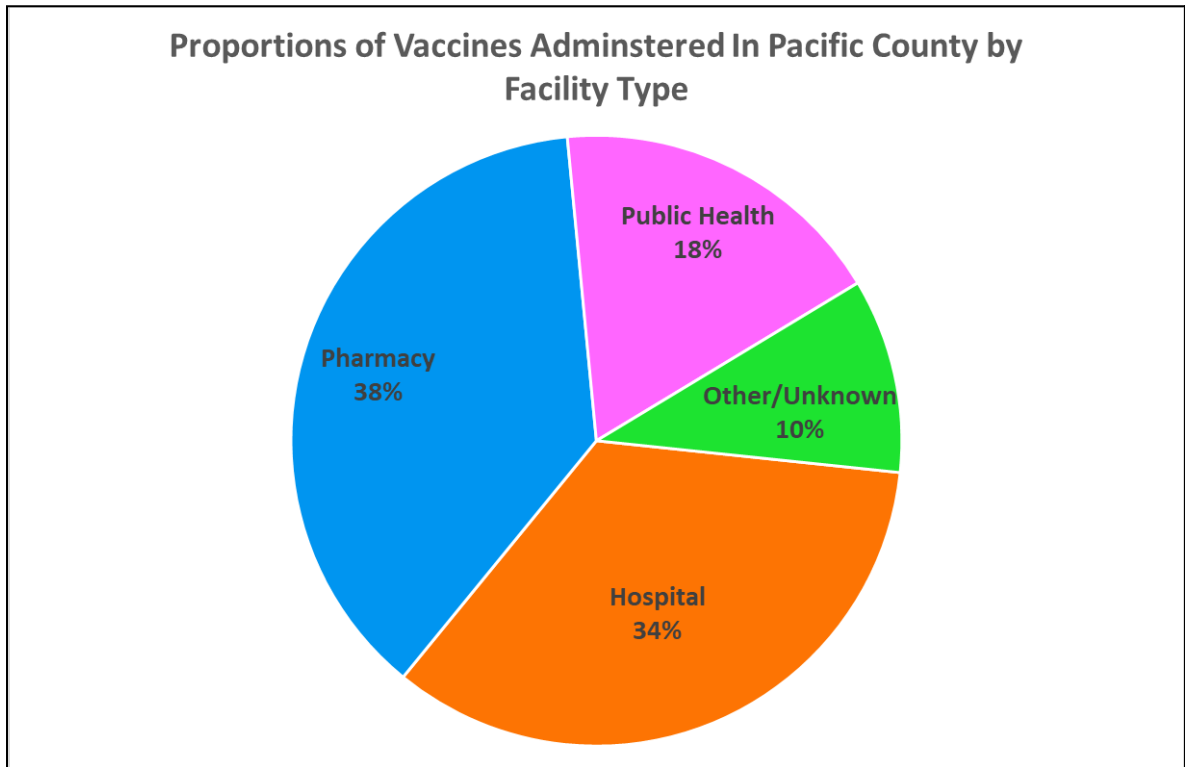
| Vaccine Type | Allocated | Distributed | Administered |
|------------------------|-----------|-------------|--------------|
| Janssen | 2300 | 2300 | 1235 |
| Moderna | 16220 | 15840 | 15016 |
| Pfizer | 24637 | 23887 | 21761 |
| Facility Type | Allocated | Distributed | Administered |
| Hospital | 13734 | 12564 | 13016 |
| Pharmacy | 15363 | 14513 | 14281 |
| Public Health Provider | 8582 | 8302 | 6795 |
| Other/Unknown | 1850 | 3020 | 3920 |

*Delays in facility type for reporting vaccine administration are reported in "Other/Unknown" currently

The amount of each vaccine type allocated and distributed varied with Pfizer being the greatest amount, followed by Moderna, and the fewest being Janssen (also commonly referred to as Johnson & Johnson). The proportions of administration followed a similar pattern as shown in the pie chart below.



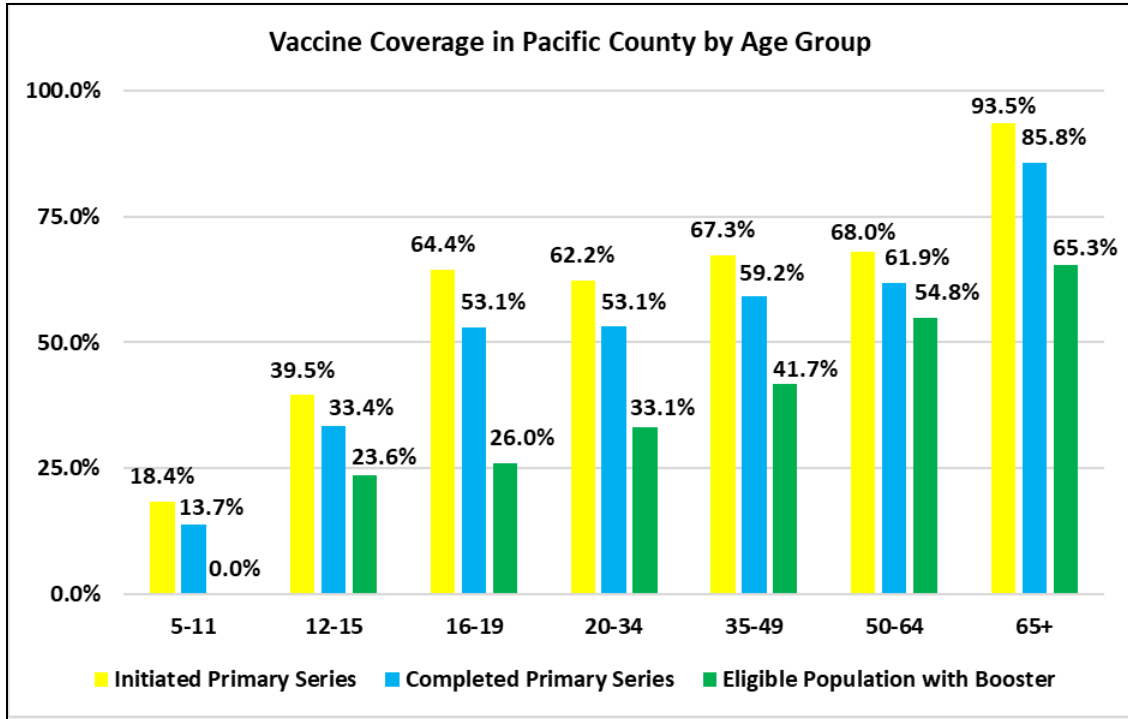
Higher percentages of vaccines administered from the number distributed means that there was a greater demand for those vaccines at their respective facilities. Pacific County had a greater demand from hospitals and pharmacies as the primary facilitators from both the frequency and percentage of utilization aspects of vaccine distribution. Below is a breakdown of the vaccine administration by facility type.



Age

Age is an important demographic variable when assessing the risk of severe illness in COVID-19. While younger age groups typically have less risk for hospitalization and death from COVID-19, it is still important to understand any disparities between vaccination status among these groups. Some vaccination milestones included 30%, 50%, and 70% for the total Pacific County population. With vaccinations and boosters becoming more available to younger age groups, we estimate that with the additional consideration of out-of-state vaccinations, we have well exceeded the 70% total population vaccination. This is an incredible effort to continue protecting ourselves and those who may not be able to get vaccinated due to preexisting medical conditions.

A comparison of vaccine coverage by age group in Pacific County is outlined below in the graph and associated table. At this time, all groups aged 16 and older have achieved at least 50% completed vaccination.



