

How large is the actual COVID-19 impact?

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Leslie Hollywood, Guest Contributor to PURG

Dave Kisker, President, People United for Responsible Government

Since Colorado Governor Polis' press conference on March 26, 2020 when he announced his "Stay at Home" executive order that closed nearly all commerce in Colorado, there have been questions about the justification for his action. Media sources such as the Colorado Sun¹ and the Gazette.com have sought the release of information² about the mathematical models that have been used to justify this action, but have largely been met with resistance to the release of complete records. Even the report released³ on April 6, 2020 by the COVID-19 Modeling Group is incomplete in that numerous key pieces of information are missing, including any indication of the expected death toll as the COVID-19 progresses over the next few months.

Because of the lack of transparency, many citizens and members of the media have been closely scrutinizing the information that HAS been made public, especially that found in the daily reports from the COVID-19 task force which can be inspected at the website:

<https://covid19.colorado.gov/case-data>

The centerpiece of the policy decisions that have been made by Governor Polis has been the threat that COVID-19 poses to Colorado's health care system. In his March 26 press conference, Polis asserted that their modeling showed that between 11,000 and 33,000 Coloradans would likely die from COVID-19 by June 1, 2020. As we have recently reported⁴, this is in direct conflict to other publicly available models which show that the likely fatalities would be less than 2000, and, now, using the latest data, are projected to be less than 1000.

¹ "Colorado's governor says he is using data to guide the state's response to the coronavirus. But the numbers are incomplete", <https://coloradosun.com/2020/03/27/coronavirus-covid-epidemiology-curve-data/>

² "Polis administration charging \$1,290 for records that would inform public on emergency response to COVID-19", https://gazette.com/health/polis-administration-charging-1-290-for-records-that-would-inform-public-on-emergency-response-to/article_d4889894-835b-11ea-979d-1312b14079ad.html?fbclid=IwAR3FHJkh_30WdGzSs-ewMU224Df9X0uDFUMTUn3J0sl2wxCzVZmCD7auVms

³ "Projections of the COVID-19 epidemic in Colorado under different social distancing scenarios", <https://drive.google.com/file/d/19ST3tRnntUGV3h7YI0tQHJDnCoL5dRE7/view>

⁴ "What is Governor Polis Not Revealing about COVID-19 Modeling?", <https://weldpeopleunited.com/wp-content/uploads/2020/04/What-is-missing-in-the-COVID-19-story-for-Colorado.pdf>

The actual impact on Colorado's health care system has also been questioned. Although there is no doubt that COVID-19 is a serious disease, especially for the elderly, we also must ask what

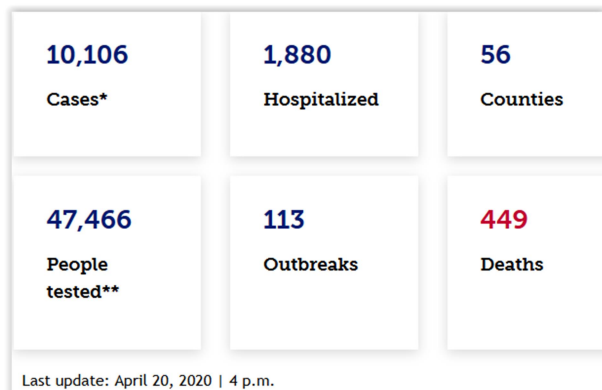


Figure 1. COVID-19 daily summary, 4/20/20

Statewide COVID-19 Hospital Data Snapshot (Last update on 4/20 - 2:41 p.m.)

Percent of facilities updating (within 24 hours)	82%
Number of patients currently hospitalized for confirmed COVID-19	861
Number of patients discharged/transferred within past the 24 hours	103
Number of facilities anticipating staff shortages (within the next week)	3
Number of facilities anticipating shortages of personal protective equipment (within the next week)	18
Facilities anticipating ICU bed shortages in the next week	2

Figure 2. Daily Hospital Data, 4/20/20

the impact on our hospitals has been to date. In his April 20, 2020 press conference, Polis again reminded us that we only have 2000 ICU beds available, although he had earlier announced⁵ plans to construct another 1000 ICU beds by May 1. In addition, thousands of additional hospital beds have been constructed at the Colorado Convention Center in Denver and at the Ranch in Loveland.

