It’s not just old people: obese young adults are ending up critically ill in hospital with Coronavirus

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Young adults are dying due to coronavirus where obesity may be their only risk factor.

Abstract

Accumulating evidence suggests that overweight and obese patients are becoming more critically ill due to COVID-19, compared to lean counterparts. The reasons are not clear. We must act now to address the “silent” pandemic of overweight and obesity in order to ensure everyone enjoys better health in the future.

While healthcare systems around the world respond to the unprecedented challenge presented by COVID-19, frontline clinician-researchers are doing their best to understand this new and poorly-understood disease. Australia has largely been spared as a result of community engagement with public health interventions. Due to this success local experience with the disease has been relatively limited. Evidence from overseas experiences are beginning to paint a clear picture of who is at risk of critical illness due to COVID-19.

Early evidence from China[1] suggested critical illness due to COVID-19 was more likely in the presence of common health conditions including hypertension, diabetes and cardiovascular disease. New evidence from the UK[2], China[3], France[4] and USA[5] suggest a possible link between obesity and more severe coronavirus disease. Weight appears to be an important risk factor for severe coronavirus disease, especially for young adults.

In the first study to link obesity to severe COVID-19 disease in 383 patients in China[3], the odds ratio (95% confidence intervals) for severe pneumonia in obesity was 5.70 (1.83 – 17.76) in men. In this retrospective cohort study from France describing 124 patients admitted to Intensive Care, the odds ratio for invasive mechanical ventilation (IMV) with body mass index (BMI) > 35 versus patients with BMI < 25 was 7.36 (1.63 – 33.14; p=0.02). In the first 383 patients admitted with COVID-19 to two New York hospitals, patients receiving IMV were more likely to be obese[5], consistent with other studies.

The data, while preliminary, indicate obesity may even be the second largest risk factor for severe COVID-19 disease, after older age. This may surprise young adults, as health messaging so far has importantly stressed older people and those with chronic disease as being more at risk from COVID-19.

This recent UK study[2] looked at more than 8,250 hospitalised critically ill COVID-19 patients across 252 hospitals. It showed more than 38% of adults presenting to hospital critically ill due to COVID-19 were obese. However only about 29% of UK adults are obese, so it appears that obese patients are over-represented amongst those critically ill due to COVID-19. This suggests an association between higher weight and more severe COVID-19 illness.

While some of the risk factors for COVID-19 infection and severe disease are not easily modifiable, such as male sex[6] or being a healthcare worker[7], some are. The COVID-19 pandemic has highlighted to all the need for governments around the world to address the “silent” pandemic[8] of non-communicable diseases such as overweight and obesity.

We must take action now to protect our communities and generate resilience against threats such as COVID-19 in the future. We can do this today by addressing the silent pandemic and ensuring that everyone enjoys better health.

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