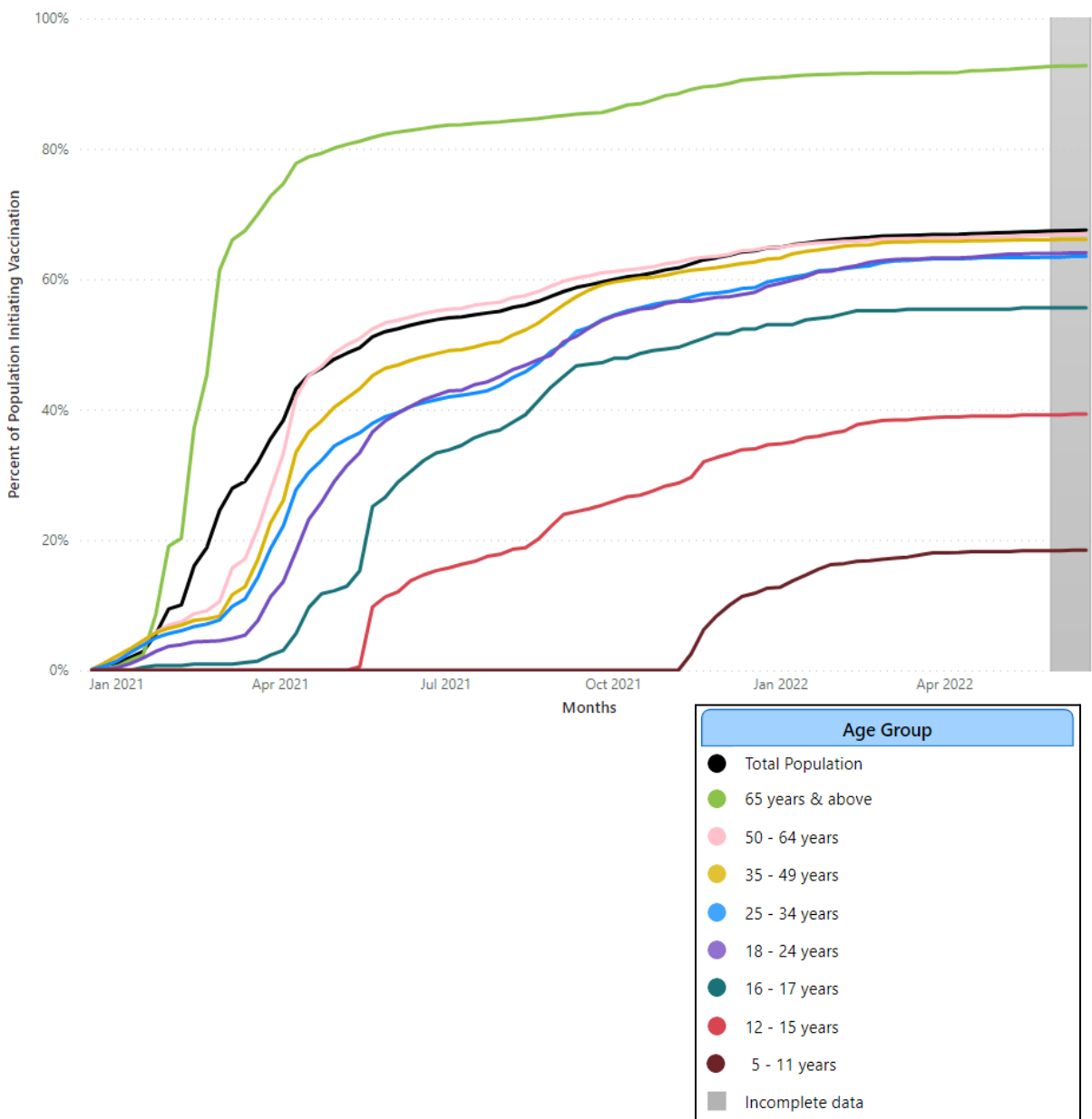
Note: Age 5-11 did not have any eligible population for booster at time of analysis

Vaccination by Age Group Table

| Age | Initiated primary series | Completed primary series | Eligible population who received booster |
|-------|--------------------------|--------------------------|--|
| 5-11 | 259 | 193 | n/a |
| 12-15 | 362 | 306 | 61 |
| 12-19 | 516 | 425 | 103 |
| 20-34 | 1479 | 1263 | 3999 |
| 35-49 | 2048 | 1801 | 735 |
| 50-64 | 3567 | 3247 | 1746 |
| 65+ | 6664 | 6111 | 3924 |

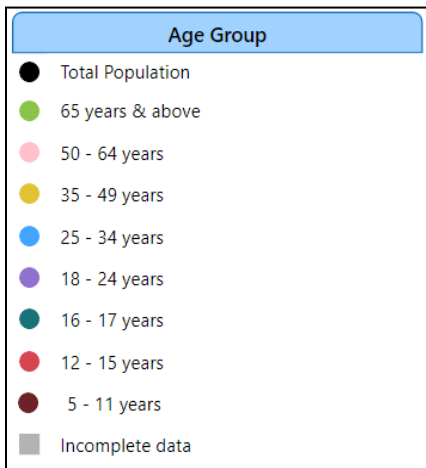
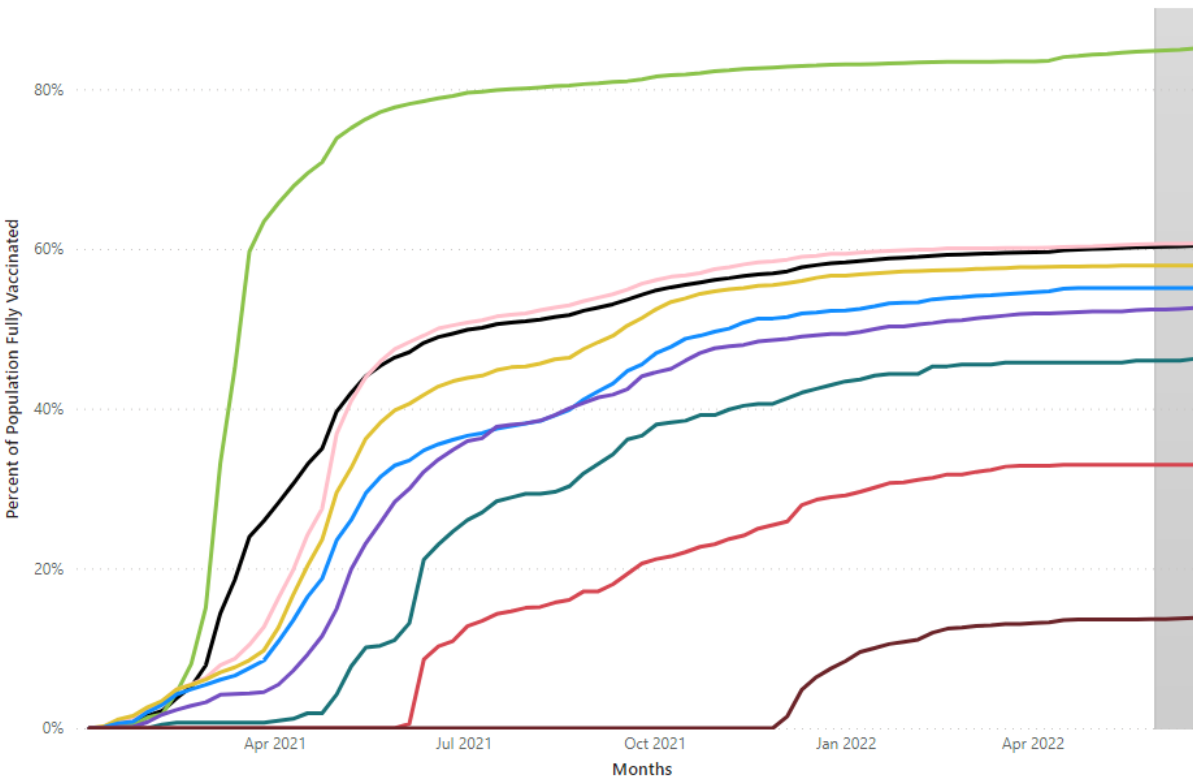
Below are DOH's reported trends in initiating vaccinations by age group over time. In the early stages of vaccine administration, Washington utilized a tier system to prioritize vaccine administration for higher risk groups, such as people older than 65 years old. This is illustrated in the trendlines below and explains why other age groups see spikes of initiating vaccination at different periods of time. It was very encouraging to see our older, more vulnerable population (65 years & above) begin reaching these milestones as early as February 2021 (30%) and eventually exceeding our goal of 70% with a peak of 92.6% as of 5/1/22. Following the first year of vaccine availability, vaccination rates have stabilized for all groups.

Initiating Vaccination Trend by Age Group



Below are DOH's reported trends in completing vaccinations by age group. Again, you will notice other age groups' variance of completing vaccination at different periods of time. Following the same milestones stated above, the total population reached these milestones approximately March 2021 (30%) and May 2021 (50%) mostly due to the higher count of individuals age 65 and older who had a large percentage of those vaccinated.