So, where do we stand?

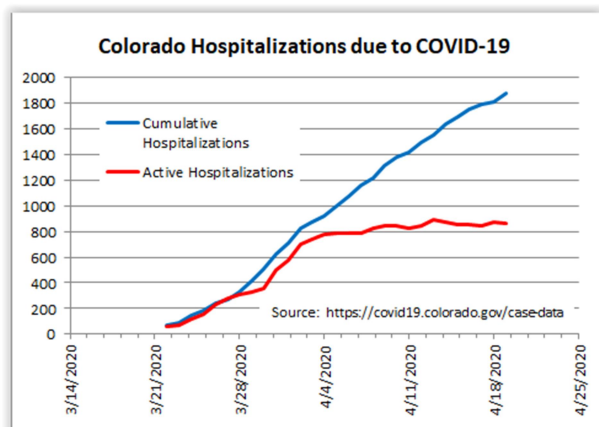


Figure 3. Hospitalization data for Colorado

daily basis, as shown in the graph below. However, this does not reflect the actual impact on

In the latest daily report from CDPHE, 1880 “hospitalizations” are reported (Figure1). This number is routinely used by both the media and the state to represent the disease progression. However, it’s critical to realize that this listing is actually the cumulative hospitalizations since the beginning of the pandemic.

As expected, the number of these reported “hospitalizations” has been increasing on a

⁵ “Without fast upgrades, Colorado hospitals will be overwhelmed by coronavirus patients, Polis warns” https://gazette.com/news/without-fast-upgrades-colorado-hospitals-will-be-overwhelmed-by-coronavirus-patients-polis-warns/article_378a68ae-7444-11ea-b4fd-c7e7f5d5b141.html

the Colorado health care system. Instead, the real impact is measured by the number of hospitalized patients at any particular time. Digging a bit deeper, we find that in fact, the actual hospital occupancy data (reported directly by the hospitals) indicates that so far, the COVID-19 impact has been far less than is implied by the cumulative hospitalization report. Instead, the current bed requirement for COVID-19 is 861 (reported at <https://covid19.colorado.gov/hospital-data>) (Figure 2)⁶. **Note that this is NOT the ICU demand, but the total current hospitalizations.** Furthermore, the demand has been essentially stable since April 4, 2020, several days before Polis' Stay at Home order expected to have impact on 4/12/20.

To provide perspective for this analysis, two additional pieces of information are needed. First, to assess the impact on Colorado's hospitals, the total number of available beds must be known. The best available information for this comes from the Colorado Hospital Association which reported about 22,000 beds available in a 2018 report⁷. **Thus, since April 4, 2020, the demand on Colorado hospitals has apparently been less than 5% of the available hospital beds.**

The second piece of information that is needed to assess the true impact of these 861 current hospitalizations is the fraction that need ICU care. The state of Colorado has not been releasing this information. However, in their report, the COVID-19 modeling group states that even for the most vulnerable patients, those older than 60, the fraction that require ICU care is estimated to be about 40% of the total number of hospitalizations⁸. **Assuming this worst case situation would mean that less than 360-400 ICU beds are currently occupied throughout Colorado, out of at least 2000 available.**

Additional scrutiny needs to be applied to the policy implementations that have occurred since mid March to determine what the true threat to the Colorado health care network actually has been and might be. While it's very clear that COVID-19 has the potential to be a serious threat, as has already been observed in certain senior care facilities, the citizens of Colorado need to understand the reality of this threat.

⁶ It should be noted that the number of beds occupied is likely undercounted since about 10% of hospitals did not report.

⁷ <https://pagetwo.completecolorado.com/2020/03/31/models-predicting-infection-hospitalization-death-rates-vastly-different-at-state-federal-level/>

⁸ Ibid.