

COVID-19 Hospitalizations in Whatcom County

By **David A. Swanson** • On Apr 05, 2020

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[**Updated 4/6/2020:** From a friend in Kennewick, I discovered that a long-time hospital in Pasco (Franklin County) is still open, contrary to the data from the American Hospital Directory I found that showed no hospital in Franklin County. I checked the AHD again and found the hospital was listed but at a different site than the one I originally used that was for all hospitals in Washington but did not show any for Franklin County. The hospital was started by the Sisters of St. Joseph (sound familiar?) and originally named “Our Lady of Lourdes,” a designation it kept for many years. It is currently owned by RCCH/Capella, a corporation headquartered in Brentwood, TN (south of Nashville) and known as Lourdes Medical Center. In a letter dated August 8th 2018, The Washington Department of Health approved the corporation’s request to convert Lourdes from a non-profit to a for-profit facility.]

In this article, I combine information from four sources to get an idea of the number of hospitalizations we can expect in Whatcom County from the COVID-19 pandemic. The first source is in the form of the baseline COVID-19 surge peak forecast published by Northwest Citizen on March 30th. The second source is found in my reply to a comment by Steve Abell on the baseline forecast, namely that the average hospital stay of a COVID-19 patient is about four days. The third source is the COVID-19 forecast update published on April 3rd, and the fourth source comes from the state of Minnesota, which shows that 21 percent of all confirmed COVID-19 cases are hospitalized. Minnesota’s hospitalization rate is applicable to Washington State from the perspective of an important demographic indicator of COVID-19 hospitalizations - age structure. As of 2018, Minnesota’s median age is 37.4 years and Washington’s is 37.7.

As I go through this exercise, keep in mind that Whatcom County has 253 beds, all of which are at PeaceHealth St. Joseph Hospital.

The hospitalizations are discussed relative to April 25th, the expected date that the surge will peak in Whatcom County. Two caveats described earlier also apply here, namely that the rate of testing and the accuracy of the tests will remain the same.

First, I combine the information from Minnesota with the forecasted new “daily” cases expected under the baseline scenario for the four-day period, April 22nd-25th (respectively, 541, 627, 726, and 841 cases, which sum to 2,735). From this combination, **under the baseline scenario, we would expect a total of 574 COVID-19 cases needing hospital beds at the peak of the surge** (where $574 = 2,735 * .21$). St. Joe’s would be overwhelmed. Having 574 cases needing beds when only 253 are available is akin to what is happening in New York City right now, albeit on a smaller scale. Even if temporary beds were added (WWU’s Carver Gym?) to

accommodate this surge, staff and supplies would likely be already exhausted by the time the surge reaches its expected peak on April 25th.

Fortunately, the updated forecast suggests some relief. Under it, the forecasted new daily cases expected for the four-day period, April 22nd-25th, are, respectively, 215, 243, 274, and 310, which sum to 1,042 cases. From this number, **we can expect a total of 219 hospitalized COVID-19 cases under the updated scenario as the surge peaks** (where $219 = 1,042 * .21$). These results suggest that with “only” 219 cases needing beds and 253 available, staff and resources will be highly stressed, but not overwhelmed.

The 355 case reductions in hospitalizations suggested by the updated scenario underscores a statement I made in the update published on April 3rd. Small reductions in the rate early in the surge will lead to substantial reductions in case numbers by the time the surge reaches its peak. In this case, **the 2.47 percent reduction in the daily rate of change in positive cases between the dates when the baseline and the update were produced (March 29th and April 3rd), leads to a 62 percent reduction in the expected number of hospitalizations.**

Whatcom County is bordered by only three counties: Okanogan, San Juan and Skagit. This relative isolation from the rest of the state makes it highly probable that the vast majority of our hospitalizations will come from cases within the county itself (with maybe a few from San Juan County). Not many, if any, are likely to come from Skagit County because it has three hospitals with a total of 228 beds. And even though Okanogan County has no hospitals, the Cascade Mountains and the paucity of roads through them, effectively preclude the transfer of COVID-19 cases to Whatcom County.

This will not be the case in other counties. For example, there are no hospitals in Asotin, Garfield, and Columbia counties, all of which are to the east of Walla Walla in the far southeast corner of the state. Counting neither the state prison’s hospital nor the Veteran Administration’s hospital, Walla Walla has 97 hospital beds. In addition, Franklin County, which borders Walla Walla to the northwest has no hospital. Having four bordering/close-by counties lacking hospitals and a combined population of approximately 123,600 will likely generate high demand for the 97 beds in Walla Walla County.

Walla Walla County is not alone in facing the possibility of high demand for its resources from other counties. Only 18 of the state’s 39 counties have hospitals and, unlike Whatcom, many of them are bordered by one or more of the 21 counties that lack hospitals. Grant County is a case in point. It has one hospital with 48 beds and six of the nine counties that border it have no hospital. These examples suggest that the number and distribution of hospitals relative to the number and distribution of expected hospitalizations due to COVID-19 is a topic to be explored in more detail.