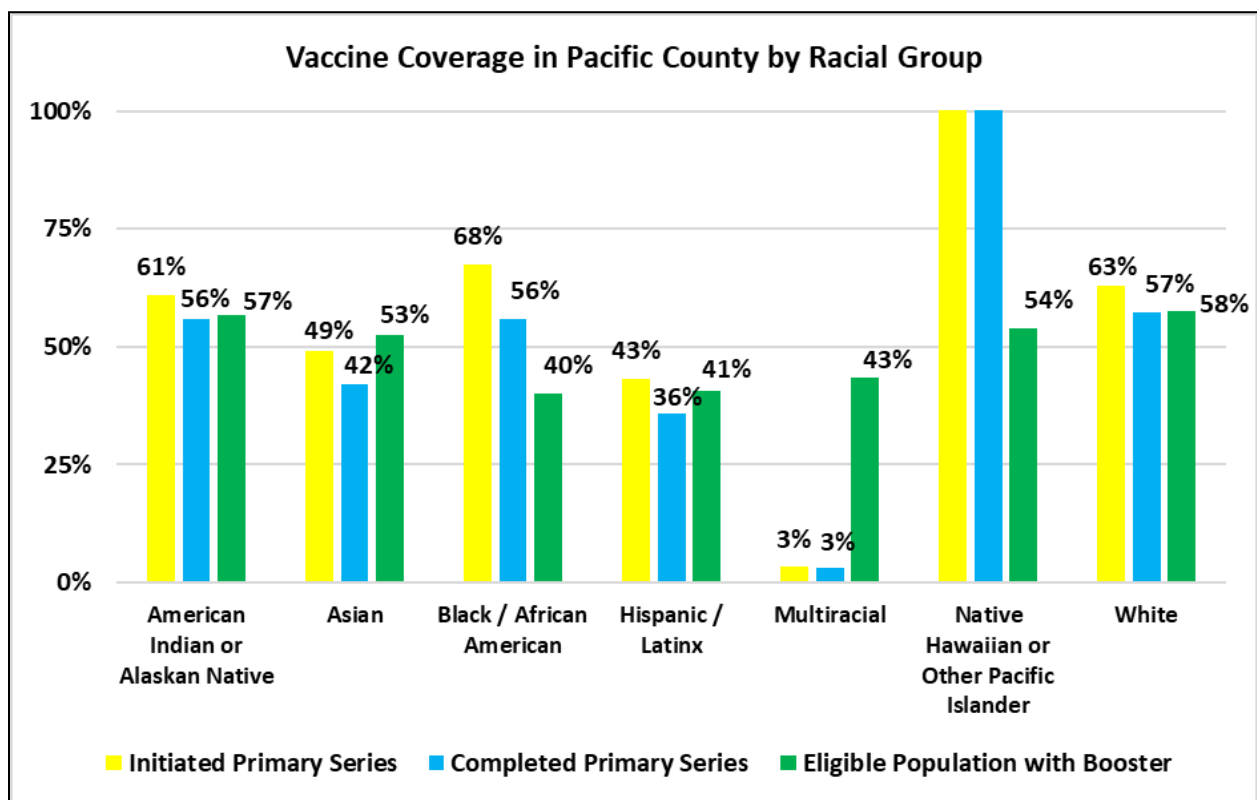
Fully Vaccinated Trend by Age Group



Race

Age is another important demographic variable when assessing the impact COVID-19 has had on subpopulations within a community. Historically, minority populations, such as Black / African American and Hispanic / Latinx, are disproportionately underserved in healthcare settings.

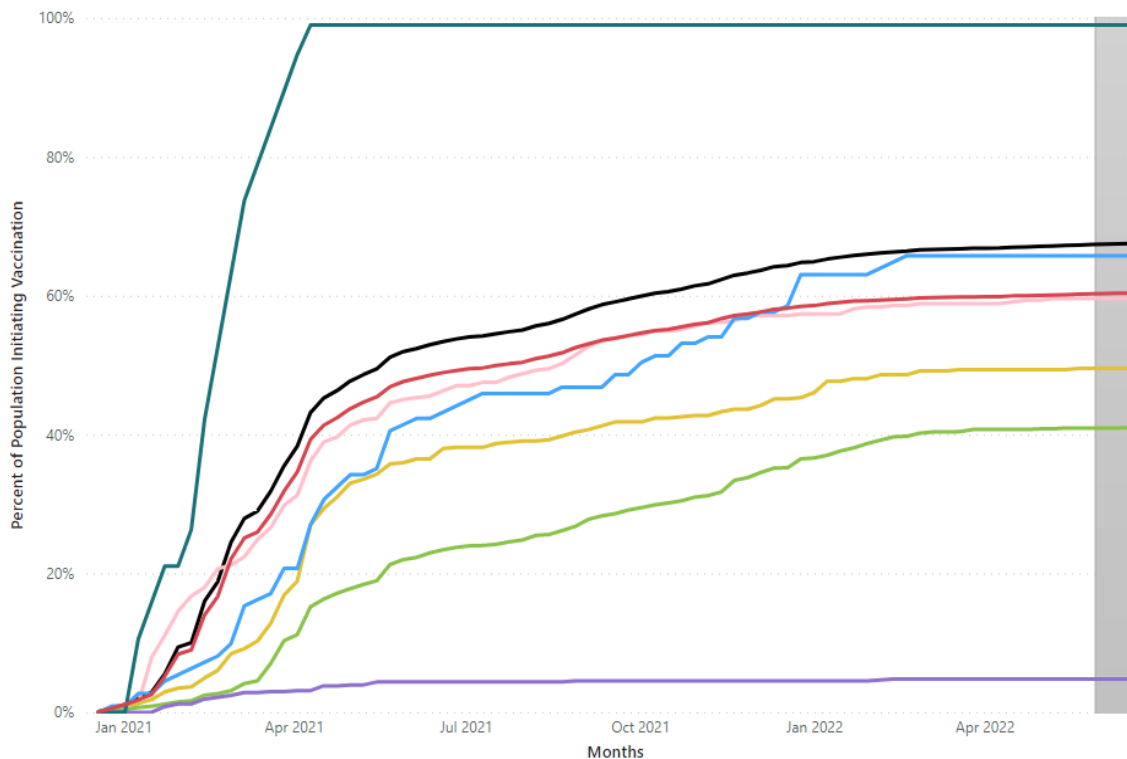
A comparison of vaccine coverage by race in Pacific County is outlined below in the graph and associated table. At this time, all groups except “Asian,” “Hispanic / Latinx,” and “Multiracial” have achieved at least 50% vaccination.



Note: Race “Native Hawaiian or Other Pacific Islander” had reported both “Initiated Primary Series” and “Completed Primary Series” over 100% (158% and 142%, respectively), which is an error from the DOH’s demographic population totals.

Below are DOH’s reported trends in initiating vaccinations by race. While Washington’s tier system had a direct impact on the trends of age groups who were able to receive vaccinations, there is not a known impact on whether these tiers had any disproportionate effect on different racial groups. It appears that those who classify themselves as “Multiracial” have been consistently the group with the lowest initiating vaccination proportion. Otherwise, there was no discernable delay in vaccine administration. The “Hispanic / Latinx” and “Asian” populations had similar initial vaccination administration growth compared to other groups, but slowed in the summer months of 2021. Beginning in 2022, most groups also plateaued in vaccine initiation, but it may be valuable to understand what is causing this slow growth in vaccination initiation for these groups to keep their pace with other groups. This is an area that Pacific County Health and Human Services can focus on for future emergency events.

Initiating Vaccination Trend by Race & Ethnicity

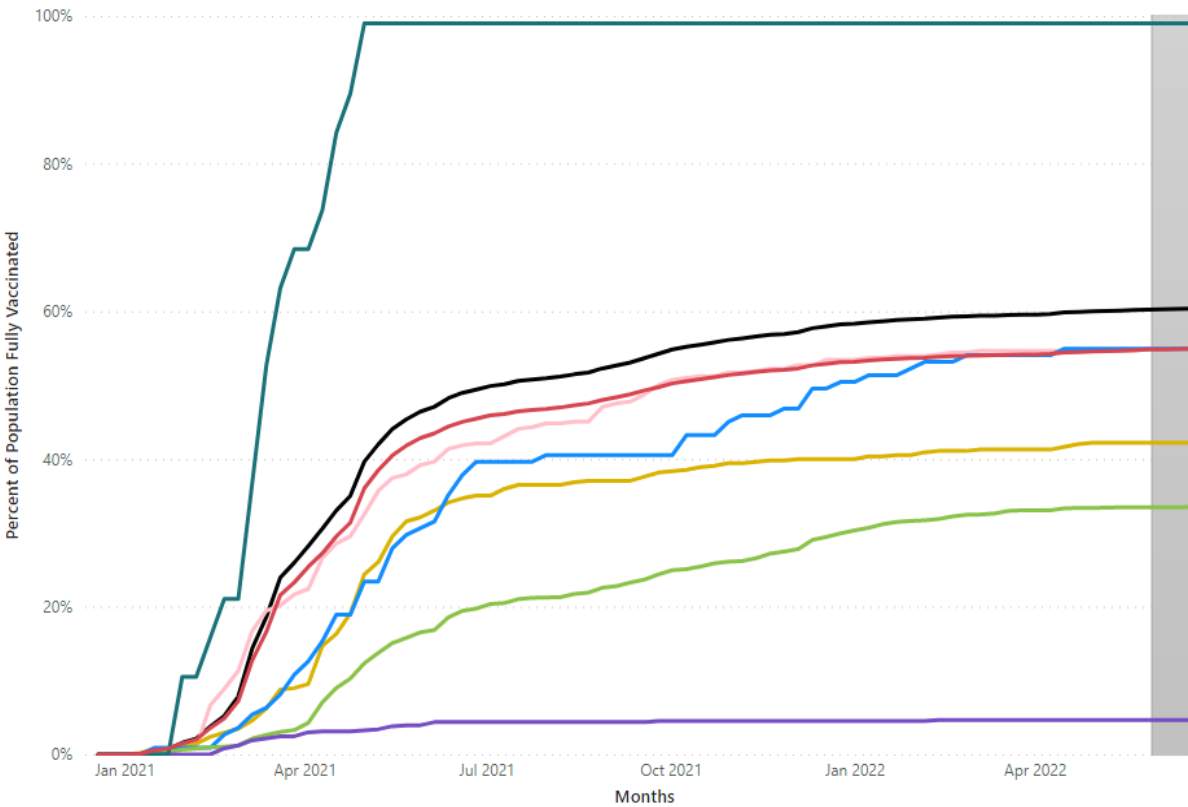


- Race & Ethnicity**
- Total Population*
 - American Indian or Alaskan Native**
 - Asian**
 - Black**
 - Hispanic
 - Multiracial**
 - Native Hawaiian or Other Pacific Islander**
 - White**
 - Incomplete data

* Includes Non-Hispanic Other & Unknown Race/Ethnicity
 ** Non-Hispanic

Below are DOH’s reported trends in completing vaccinations by race. This chart showcases the same trends as described above for “Multiracial,” “Hispanic / Latinx,” and “Asian.” It’s encouraging to see there is no single group that has drastically different initiation and completion of their vaccination. Using the milestone of 50% as mentioned above, “American Indian or Alaskan Native,” “Black or African American,” and “White” all reached their 50% threshold by the 4th quarter of 2021.

