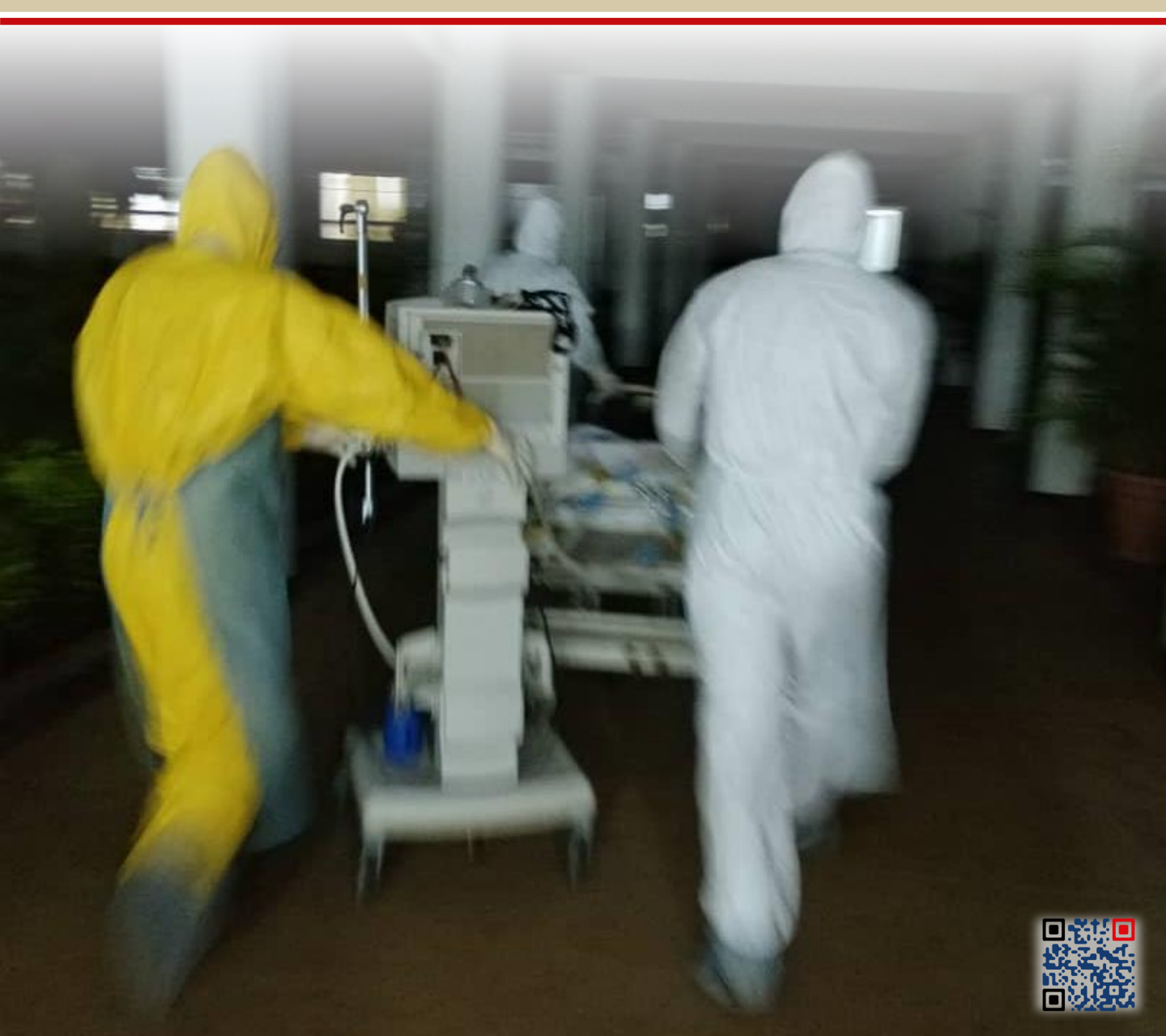


The Compass

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Case Report

A case of COVID-19 in the emergency department with Dr. Michael Shertz

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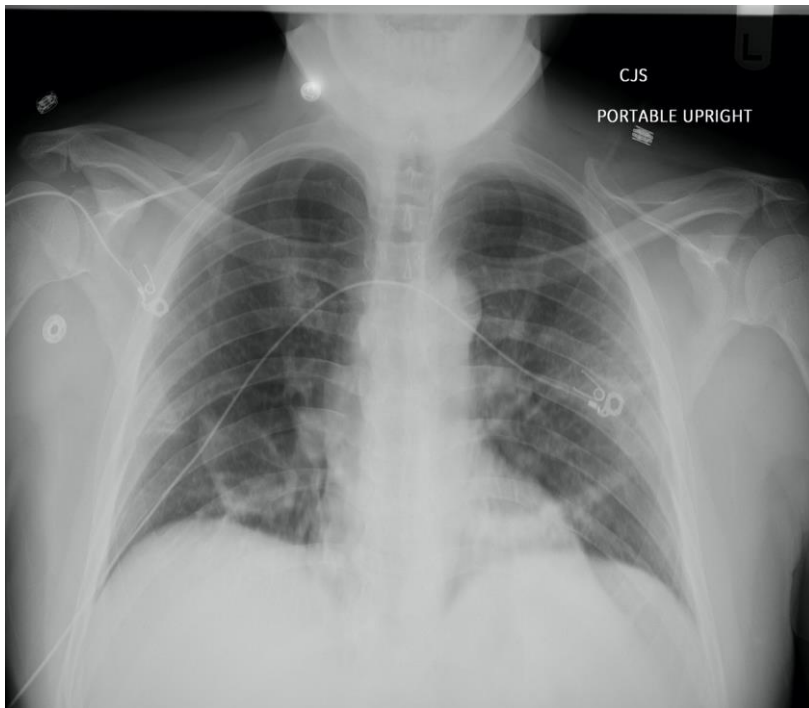
Dr. Michael Shertz
18D/MD, DTM&H

On April 5th a 55-year-old male with treated hypertension presented to the emergency department for one week of dry cough, shortness of breath “while talking”, body aches, and fever to 38.5 Celsius. He stated overall, he “felt good”, but didn’t think his symptoms were improving.

He was afebrile, but diaphoretic, mildly tachycardiac (110’s) and mildly tachypneic (high 20s) on arrival. He had very minor end expiratory wheezing on auscultation and an O₂ saturation of 92% on room air.

Differential for his symptoms included a viral upper respiratory infection with a reactive component, influenza as it was still present in the community and he didn’t undergo vaccination for it this season, pneumonia, and COVID-19. With his fever and body aches, noninfectious causes like congestive heart failure and pulmonary embolism seemed unlikely.

His complete blood count, basic metabolic panel, and venous lactate were baseline for him. His portable chest x-ray is shown.



His chest x ray shows patchy bilateral airspace abnormalities most prominent in the right lower lobe.

Despite albuterol MDI use in the ED, his minor wheezing persisted. He became a bit more tachypneic (28 – 30), but never had O₂ saturations below 90%.

Overall, it was felt that he likely had a viral pneumonia based on CXR findings. COVID-19 was presumed, but since it had limited penetration in the local community at that time and nearly 1/3 of viral appearing pneumonias on CXR ultimately have a bacterial cause he received 1 gm ceftriaxone and 500 mg azithromycin, both IV.

Because he was slowly worsening in the ED he was admitted to the hospital. During the five days of his admission he became hypoxic requiring nasal cannula oxygen, but ultimately improved. His COVID-19 testing was positive.



SARS-CoV-2 and its infection COVID-19 are currently responsible for a global pandemic. The last four pandemics of the last 100 years were 1918 Spanish Influenza-H1N1, 1957 H2N2 Influenza, 1968 H3N2 Influenza, and 2009 H1N1 Influenza.

