



## Commentary

## Obesity during COVID-19: An underrated pandemic?

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Obesity trends have been consistently rising across the world: over the last 40 years, the number of men and women with obesity raised from nearly 100 to nearly 700 million, with an increasing impact in children and adolescents [1,2]. This global pandemic led to 5 million deaths due to high body mass index (BMI) in 2019, with cardiovascular diseases and type-2 diabetes as leading causes of deaths [3]. High BMI has also been associated to a higher risk of developing cancer [4]. If data on the impact of overweight and obesity on global health is not alarming enough, high body weight has been considered one of the main factors responsible for the variability of the outcomes related to COVID-19.

The prevalence of obesity among COVID-19 patients has been reported to be around 25%; however, it varied across countries, reaching up to 50% and more in studies including patients from US, Mexico, and UK [5]. Recent evidence suggests that patients with obesity are more likely to require hospitalization for COVID-19, they may suffer from more severe symptoms and have higher odds of being admitted in intensive care and undergoing invasive mechanical ventilation than patients without obesity, which may result in a higher risk of death [6]. The mechanisms responsible for greater COVID-19 severity in individuals with obesity remains largely unknown, even though metabolic dysfunction, immune impairment, and adipose tissue inflammation have been taken into account as potential etiopathological pathways [6]. Moreover, obesity has been linked to social disadvantage, smoking, age, and male gender, factors which may also concur in influencing the outcome of COVID-19 patients [7]. These findings are in agreement with a recently published study on patient-level data from the database of general practices in England, reporting that at a BMI of more than 23 kg/m<sup>2</sup>, BMI was linearly associated with increasing risk of severe COVID-19, leading to admissions to hospital and deaths not attributable to excess risks of related diseases [8].

The COVID-19 pandemic has been called a “syndemic” since influenced by concurrent pandemics, such as the non-communicable diseases pandemic (NCDs), with adverse effects exacerbated by disadvantaged social status [9]. Importantly, obesity should be included in this scenario, as it may act as a catalyst for some non-communicable diseases and it has probably been playing an underrated role in the COVID-19 syndemic [10]. Interventions at a population-level to achieve a healthier weight and improve diet quality represents key priorities for public health worldwide, also through efforts towards unified policies to regulate unhealthy food markets. While in different countries weight management and metabolic control services have implemented patients' remote management to ensure follow-up visits and medical consultations, current actions undertaken to counteract the obesity pandemic at a population level are quite scarce. The healthcare systems adaptation toward telemedicine and costs reduction may play an important role in supporting patients with chronic conditions, to have better access to the clinical practice service and ensure follow-up visits. However, large scale global interventions, such as food market regulation, food formulation and food taxation, are needed at a governmental level to implement policies in the public interest to counteract obesity.

## Declaration of Competing Interest

None to declare.

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