Fully Vaccinated Trend by Race & Ethnicity



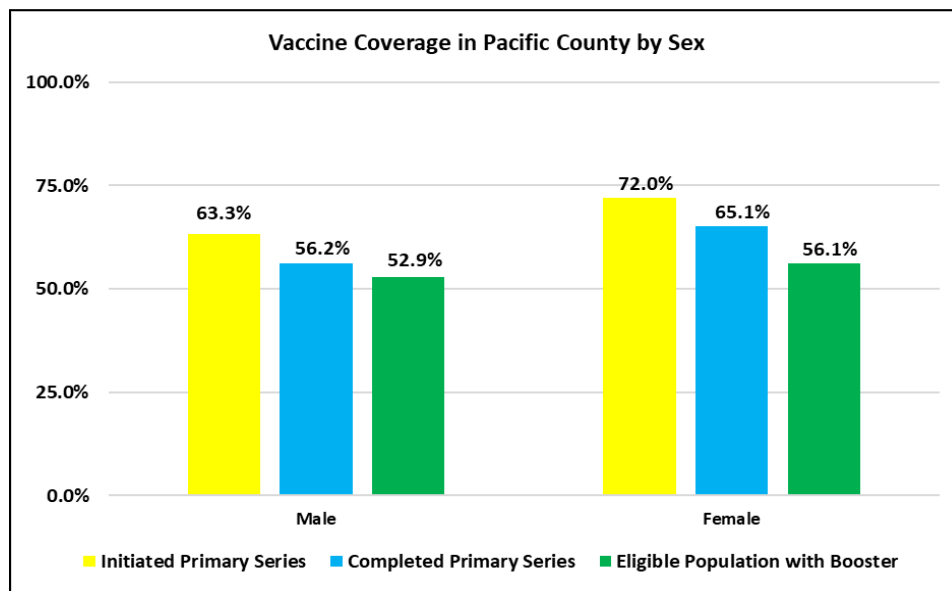
Race & Ethnicity

- Total Population*
- American Indian or Alaskan Native**
- Asian**
- Black**
- Hispanic
- Multiracial**
- Native Hawaiian or Other Pacific Islander**
- White**
- Incomplete data

* Includes Non-Hispanic Other & Unknown Race/Ethnicity
 ** Non-Hispanic

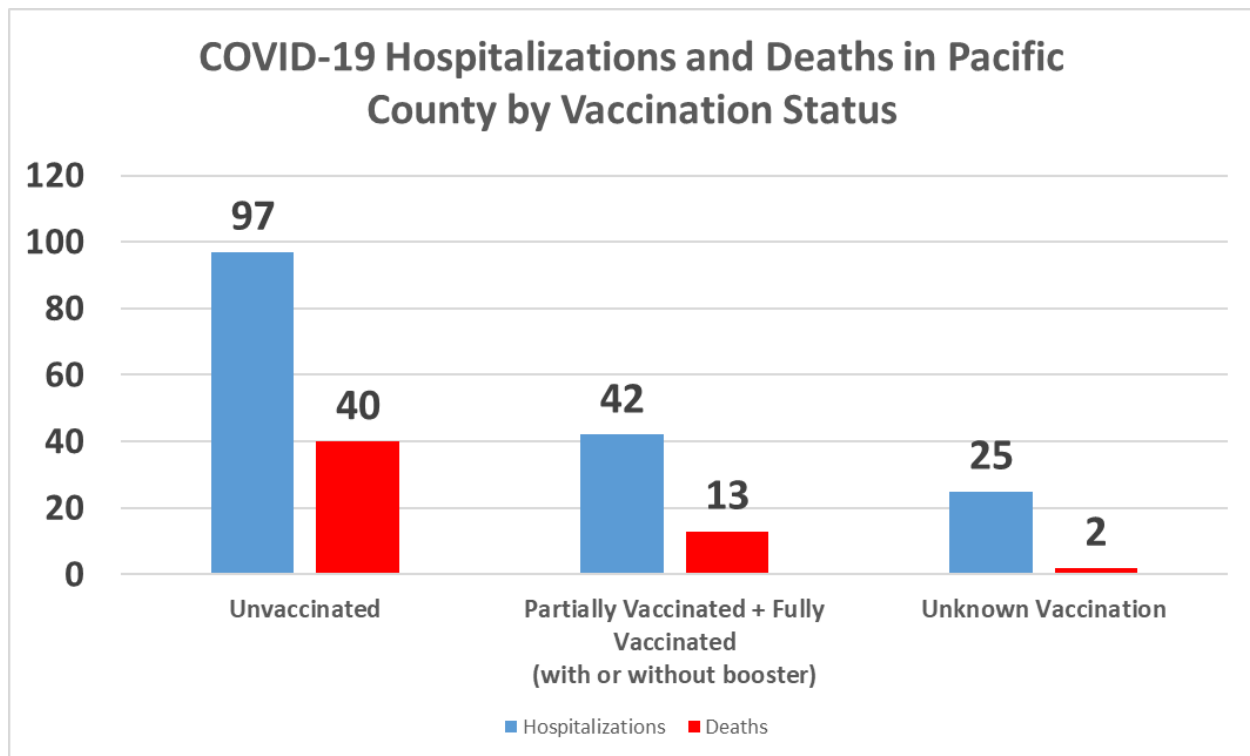
Sex

Similar to age, sex is another important demographic variable when assessing the impact COVID-19 had within a community. While health disparities may manifest in different ways compared to race groups, it is still important to be vigilant for any inequalities regarding accessibility or utilization especially for shared resource services like vaccinations. Females tend to have slightly higher rates of vaccine initiation, completion, and booster proportions when compared to males. While the “Booster” category looks comparable at a glance, there is a larger total number of females eligible for the booster. With a larger percentage of those females receiving their booster, the total counts between sexes show a larger difference in the “Booster” category (difference of approximately 14.7%). These differences are worth noting, since at a glance of the Pacific County population there are more males than females. We hypothesize this could be explained by the fact that there are more females in the older populations, and these populations are a large proportion of the total number of Pacific County residents, which had the highest vaccination rates. This could explain the skewing of vaccine coverage towards females. Efforts to understand why the male population might be lower than the females will be another focal point of improving our emergency preparedness.



| Sex | Initiated primary series | Completed primary | Eligible population who rec. booster |
|--------|--------------------------|-------------------|--------------------------------------|
| Male | 7096 | 6301 | 3190 |
| Female | 7048 | 6921 | 3741 |

Vaccinations continue to be a long-term focal point of the COVID-19 response. We understand that changing variants can affect the efficacy of vaccines in preventing becoming a symptomatic case of COVID-19, but there is a high probability that vaccinations of any kind attribute to less severe symptoms and a lower chance of hospitalization and death. Below we share information from local data that we were able to collect on the frequency of hospitalizations and deaths based on vaccination status.



The information above illustrates the significant increased risk for both hospitalization and death for those who are unvaccinated. Even when combining all categories of those who were vaccinated in any way, an unvaccinated individual is more than twice as likely to be hospitalized and three times as likely to die from COVID-19 compared to any level of vaccination status. Vaccination against COVID-19 may not perfectly prevent the spread of all infections, but those who are infected are much less likely to experience severe symptoms, hospitalization, and death.

Another important facet of limiting the impact that COVID can have is preventing the overcrowding of hospitals. When large surges of viral activity occur, or more severe variants force individuals to seek care, this creates stress on the already typically under-resourced, smaller healthcare systems in the county. Hospitals stated they had to expand staffing due to increased demand and extra precautions relating to COVID, stop or limit surgeries and/or physical therapy, incur more overhead costs for staffing, PPE,

negative pressure rooms, and many other instances where policy or procedure changes were hampering their ability to function as well as they would have liked. This also does not account for the long hours, extra efforts, and psychological impacts that the staff had endured since 2020. We encourage vaccines not only to keep individuals and their immediate friends and family more safe, but also to limit the severity of COVID's impact on the healthcare systems in place for all individuals who might need it for non-COVID related issues.

With the availability of the vaccine beginning in 2021, mass vaccination clinics became a priority to utilize a collective effort for large-scale, efficient administration to many individuals at once. These collaborative clinics were hosted through local healthcare providers: Ocean Beach Hospital, Willapa Harbor Hospital, Peninsula Pharmacy, Raymond Pharmacy, South Bend Pharmacy, Shoalwater Clinic, Valleyview Clinic, and Pacific County Health and Human Services. Other key partners assisting with logistics such as scheduling, traffic control, waitlist management, and paperwork included the city of Long Beach, General Administration, Department of Public Works, Pacific County Emergency Management Agency, along with many additional volunteers who assisted with these events. All of these partners made it possible for us to have accessible vaccination opportunities for individuals to receive the COVID-19 vaccine in a quick and efficient manner. Moving forward, many of these clinics, and others like Valleyview, Family Health Center, Ocean Beach Hospital, and Willapa Harbor Hospital, and Shoalwater Clinic, are continuing clinic based vaccination efforts with support from other agencies, such as Aristo, for times of surge in demand.

In addition to mass vaccination and healthcare provided vaccine clinics PCHHS and our partners also provided on-site vaccinations for congregate work settings like canneries along with home based vaccines for individuals who are homebound. Key partners in our mobile vaccine program included: Olympic Area Agency on Aging (OAAA), Aristo Health, Peninsula Pharmacy, Port of Peninsula, and business partners including canneries who hosted events.