Based on a retrospective review of 1099 Chinese patients with laboratory confirmed COVID-19 89% had fever, 68% dry cough, and 19% dyspnea.¹ Ultimately, 82% of those requiring hospitalization would require some oxygen support. Half required only nasal cannula oxygen. Unfortunately, 3% required intubation.²

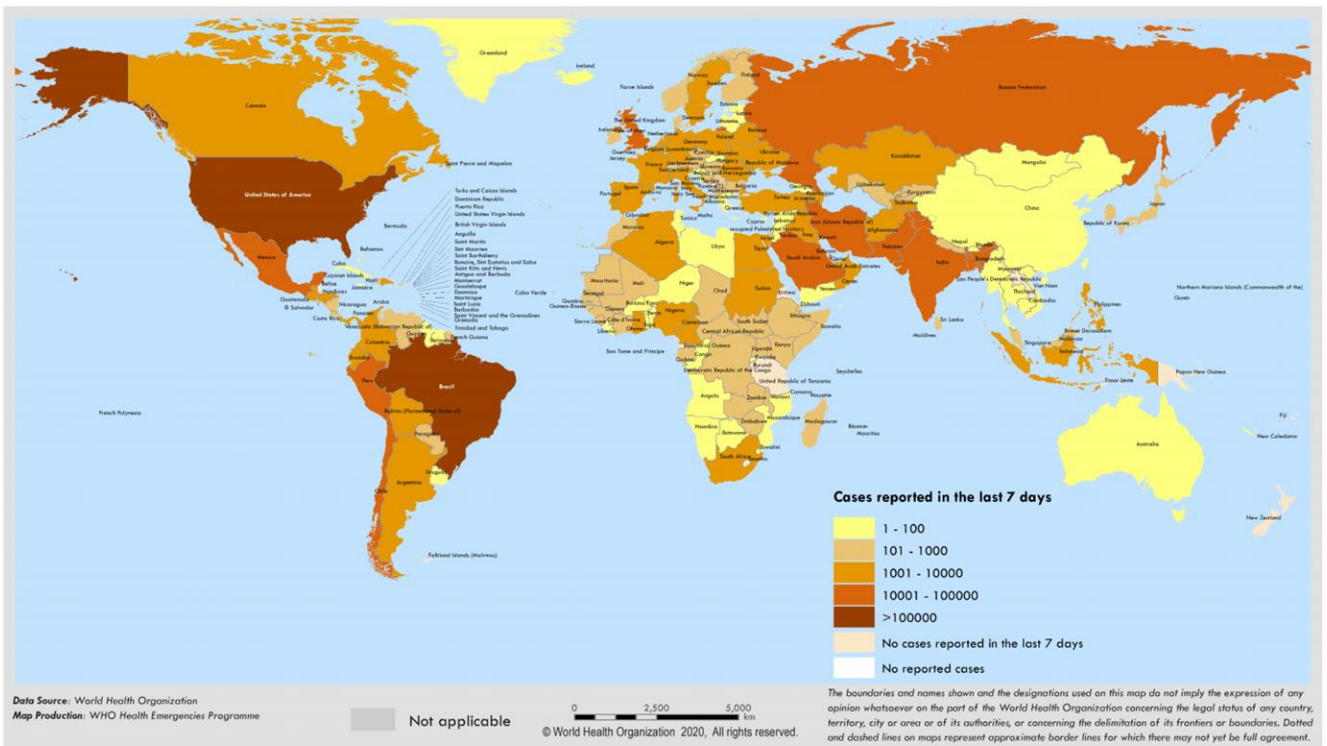
Generally speaking about 20% of symptomatic adults with COVID-19 will be ill enough to require hospitalization. One quarter of those will become critically ill requiring ICU admission. Survival rates of patients requiring intubation have been between 33 to 50% and they are generally intubated for a week which can lead to a shortages of ventilators.

At the time of this publication there are currently no well-studied treatments available that have shown an improvement in mortality. Multiple different medications are being researched and used in the hopes of improving the death rate of the infection which is generally 3 to 5%. Typical seasonal flu has a 0.1% mortality per the US CDC.

¹ Guan WJ, Ni ZY, et al. Clinical characteristics of corona virus disease in 2019. NEJM, 2020 FEB 28.

² Wu C, Chen X, et al. Risk factors associated with acute respiratory distress syndrome and death in patients with Corona virus disease 2019 in Wuhan, China. JAMA Internal Med. 2020 MAR 13.

Figure 1. Number of confirmed COVID-19 cases reported in the last seven days by country, territory or area, 25 May to 31 May**



**See Annex 1 for data, table and figure notes.

Figure 2. Number of confirmed COVID-19 cases, by date of report and WHO region, 30 December 2019 through 31 May 2020**

