Lumeris' COVID-19 Hospitalization Index
Predicting likelihood of hospitalization during the pandemic

Frequently Asked Questions (FAQs)

FAQ: Does the COVID-19 Hospitalization Index predict COVID-19?
No, the COVID-19 Hospitalization Index does not predict COVID-19. Instead, the Index identifies patients at high risk of hospitalization due to existing conditions, who are also at risk for severe disease and death due to coronavirus infection. Said another way, we are predicting who will get hospitalized and will get sicker with coronavirus. With this information, practitioners such as PCPs, pediatricians, nurses, social workers, etc., can be proactive and frequently outreach to the highest risk patients by phone or telehealth services to avoid the potential hospitalization.

FAQ: Users of Epic EHR already have a model built-in called the Deterioration Index. How is Lumeris' COVID-19 Hospitalization Index different?
The two algorithms are complementary and predict different things:
1. Epic's Deterioration Index predicts the likelihood of hospitalized patients to need escalated care (for example, from inpatient to ICU), so it applies when someone is already in the hospital and has a "high risk of deterioration" (https://www.statnews.com/2020/04/01/stanford-artificial-intelligence-coronavirus/).
2. Lumeris' COVID-19 Hospitalization Index predicts who will be hospitalized for non-institutionalized people who are currently at home and not hospitalized.

In short, Lumeris' algorithm is to be used to proactively identify high risk people to avoid the hospitalization in the first place; Epic's algorithm is to be used once someone is already hospitalized.

FAQ: Can the COVID-19 Hospitalization Index be used for both Adult and Pediatric populations? I'm asking because I see COPD as one of the conditions and that condition isn't prevalent in children unless they have asthma, a chronic lung infection or cystic fibrosis.
Yes, the algorithm was built and tested on people ages 0 to 114 years old. Since the percentage of children with COPD is much lower than with adults, in the vast majority of cases children will have a COPD score of zero.

FAQ: I noticed that the points for diabetics without complications is higher than the points for diabetics with complications. Is something awry?
This is difficult to interpret at face value, but it is actually by design. The explanation is that those two groups are not mutually exclusive. Almost all patients with a code signifying "diabetes with complications" also have a code signifying "diabetes without complications" at some point earlier during the observation year. The analytics seem to be identifying a type of disease progression, and those patients will get weight added from both classifications. Regardless, the way to think about it is, the points associated with "diabetes with complications" should be interpreted as extra risk over and above what they already had from having diabetes without complications.

FAQ: Can I use this predictive model with claims data?
Yes. The algorithm was built and tested with EHR data, but we also tested it with claims data and the performance is the same (accounting for claims lag).

FAQ: I noticed that in an earlier version that the Top 1% was defined as people with 400 points or higher but now the documentation says Top 1%. Do I need to change my algorithm?
No. In order to simplify deployment, the points were omitted for the Top 1% based on feedback we received from some clients, including clinicians. To simplify, once people are scored and ranked highest to lowest, we recommend engaging with the people who are in the Top 1% of the list (the number of points that this corresponds to will vary between organizations). If resources are unavailable to proactively engage with the Top 1%, it is ok to engage with fewer (just start at the top of the list and go down). Conversely, if you have resources to engage with more people, our scenario modeling shows that it may be beneficial to proactively engage with the Top 5%, and possibly even more if the proactive service is relatively inexpensive and/or particularly effective.

FAQ: How often are you updating the COVID-19 Hospitalization Index?
Since the medical knowledge about risk factors for severe disease and death due to coronavirus infection is growing daily, we have been scouring the medical literature including the CDC, medical journals, etc., and checking the analytics every few days. If you want to be updated as new analytics are published, either send an email to info@lumeris.com or Subscribe to updates at https://www.lumeris.com/covid-19-response-solution/.

Note: The COVID-19 Hospitalization Index and predictive analytics program and the information described herein is not intended or implied to be a substitute for professional medical advice, diagnosis or treatment.