When surveying the community regarding vaccines, a wide variety of responses were given. Most were positive responses and ratings regarding scheduling, accessibility, and their clinic visits for vaccination. Some qualitative comments focused on the early limitations on vaccinations and expressed confusion about scheduling boosters as those became available. Some of these comments were specifically linked to the early use of the phone systems for vaccine scheduling. PCHHS now uses an online scheduling system, and that would be the preferred option moving forward for most community members. There was a large appreciation for the drive-through clinics offered to quickly and easily get a vaccine. Others were grateful they were able to receive a COVID-19 vaccination and flu vaccine at the same appointment. All of these

suggestions and the current methods that community members find useful will be implemented in the future, and to improve emergency response.

Pacific County partners echoed many of these responses in their survey. There were specific mentions of site-based vaccination clinics to be a potential event as well. This would be similar to site-based testing efforts, but bringing a large-scale vaccination event to industries who might be at greater risk, such as agriculture, food service, and other occupations with higher exposure, could be another way to increase access and utilization of allocated vaccines. Many other comments praised the efforts of pharmacies and healthcare providers across the country to provide efficient vaccinations to the community.

Treatment

Treatments for acute cases of COVID-19 have become available to reduce the chances of requiring hospitalization and worse yet, death. Individuals who are at high risk of severe disease due to age or underlying health condition are eligible to receive treatment from their healthcare provider. Treatment options have included oral antivirals, such as Paxlovid or Lagevrio, intravenous antivirals, Veklury, and monoclonal antibody (mAbs) treatment, such as Bebtelovimab. These all must be started within days of symptom development to be effective. This caveat can make utilization of treatments more complex. Individuals may experience transportation issues, delays from their healthcare provider's approval for treatment, or limited accessibility for times of surging cases. Again, PCHHS would like to recognize and thank our key partners, Ocean Beach Hospital, Willapa Harbor Hospital, Raymond Pharmacy, Ilwaco Pharmacy, and South Bend Pharmacy, Shoalwater Clinic, ValleyView, and Family Health Center for their efforts to assist their patients in accessing and/or administering COVID treatments.

Early accessibility to COVID-19 treatments was hampered by a few factors. Lack of information sharing or awareness led to less than half (45%) of respondents stating they were aware of how to access COVID-19 treatments, such as monoclonal antibodies and/or oral antivirals. Compared to the prior questions inquiring about accessing local testing and local vaccination options, there was a significant difference (93% and 96%, respectively) in the proportion of individuals who were aware of local COVID treatment options. For future emergency planning an improvement on the methods for disseminating information about these options should be another action item. Another barrier to accessing treatment for some individuals in Pacific County is lack of a healthcare provider to prescribe treatments and manage care. This can be due to lack of health insurance or inability to be seen by a provider within the required timeframe. In response to this gap, in the spring of 2022, WA Department of Health established a system for these individuals to access telehealth services in which individuals can be assessed for eligibility and prescribed medications if needed.

While access may have been limited to some degree, we do know that individuals have sought out and utilized these treatments. Out of the available information from some of the aforementioned healthcare providers, Pacific County was able to administer 45 courses of antivirals beginning in December of 2020 following FDA approval for use in mild to moderate cases and 25 courses of monoclonal antibody treatments beginning in December of 2021. Unfortunately, our survey was unable to capture any responses from individuals who did access these treatments. We would have liked to review their experiences with accessing and utilizing treatment options to have a better idea of what we could do to improve our response for future events.

Communication & Data

As PCHHS and its partners assess some of these areas for improvement in treatment communication, general communications and data sharing was another large focal point of the pandemic response to keep our community informed. Some avenues of communication and data to be disseminated included social media, PCHHS's COVID-19 website, Status Reports, print with help from media partners, community forums, and partner meetings. Through these different channels, PCHHS was able to share relevant information at regular intervals for number of cases, hospitalizations, deaths, case rate, updates to guidelines at the state and federal levels, and many other topics of interest throughout the different stages of the pandemic response. We would like to thank our community partners once again for helping us reach as many individuals as possible through a variety of mediums with special thanks to those who assisted us in print media like the Chinook Observer, the Willapa Harbor Herald, and radio like KMUN, and KRXO along with the many members of the public and social media groups who shared regular updates with their audiences.

In the early stages of the COVID-19 response, PCHHS began sharing Status Reports and weekly data updates. These were reports and presentations of current case data and applicable guidelines regarding the level of COVID-19 within the community. These were also opportunities for sharing new guideline updates and other information from DOH and the CDC. As of May 1st, 2022, there have been 172 Status Reports shared and 108 total weekly data reports shared. These communications were shared through email, some print formats, such as the Chinook Observer and the Willapa Herald, the www.pacificcounty covid19.com website, and social media. Many community members made qualitative comments in our survey about their appreciation of the weekly data sharing and Status Reports.

Status Reports and weekly data updates were not the only communications provided through social media. Many updates to COVID-19 guidelines, information regarding testing and vaccinations, and other communications for resources and social supports were shared frequently. When reviewing what surveyed community members reported accessing for communications, social media (Facebook / Instagram) was the top response. Facebook insights showed approximately 3,500 new page followers since the early stages of the pandemic (a 700% increase) with 62,034 unique page visits. These insights also reported the reach of PCHHS's Facebook page was over 380,000 users. This was partly due to "viral" posts that gained state and/or national attention. Instagram did not have as large of a following nor as drastic of an increase in followers, but PCHHS will continue to utilize social media as another easily accessible communication medium for future emergency information sharing.

Following the development and dissemination of these reports and data updates, community forums were hosted online beginning in early June 2020. Initially these community forums were hosted weekly, eventually moving to bi-weekly, and finally transitioned to monthly as the pandemic progressed in the Fall of 2021. After ending in November 2021, these forums averaged 1,100 views per forum. In addition to these community forums, PCHHS hosted several other presentations and forums with the help of guest speakers to discuss topics of interest to the community, such as vaccine safety, school safety, and reopening guidance.

The final Internet based communication platform to be discussed is the dedicated website for Pacific County COVID-19. This page was established June 1st, 2021, and over the following year it had over 31,000 unique visits with over 65,000 page views. This website has received many visitors not only for sharing case data, but became a hub of information regarding current clinics for testings and vaccinations. We recognize that this is the preferred method for many individuals rather than waiting through dedicated phone lines to schedule these appointments and will continue to provide this option in future events.

PCHHS and Pacific County Emergency Management Agency (PCEMA) partnered to provide COVID-19 phone hotline that has operated continuously since the beginning of the pandemic. The hotline was available Monday-Friday from 8:00-4:30 to assist the public with questions regarding COVID-19 and to schedule testing and vaccination appointments.

More direct channels of communication with partners were established and continued throughout the COVID-19 response. Pacific County facilitated several stakeholder meetings with a variety of community partners to establish communications regarding COVID-19 and facilitate partnerships and collaborative efforts in support of the COVID-19 response.

In January of 2022, PCHHS secured funding from WA State DOH to support a full time epidemiologist to support the data collection and analysis related to the COVID response and provide other epi support for the county. Prior to January 2022, PCHHS did not have dedicated support for epidemiology which required other PCHHS staff to develop data collections systems, conduct data analysis, and create and deliver data reports to the community (in addition to their regular duties). The county and PCHHS staff would have greatly benefitted from having the Epidemiologist position established much sooner in the pandemic and we would strongly recommend this position be maintained to continue supporting the current pandemic along with any events that may occur in the future.

| Meeting Group / Dates | Frequency & Objective | Participants |
|---|--|--|
| Healthcare Providers / April 2020 - Ongoing | Weekly workgroup to collaborate on testing, vaccinations, PPE, and other COVID-19 related topics | PCHHS, Ocean Beach Hospital, Willapa Harbor Hospital, Valley View, Family Health Center, Peninsula Pharmacy, Shoalwater, Dr. Cundiff, PCEMA, PCHHS Health officer |
| Reentry Workgroup / April 2020 - November 2020 | Weekly workgroup beginning April 2020 - November 2020 to navigate through state closure and re-opening related to the business sector | Visitors bureau, local business representatives, City of Longbeach, Sheriff's office, City of Ilwaco, WA State Parks, Department of Community Development |
| Social Support Workgroup / March 2020 | Weekly, bi-weekly, and then monthly meetings to collaborate, provide social and mental health supports to the community, including promotion of mental health services, Q&I support, and sharing resources with PC community | PCHHS, Peninsula Poverty Response, Pacific County Immigrant Support, Keep A Clear Mind, WellSpring Community Network, Road 2 Resiliency, Teen Advocacy Coalition, ESD 113/True North, Peninsula Baptist Church, Crisis Support Network, Equus Workforce Solutions, Big Brothers Big Sisters, County Food Banks |
| Pacific County Emergency Management Agency (PCEMA) / April 2020 | Daily call eventually reduced to weekly for elected officials and community stakeholders to provide regular status updates related to the local COVID-19 response | Pacific County Commissioners, City of Raymond, City of Longbeach, Shoalwater tribe, City of Ilwaco, Emergency Management, Sheriff's office, Fire district 1 and 3, School districts, Ocean Beach Hospital, OBSD |
| Pacific County Schools / August 2020 - Ongoing | Weekly workgroup to support school reopening, test, vaccinations, and provide education regarding school related COVID-19 guidelines | Raymond, Ocean Beach, Naselle, Willapa Valley, Northriver, and South Bend school administrators, school nurses, and partners, PCHHS, PCEMA, Shoalwater Tribe |
| COVID-19 Treatment / September 2021 | Weekly workgroup to establish and expand COVID-19 treatment options in Pacific County included monoclonal antibody treatment and oral antiviral medication | Ocean Beach Hospital, Willapa Harbor Hospital, PCHHS, Peninsula Pharmacy, South Bend Pharmacy, Raymond Pharmacy, Valley View, Family Health Center, PCHHS Health Officer |

Another important communication focus for the pandemic response was centered around reopening of in-person facilities, primarily, schools and businesses. Considerations for these spaces included face-coverings, social distancing, limiting the

occupancy, and many other modifications to the operational methods that these service providing industries had functioned under previously.

