

COVID-19 Care, Vashon Island

Preparing for hospitals exceeding capacity

Vashon Medical Reserve Corps (MRC)

April 3, 2020

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SUMMARY

Vashon-Maury Island (“Vashon Island”) has a population of 12,000 many of whom are at higher risk for COVID-19 infection because of age and co-morbid conditions. While the island does have two primary care clinics (NeighborCare, Vashon Natural Medicine) that provide primary care for about 40 percent of the island’s population, the island lacks an urgent care center, emergency room, and inpatient care facility. Vashon Island’s residents use hospitals and obtain specialty medical care located mostly in Seattle and Tacoma.

On the island, few clinicians (physicians, nurse practitioners, and physician assistants) are actively seeing patients; many are retired. Those with active licenses and seeing patients are not available to take on additional patient-care responsibilities. Few Vashon physicians are capable of providing care for adults needing critical care. The island has no anesthesiologists, recommended for intubations because of the high risk of viral transmission.

Given the lack of clinicians, the anticipated lack of other health care workers, and the lack of a facility with necessary supplies, the Vashon MRC recommends against establishing an on-island care facility for COVID-19 patients. Given that many potential Vashon COVID-19 patients may have more severe, multi-system disease (respiratory failure, heart failure, kidney failure), and that COVID patients can deteriorate over a few hours requiring intubation, we recommend that those patients unable to remain at home should be transported to facilities on the mainland where they are more likely to receive appropriate levels of care. Unstable and deteriorating patients with COVID-19 should not remain on Vashon Island.

Recommendations

The MRC recognizes that Vashon Island Fire & Rescue (VIFR) is monitoring available beds in mainland hospitals, and this should alert the Fire District to an emerging surge. While it is

unlikely that Vashon 9-1-1 calls will exceed local ambulance capacity, the MRC will collaborate with VIFR on a plan that supports VIFR staff should island demand exceed ambulance capacity.

We encourage all efforts to support patients in their homes to reduce demands on limited ambulance capacity, and on limited ER and hospital capacity. The MRC recommends an enhanced role for the island's 270-plus Neighborhood Emergency Response Organizations (NEROs): to distribute situation reports to their members, encourage social distancing and other preventive measures, monitor neighbors who require enhanced medical support, provide support for those who are isolated with COVID-19, meet by telephone or teleconferencing to discuss opportunities to support each other, and other "neighbors helping neighbors" activities. In all circumstances, such activities must be done using appropriate PPE.

The MRC will continue efforts to establish on-island testing, a strategy to reduce viral spread on the island by identifying those infected with the virus and tracking contacts. The MRC has established a PPE task force to help with obtaining and appropriately distributing PPE. The MRC's Community Care Team is now activated to address the mental and spiritual health of the Vashon Island Community.

Continuing a focus on prevention and stopping viral transmission are essential for all involved. As noted by Public Health for Seattle/King County, "Staying home and limiting contact with others is helping slow the spread of COVID-19, and those limits must continue in order to reduce the impact of the outbreak." ([link](#)). The Vashon MRC will also encourage [Stay Safe, Stay Home](#) behavior.

DISCUSSION

On January 21, the CDC reported the first case of COVID-19 infection in the United States: a patient living north of Seattle. ([link](#)) On February 29, the CDC and public health officials in the state of Washington reported three hospitalized patients with COVID-19, including one who died. ([link](#)) As the virus has spread into Puget Sound communities, there was growing concern that a surge of sick patients, including those in acute respiratory failure requiring ventilatory support, could overwhelm hospital capacity. ([link](#))

According to the UW's Institute for Health Metrics and Evaluations (IHME), an independent global health research center, current projections place a peak in critical care demand for Washington State at mid-April ([link](#)).

Vashon Island residents depend on mainland hospitals. Efforts are underway to expand hospital bed capacity to handle the anticipated influx of COVID patients. ([link](#))

CLINICAL ELEMENTS

COVID-19 may be asymptomatic. ([link](#)). When patients are symptomatic, they present with a spectrum of disease: mild, 81%; severe, 14%; and critical, 5%. ([link](#))

The time course of infection can vary, but a general timeline for people experience severe or fatal infections may appear as the following:

Day 0: Exposure

Day 4: Symptoms begin

Day 11: Shortness of breath (dyspnea)

Day 12: Acute Respiratory Distress Syndrome (ARDS)

Recovery time for severe illness: 3-6 weeks. ([link](#))

While we usually focus on the lungs, COVID-19 can impact many organs: heart, kidneys, gut, and brain. Heart failure is a common consequence of severe disease that compounds respiratory failure, often resulting in death. ([link](#))

Patients with COVID-19 can deteriorate over just a few hours ([cytokine storm](#)) requiring experienced medical staff for intubation and placing patients on ventilators. To avoid viral transmission, PPE and a high degree of vigilance are required. ([link](#)) In a recent report related to 138 confirmed COVID-19 cases, 41.3% were considered acquired infection from the hospital, and more than 70% of these patients were healthcare providers. ([link](#))

As hospitals fill up, and ICUs approach capacity, physicians will have to discharge patients from ERs and hospital wards who would normally remain, including those with pneumonia on supplemental oxygen. More patients will be discharged on oxygen and monitored at home to keep oxygen saturations above 92%. In New Orleans, one hospital has contracted with a company that sends a paramedic to a COVID patient's home twice daily to check on them and record oxygen levels using a pulse oximeter. While recognizing that some of these patients may have to return to the ER, it keeps hospital beds open for those who are in worse shape. (Personal communication from New Orleans ER physician, shared with VA ER physicians) Such a strategy may be problematic for Vashon residents because of longer transport times with increased risks.

CONCLUSION

The surge in COVID patients projected for April combined with the clinical realities of COVID-19 will require careful attention by Vashon Island residents and especially those involved with community support. Many Vashon Island residents are at higher risk of more severe disease. Medical care is not available on-island with more advanced COVID disease. However, if hospitals exceed capacity, care may also be limited off island. Continued efforts must be made to prevent on-island spread of the virus causing COVID-19, including social distancing, and careful monitoring of available hospital resources.