Using a phased approach, schools were able to begin hybrid learning programs to help students return for face-to-face instruction beginning in the Fall of 2020. Split groups with alternating schedules, including grouping students from the same households together, remote learning options, and daily health assessments were staples of these plans. School districts have participated in over 75 meetings since March 2020 covering an array of topics from emergency response to re-opening procedures. PCHHS worked with county school districts to provide information about returning safely, such as face covering and distance guidelines.

Communities, especially those on the peninsula, were negatively impacted- especially early on in the pandemic from the lack of business opportunities during the typical tourist season. Not only were some of the guidelines encouraging many to limit travel initially, but, as re-opening strategies were developed, businesses needed to adjust policies for patrons that included extra efforts from workers. Many of these businesses needed to make the necessary adjustments for re-opening to their floor spacing and typical practice while understaffed. These are difficult considerations for smaller businesses that thrive on tourists and those who travel into the area.

We understand that there are lags in reporting, data sharing, and analysis of trends, especially when utilizing federal data from the CDC. To combat this delay, we wanted the community and our partners to be as up-to-date and informed as possible throughout the process and emphasized communication and data sharing in our COVID-19 response. Survey results from community members indicated they were more satisfied with the information and data shared by Pacific County when compared to the WA State DOH and CDC and their comments encouraged us to continue using a variety of media sources as some individuals do not have access to social media nor other internet based mediums. Suggestions for areas of improvement included keeping messaging as simple and clear as possible, especially when guidelines are changing, and sharing data by zip code to help understand if COVID-19 cases are impacting north or south Pacific County.

PPE Distribution

The provision of personal protective equipment (PPE) was an important focal point of the response efforts to keep those who provided healthcare in a variety of settings as safe as possible. Some of these items included face coverings, gloves, and gowns. Many other protective coverings were available to order and respirators used in hospital settings were included in PPE order forms.

All PPE had to be requested through a state centralized resource request website (WebEOC [Emergency Operations Center]). Pacific County EOC acted as a “pass through” to get PPE suppliers for community partners. Pacific County has submitted 269 requests to the state for fulfillment. At the time of this report, 251 requests have been completed, 9 were unable to be completed (due to lack of availability in requested supplies), and 9 requests are still pending. All orders of PPE that were completed were allocated and distributed to partners.

There were a total of approximately 250,000 PPE items requested. 83% of these requests were for different types of gloves, followed by face coverings at 13%, then gowns, sanitation supplies, and other equipment contributed to 1-2% each of the remaining PPE orders.

However, these efforts were also subject to certain challenges. Initially, WA State had difficulty scaling up to meet PPE needs throughout the state. This led to a moving target and drifting rules for ordering and distribution of PPE items. These changes were arbitrary and often came with no notice with order forms often changed as much as twice a week. Once the DOH began working within the guidelines of the ICS, the process ran smoothly. Also, initially all PPE orders were only shipped to the Pacific County EOC. Pacific County Health and PCEMA personnel then had to divide and deliver the items themselves to the designated locations. Eventually, shipments were able to be made to the specific locations placing the order. This freed up our people for other duties.

Even with some initial challenges that were not entirely within our control, the coordination between PCHHS and PCEMA was a response strength in terms of logistics as well as the coordination and cooperation with all of our partners regarding acquisition and distribution of PPE. All of our partners were very proactive in these efforts, and this coordination and cooperation was a key to the entire COVID-19 response, not limited to PPE and logistics.

Social supports

With many avenues for precautionary and response measures being taken in healthcare settings, the social impact of the COVID-19 pandemic was another important factor to consider in the response process. The negative effects, such as increased prevalence of depression, anxiety, and stress, of prolonged periods in isolation are well documented through the initial stages of the pandemic. This can be even more difficult for older populations, a large proportion of the Pacific County population, who might not have immediate, internal support from family or neighbors and lack access to external support lines. Addressing the need of social support by providing opportunities through

mental health services utilization, quarantine/isolation supports, and specific support services like eviction prevention was a substantial response effort that was greatly needed by those directly or indirectly affected by the pandemic.

Mental health promotion efforts were deployed almost immediately beginning in March 2020. PCHHS hosted 42 meetings with providers and support organizations to address gaps in service and continue addressing community needs. These meetings initially occurred weekly to make consistent progress in developing strategies for increased accessibility through options like telehealth before transitioning to bi-weekly and monthly meetings as services like “WA Listens” and “Warm Line” had been established. The majority of surveyed community members who had accessed some of these services rated that they were “Very Satisfied” with the mental health support they received.

As mentioned in the “Testing” section of this report, individuals or those in close contact with positive COVID-19 cases may benefit from quarantine/isolation support. Some of these included grocery delivery, rent support programs, pharmacy pick up, and other services aimed at assisting those who have been negatively impacted by the COVID-19 pandemic in a variety of settings. PCHHS Housing department worked tirelessly to help individuals apply for and process eviction rent assistance applications through the Eviction Rental Assistance, CDBG, and Treasury rental assistance programs. As of May 1, 2022, 374 applications for rental assistance have been processed, with 68.2% of applications approved resulting in rental payments to 139 landlords (and 139 evictions prevented). These programs paid for a combination of rent, utilities, and other housing needs. Surveyed community members who utilized these services were “Very Satisfied” with services provided like rental assistance and grocery delivery.

Summary

Strengths

There were many challenges presented over the last two years during the COVID-19 pandemic. People locally and across the globe were thrust into an unfamiliar scenario with worrisome outcomes of a previously unknown pandemic to this scale. Throughout all of these challenges, the resilience and fortitude of those within our community was not only necessary, but commendable. While there were many challenges, there were opportunities for PCHHS, PCEMA and our partners to improve public relations, foster partnerships within our community, and quickly respond to changing needs of community members during the pandemic.

The communicable disease expertise of public health nurses, and Health Officer, Dr. Steven Krager was invaluable when assessing initial response measures to be taken. PCEMA, Shoalwater Bay Tribe, and Pacific County Government, provided invaluable leadership in the activation and maintenance of our formal incident command structure (ICS) with active participation from nearly all Health Department Staff along with countless agency and community volunteers in the initial ICS and during the pandemic with testing, vaccination, and other efforts throughout the pandemic. Information and data was shared through a wide array of mediums with an emphasis on adapting to the requests and needs of the community to stay informed through a variety of media to reach as many individuals as possible. Many individuals commented on this from our community survey and appreciated our efforts to share policy and guideline updates from the state and federal levels, even if they disapproved of those changes. The emphasis for clarity and consistency in reporting was noted as well.

Strong partnerships with community stakeholders, such as PCEMA, tribal leaders, city officials, county departments, healthcare providers, schools, pharmacies, local media, fire departments, PCHHS staff, Libraries, Behavioral Health, and many others, allowed us to not only fulfill emergency response duties, but also maintain most non-COVID health department services. These collaborations established a mass vaccine collaborative and allowed for more opportunities for drive-through test sites and vaccination clinics. Shared vaccine and testing clinic schedules were created to provide one stop locations online for community members in need of either. Using these partnerships to distribute at-home test kits was another successful way to increase accessibility for individuals across the county. Again, many community members commented on the appreciation for at-home testing options for the convenience of taking the test immediately and being able to report positive test results online.

Finally, the efforts to provide extra social support for services like rental assistance and grocery delivery was considered a strength in the pandemic response. As previously described, many individuals were able to benefit from a rapid rollout of eviction prevention funds. The PCHHS Housing Department and their partners were able to connect individuals with a variety of social services during this tempestuous time.

Areas for Improvement

While there were many success stories from PCHHS and community members and partners within the COVID-19 emergency response, there are plenty of opportunities for improvement as well. These changes include external efforts to connect with partners and community members in more meaningful ways, adjustments of internal processes to improve efficiency, and general emergency preparedness updates. These action items were developed using suggestions from Pacific County community members and insights from Pacific County partners.

The recommendations for improved communication when sharing relevant information was a large theme from the community survey. An emphasis on sharing updates in policy and changes in guidelines in understandable, concise language was noted when asking for areas of improvement. This could be addressed through standardized language that’s shared with community partners to the community members they engage with. Also, future communications should include Spanish translations as an option.

These improvements in communication are an opportunity for improving the spread of general information regarding accessing services related to the occurring emergency. This can help address gaps in healthcare access, such as the knowledge of available COVID-19 treatments. As previously described in the “Treatment” section of this report, only 45% of surveyed individuals reported knowing how to access COVID-19 treatments.

| Improvement Plan | | | | | |
|--|---|---|--|--|----------------|
| Action Item | Expectation(s) | Performance Measure(s) | Department / Employees | Outcome(s) | Priority Level |
| Improved communication through various avenues and in multiple languages | PCHHS will work with community media and partners to provide practical, relevant information in easily accessible mediums Providing information in Spanish | Qualitative feedback from community Focusing on quality of information shared rather than quantity Spanish translation for communications | Foundational Public Health, Emily Singharath, Connor Montgomery, Jamie Castro, Letecia Sebastian | Improved confidence in community members Increased utilization of PCHHS information resources (website, social media, etc.) | 1 |

| Improvement Plan | | | | | |
|---|--|--|---|---|----------------|
| Action Item | Expectation(s) | Performance Measure(s) | Department / Employees | Outcome(s) | Priority Level |
| Improved treatment information sharing | Along with improved communication efforts, an emphasis will be placed on sharing information regarding available treatment options | Increased number of communications for sharing what is currently available and how to access | Foundational Public Health, Emily Singharath, Connor Montgomery | Increased utilization and access of treatment options within the Pacific County community Improving healthcare providers/partners ability to advocate for their services | 2 |
| Recommend the county establish and fully fund a dedicated emergency preparedness coordinator position for the health department | Fully fund 1.0 FTE emergency preparedness manager | Increase emergency prep FTE from .50 to 1.0 by 2023. | PCHHS, BOCC budget approval | Increased capacity to plan and prepare for future pandemic or public health emergencies | 3 |
| Maintain dedicated epidemiology support | Continued support of 1.0 FTE Epidemiologist on an on-going basis to provide consistent and timely data to inform the response and the public | 1.0 FTE position supported by the department | PCHHS management, DOH FPHS funding | Increase epi capacity to collect, interpret, and communicate data to inform decisions and educate the public | 2 |

Conclusion

As Pacific County is able to use this experience to plan for future emergency events, it's important to think about not only what will make the most internal logistic sense for ourselves and partners, but what may have the greatest potential effect for improving the safety and health of our community. Using data collected over the previous years, lessons learned from experience in response efforts, and the feedback of community and partners through surveys, PCHHS will continue to refine options for improving similar emergency situations including: improved accessibility of testing and vaccines through online reporting and scheduling with at-home options available in both areas, continued support for individuals who test positive for COVID-19 with an emphasis on making treatment options widely available and known, and improved outbreak response

through ongoing education and support for larger employers and congregate settings in outbreak prevention and mitigation.

A silver lining to the COVID-19 pandemic was the increased frequency and emphasis on communication between public health, partners, and the Pacific County community. Continuing these opportunities to collaborate and share information can help keep them and the communities they serve within Pacific County more up-to-date with the developing situation. From general data sharing to updates in policy and guidelines, another large focus of these communications will be making sure pertinent information is shared in English and Spanish.

Creating new objectives and maintaining progress in all of the areas described throughout this report is a daunting task itself. To spearhead these efforts, Pacific County proposes establishing and funding a dedicated emergency preparedness coordinator position within the Health Department. This individual will not only work on these improvements to our infectious disease response, but continue as a preparedness coordinator for other future situations.

Thanks and acknowledgements

We would like to say thank you to every organization and the many individuals who helped support the COVID-19 response in Pacific County. We are so grateful for your collaboration and support!

- ❖ Pacific County Health Dept Staff (past & present)
- ❖ Pacific County Emergency Management Agency
- ❖ Shoalwater Tribe
- ❖ Washington State Department of Health
- ❖ Washington State Department of Commerce
- ❖ Ocean Beach Hospital & Medical Clinic
- ❖ Willapa Harbor Hospital & Medical Clinic
- ❖ Valleyview Medical Clinic
- ❖ Cowlitz Family Health Center
- ❖ Shoalwater Medical Clinic
- ❖ Dr Dave Cundiff Medical Group
- ❖ Pacific County Health Officer & Deputy Health Officers (and Clark County)
- ❖ Aristo Health
- ❖ Medical Teams International
- ❖ City of Long Beach
- ❖ City of South Bend

- ❖ City of Raymond
- ❖ City of Ilwaco
- ❖ Pacific County Fire District #1
- ❖ Raymond Fire Dept
- ❖ South Bend Fire Department
- ❖ Long Beach Fire Department
- ❖ Pacific County Visitor's Bureau
- ❖ Pacific County BOCC & General Administration
- ❖ Pacific County Dept of Public Works
- ❖ Pacific County Sheriff's Office & Jail
- ❖ Pacific County Assessor
- ❖ Pacific County IT
- ❖ Port of Peninsula
- ❖ Port of Raymond
- ❖ South Bend Pharmacy
- ❖ Peninsula Pharmacies
- ❖ Raymond Pharmacy
- ❖ Pacific County Health & Human Services Advisory Board
- ❖ Ocean Beach School District
- ❖ Raymond School District
- ❖ Willapa Valley School District
- ❖ South Bend School District
- ❖ Naselle School District
- ❖ North River School District
- ❖ The Chinook Observer
- ❖ Willapa Harbor Herald
- ❖ Willapa Behavioral Health
- ❖ Timberland Regional Libraries

And the many volunteers & local businesses who helped with vaccination clinics, testing clinics and PPE distribution, social services, and other efforts in the support of the response. This response would not have been possible without your support and we extend our heartfelt thanks to each of you!

Appendix A: Community Survey

Pacific County Community Health Assessment

The goal of this survey is to gather feedback on Pacific County public health, health care delivery, and current community health needs. Survey responses are anonymous. At the conclusion of this review, we will produce and share a community health improvement plan. This survey will take about 10-15 minutes to complete. If you have questions, please contact Connor Montgomery: cmontgomery@co.pacific.wa.us

Please select your age group

- 10-19 years
- 20-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70+ years

Gender

Specify Other Gender

Race

Specify Other Race

Ethnicity

Marital Status

Highest Education Level Earned

Number of Individuals in Household

Annual Household Income

Please answer in USD only. No "\$" or other currency denotation required.

Please confirm your Pacific County Zip Code

Community Health

This section will ask questions regarding what you believe to be the most important factors in each of the following categories. Answers are limited to 3 per section, so please consider your answers critically and provide additional details in the space provided below.

In the following list, what do YOU think are the three most important factors for a "Healthy Community"? (Factors which most improve the quality of life in a community)

- | | |
|--|--|
| <input type="checkbox"/> Good place to raise children | <input type="checkbox"/> Low crime / safe neighborhoods |
| <input type="checkbox"/> Low level of child abuse | <input type="checkbox"/> Good schools |
| <input type="checkbox"/> Access to health care (e.g., family doctor) | <input type="checkbox"/> Parks & recreation |
| <input type="checkbox"/> Clean environment | <input type="checkbox"/> Affordable housing |
| <input type="checkbox"/> Arts and cultural events | <input type="checkbox"/> Excellent race/ethnic relations |
| <input type="checkbox"/> Good jobs & healthy economy | <input type="checkbox"/> Strong family life |
| <input type="checkbox"/> Healthy behaviors & lifestyle | <input type="checkbox"/> Low adult death and disease rates |
| <input type="checkbox"/> Low infant deaths | <input type="checkbox"/> Religious or spiritual values |
| <input type="checkbox"/> Emergency preparedness | <input type="checkbox"/> <input type="text"/> |

Please share additional comments regarding "HEALTHY COMMUNITY FACTORS" below:

In the following list, what do YOU think are the three most important "health problems" in our community? (Those problems which have the greatest impact on overall community health)

- | | |
|---|--|
| <input type="checkbox"/> Aging problems (e.g. arthritis, hearing/vision loss, etc.) | <input type="checkbox"/> Cancers |
| <input type="checkbox"/> Child abuse / neglect | <input type="checkbox"/> Dental problems |

- | | |
|--|---|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> Domestic Violence |
| <input type="checkbox"/> Firearm-related injuries | <input type="checkbox"/> Heart disease and stroke |
| <input type="checkbox"/> High blood pressure | <input type="checkbox"/> HIV / AIDS |
| <input type="checkbox"/> Homicide | <input type="checkbox"/> Infant death |
| <input type="checkbox"/> Infectious disease (e.g. hepatitis, TB, COVID-19, etc.) | <input type="checkbox"/> Mental health problems |
| <input type="checkbox"/> <input type="text"/> injuries | <input type="checkbox"/> Rape / sexual assault |
| <input type="checkbox"/> Respiratory / lung disease | <input type="checkbox"/> Sexually Transmitted Diseases (STDs) |

Please share additional comments regarding "HEALTH PROBLEMS" below:

In the following list, what do YOU think are the three most important "risky behaviors" in our community? (Those behaviors which have the greatest impact on overall community health)

- | | |
|--|--|
| <input type="checkbox"/> Alcohol abuse | <input type="checkbox"/> Being overweight |
| <input type="checkbox"/> Dropping out of school | <input type="checkbox"/> Drug abuse |
| <input type="checkbox"/> Lack of exercise | <input type="checkbox"/> Lack of maternity care |
| <input type="checkbox"/> Poor eating habits | <input type="checkbox"/> Not getting "shots" to prevent disease |
| <input type="checkbox"/> Racism | <input type="checkbox"/> Tobacco use |
| <input type="checkbox"/> Not using birth control | <input type="checkbox"/> Not using seat belts / child safety seats |
| <input type="checkbox"/> Unsafe sex | <input type="checkbox"/> Unsecured firearms |
| <input type="checkbox"/> <input type="text"/> | |

Please share additional comments regarding "RISKY BEHAVIORS" below:

Dental

Pacific County is currently engaging in learning more about Access to Baby and Child Dentistry (ABCD)

efforts to improve future access and quality of care from providers. Please answer the following prompts to the best of your experience/knowledge.

Please rate the statements below for baby and child dentistry

| | Not Satisfied | Somewhat Satisfied | Satisfied | Very Satisfied | Unsure/Not Applicable |
|---------------------------------------|---------------|--------------------|-----------|----------------|-----------------------|
| Accessibility to Dental Care Services | | | | | |
| Clarity of costs | | | | | |
| Quality of services received | | | | | |

Obesity

Based on findings from Behavioral Risk Factor Surveillance System (BRFSS) data over the previous 5 years, Pacific County is currently engaging in learning more about...

Please rate the statements below for...

| | Not Satisfied | Somewhat Satisfied | Satisfied | Very Satisfied | Unsure/Not Applicable |
|--|---------------|--------------------|-----------|----------------|-----------------------|
| Accessibility of healthy grocery options | | | | | |
| Costs of healthy grocery options | | | | | |
| Quality of grocery food options | | | | | |

Quality of Life

Read through the prompts below and select your level of satisfaction with each. If you're unsure about any answer you may skip that prompt and move onto the next one.

| | Strongly Disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree | Not Applicable/Unsure |
|--|-------------------|----------|----------------------------|-------|----------------|-----------------------|
| I am satisfied with the quality of life in our community. | | | | | | |
| I am satisfied with the health care system in our community. | | | | | | |

This community is a good place to raise children.

This community is a good place to grow old.

There is economic opportunity in this community.

This community is a safe place to live.

There are networks of support for individuals and families during times of stress and need.

All individuals and groups have the opportunity to contribute to and participate in the community's quality of life.

All residents perceive that they can make the community a better place to live. (Individually and collectively)

There are a broad variety of health services in the community.

There is a sufficient number of health and social services in the community.

Levels of mutual trust and respect are increasing among community partners.

There is an active sense of civic responsibility, engagement, and pride in shared accomplishments.

Please share additional comments regarding "QUALITY OF LIFE" below:

Please share additional comments regarding "OBESITY" below:

Conclusion

Leisure Physical Activity

Based on findings from Behavioral Risk Factor Surveillance System (BRFSS) data over the previous 5 years, Pacific County is currently engaging in learning more about...

Please rate the statements below for...

| Not Satisfied | Somewhat Satisfied | Satisfied | Very Satisfied | Unsure/Not Applicable |
|---------------|--------------------|-----------|----------------|-----------------------|
|---------------|--------------------|-----------|----------------|-----------------------|

Accessibility to nearby outdoor walking paths

Feelings of security/comfort while utilizing spaces

Quality of spaces/parks provided

Please list the greatest strengths of Pacific County's Public Health when addressing community health improvement in recent years.

Please list Pacific County Public Health's biggest areas for community health improvement moving forward.

Please select if you would like any of the following:

- A copy of the Community Health Improvement Plan (CHIP)
- A follow-up interview about responses recorded today via email
- A follow-up interview about responses recorded today via phone call

Email

example@example.com

Phone Number

Please enter a valid phone number.

Appendix B: Stakeholder's Survey

Pacific County Community Health Assessment

Please take a few moments to complete the short survey below. The purpose of this survey is to gather opinions about community health problems in Pacific County. Pacific County Health & Human Services (PCHHS) will use the results of this survey and other information to identify the most pressing problems which can be addressed through community action.

Name of individual completing this form *

First Name

Last Name

Name of Agency/Department *

Community Health: Areas of Concern

Please use the input table below to select what your agency/department believes are the least important (1) to most important (5) community health aspects moving forward. Spaces are provided below to expand on selections and include other priority areas for CHIP planning.

Community Health

This section will ask questions regarding what you believe to be the most important factors in each of the following categories. Answers are limited to 3 per section, so please consider your answers critically and provide additional details in the space provided below.

In the following list, what does YOUR AGENCY think are the three most important factors for a "Healthy Community"? (Factors which most improve the quality of life in a community)

- | | |
|--|--|
| <input type="checkbox"/> Good place to raise children | <input type="checkbox"/> Low crime / safe neighborhoods |
| <input type="checkbox"/> Low level of child abuse | <input type="checkbox"/> Good schools |
| <input type="checkbox"/> Access to health care (e.g., family doctor) | <input type="checkbox"/> Parks & recreation |
| <input type="checkbox"/> Clean environment | <input type="checkbox"/> Affordable housing |
| <input type="checkbox"/> Arts and cultural events | <input type="checkbox"/> Excellent race/ethnic relations |
| <input type="checkbox"/> Good jobs & healthy economy | <input type="checkbox"/> Strong family life |
| <input type="checkbox"/> Healthy behaviors & lifestyle | <input type="checkbox"/> Low adult death and disease rates |
| <input type="checkbox"/> Low infant deaths | <input type="checkbox"/> Religious or spiritual values |
| <input type="checkbox"/> Emergency preparedness | <input type="checkbox"/> <input type="text"/> |

Please share additional comments regarding "HEALTHY COMMUNITY FACTORS" below:

In the following list, what does YOUR AGENCY think are the three most important "health problems" in our community? (Those problems which have the greatest impact on overall community health)

- | | |
|---|---|
| <input type="checkbox"/> Aging problems (e.g. arthritis, hearing/vision loss, etc.) | <input type="checkbox"/> Cancers |
| <input type="checkbox"/> Child abuse / neglect | <input type="checkbox"/> Dental problems |
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> Domestic Violence |
| <input type="checkbox"/> Firearm-related injuries | <input type="checkbox"/> Heart disease and stroke |
| <input type="checkbox"/> High blood pressure | <input type="checkbox"/> HIV / AIDS |
| <input type="checkbox"/> Homicide | <input type="checkbox"/> Infant death |
| <input type="checkbox"/> Infectious disease (e.g. hepatitis, TB, COVID-19, etc.) | <input type="checkbox"/> Mental health problems |
| <input type="checkbox"/> Motor vehicle crash injuries | <input type="checkbox"/> Rape / sexual assault |
| <input type="checkbox"/> Respiratory / lung disease | <input type="checkbox"/> Sexually Transmitted Diseases (STDs) |
| <input type="checkbox"/> Suicide | <input type="checkbox"/> Unwanted pregnancy |
| <input type="checkbox"/> <input style="width: 100px; height: 15px;" type="text"/> | |

Please share additional comments regarding "HEALTH PROBLEMS" below:

In the following list, what does YOUR AGENCY think are the three most important "risky behaviors" in our community? (Those behaviors which have the greatest impact on overall community health)

- | | |
|---|--|
| <input type="checkbox"/> Alcohol abuse | <input type="checkbox"/> Being overweight |
| <input type="checkbox"/> Dropping out of school | <input type="checkbox"/> Drug abuse |
| <input type="checkbox"/> Lack of exercise | <input type="checkbox"/> Lack of maternity care |
| <input type="checkbox"/> Poor eating habits | <input type="checkbox"/> Not getting "shots" to prevent disease |
| <input type="checkbox"/> Racism | <input type="checkbox"/> Tobacco use |
| <input type="checkbox"/> Not using birth control | <input type="checkbox"/> Not using seat belts / child safety seats |
| <input type="checkbox"/> Unsafe sex | <input type="checkbox"/> Unsecured firearms |
| <input type="checkbox"/> <input style="width: 100px; height: 15px;" type="text"/> | |

Please share additional comments regarding "RISKY BEHAVIORS" below:

Additional comments regarding "Economic Stability" (Education, job opportunities, and income)

Please select the response in each of of the following categories your agency/department notes as important social determinants of health moving forward following the COVID-19 pandemic.

| | Least Important | Less Important | Important | More Important | Most Important | Not Applicable/Unsure |
|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Economic Stability | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Education Access & Quality | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Health Care Access and Quality | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Social and Community Context | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Neighborhood and Built
Environment



Additional comments regarding "Health Care Access and Quality" (Primary care, Specialty Care, Behavioral Health Services)

Additional comments regarding "Education Access and Quality" (Language and literacy skills)

Additional comments regarding "Neighborhood and Built Environment" (Housing, crime rates, access to safe air/water, safety risks, access to food)

Additional comments regarding "Social Community Context" (Relationships/interactions with family, friends, co-workers, and community)

Please add additional areas of concern not list below and any comments you might have regarding them.

What role do you believe you or your agency would play in the community health improvement plan's actions or objectives?

Please list the top challenges your population experiences that limits their ability to improve their health? (Up to three "top challenges")

Briefly describe a hypothetical county-wide public health initiative that would greatly improve your agency's ability to maximize its function. If funding or resources were available, where could they create the largest impact based on your perspective?

Potential Follow-Up Interviews and Focus Groups

Would you be willing to participate in a follow-up interview via email, phone call, or Zoom meeting (if selected/needed)?

- Yes
- No

Please select your preferred contact/interview method.

- Email
- Phone Call
- Video Conference
-

Email (For follow up contact, optional)

example@example.com

Phone Number (For follow up contact, optional)

Please enter a valid phone number.