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## Commentary

## Younger Brazilians hit by COVID-19 – What are the implications?

Raphael Mendonça Guimarães, DSc PhD<sup>a,\*</sup>, Margareth Crisóstomo Portela, PhD<sup>a</sup>,  
Daniel Antunes Maciel Villela, PhD<sup>a</sup>, Gustavo Correa Matta, DSc<sup>a</sup>, Carlos Machado de  
Freitas, DSc<sup>a</sup>

<sup>a</sup> Fiocruz COVID-19 Observatory, Oswaldo Cruz Foundation, Brazil

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Since the beginning of 2021, there has been a significant acceleration in COVID-19 incidence and mortality in Brazil. By the first week of June, Brazil had reached almost 17 million cases and a little more than 472,000 deaths<sup>1</sup>. A notable demographic change has been observed within this period, in which young and middle-aged adults representing an increasing share of patients in wards and intensive care units (ICU)<sup>2</sup>. Hospitals' case mix has changed by replacing elderly patients, more likely to develop severe forms<sup>3</sup> due to pre-existing chronic conditions, to younger COVID-19 patients.

Fiocruz' COVID-19 Observatory has been following, since January, this process, which became known as the "youthening" of the pandemic<sup>4</sup>. The methodology involves a weekly analysis by age distribution and average age of hospitalized cases and deaths and the absolute and relative proportion of hospitalized patients and deaths due to COVID-19 by age groups. Cases are aggregated by epidemiological week, given the date of initial symptoms for COVID-19 confirmed cases. Since 2021's first epidemiological week (EW), the mean age of hospitalized patients and patients who died has gradually decreased. Concomitantly, the distribution of age gained a more significant dispersion over time among age groups, in a phenomenon that suggests a decompression of morbidity and mortality<sup>5</sup>. Usually, the variability in the age of patients and patients who die increases to reconcentrate later, but in younger groups (Figure 1). In turn, since EW18 (May 02<sup>nd</sup> – 08<sup>th</sup>), the median age of patients admitted to a hospital or ICU has been lower than 60 years. Among patients who died, median age is still slightly larger than 60 years, after having dropped 13 years throughout 2021<sup>6</sup>.

In a current complex context in the Brazilian COVID-19 pandemic, we underline two main factors that have contributed to

the change in the pandemic's dynamics. First, the entry and increased circulation of new variants of concern (VOC). Second, the end of the Emergency Aid for the poorest led less mobility reduction, since more people had to go to the streets, for work, income, and food. Also, COVID-19 vaccination began in Brazil immediately after the approval of the first vaccine by ANVISA on January 17<sup>th</sup>, 2021 and has already covered some priority groups – health workers, institutionalized people over 60 years of age or with disabilities, and the indigenous population living in tribes –, and, in part, the elderly. By the end of May, vaccination in the densely populated Brazilian cities had already reached most groups over 60 years of age, at least with the first dose<sup>7</sup>. Change in the pandemic also partially reflects the effectiveness of immunization, leading to a retraction in the contribution of long-lived older adults in COVID-19 cases and deaths in recent weeks.

The COVID-19 youthening phenomenon undoubtedly brings some different challenges in the ambiguity of what it expresses and implies.

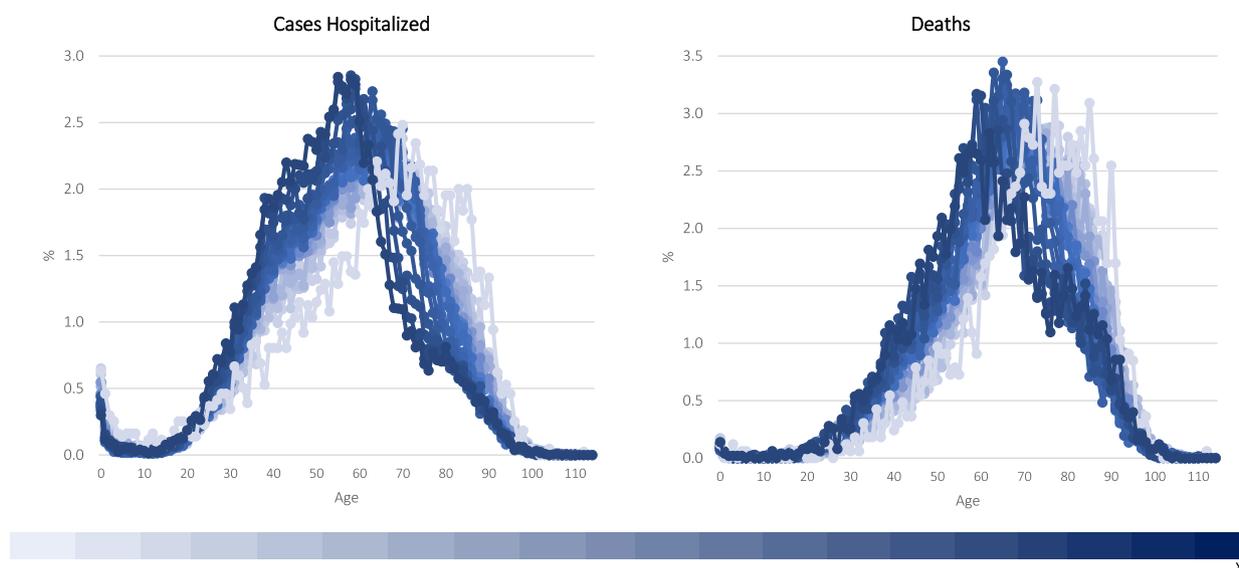
Once the older adults are mostly vaccinated, we expect that younger adults will gradually occupy more hospital wards and ICU beds. Although we recognize a higher prevalence of comorbidities among older adults<sup>8</sup>, many chronic diseases, such as hypertension and diabetes, have a high prevalence among those aged 40. Many adults in this age group might suffer from these diseases. However, they do not even have a diagnosis, since they often present an insidious course. They only discover these chronic conditions when hospitalized due to the acute – and severe – disease COVID-19.

COVID-19 cases among adults between 20 and 59 years that evolve severely and result in death have been regular. Still, this population is more likely to survive due to greater physical vigor or lower occurrence of comorbidities or better response to symptom treatments. As the healthcare system is already overloaded in many cities, an immediate implication is the growing COVID-19 hospitalizations' length of stay. This age group will likely be

\* Corresponding Author. Raphael Mendonça Guimarães, Oswaldo Cruz Foundation, Avenida Brasil, 4365 – Manguinho, Rio de Janeiro/RJ, Zipcode: 21041-960  
E-mail address: [raphael.guimaraes@fiocruz.br](mailto:raphael.guimaraes@fiocruz.br) (R.M. Guimarães).

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**Figure 1.** Proportional distribution of hospitalized cases and deaths due to COVID-19 in hospitalizations according to epidemiological week. Brazil, 2021  
<sup>†</sup>Epidemiologic Week #1/2021 (Jan 03<sup>rd</sup>-09<sup>th</sup>); <sup>‡</sup>Epidemiologic Week #20/2021 (May 16<sup>th</sup>-22<sup>th</sup>).  
**Source:** SIVEP-Gripe, 2021

highly affected by the occurrence of long COVID or post-COVID syndromes. Indeed, it can increase the burden of disease among young adults, chronically compromising their quality of life and their capacity for daily activities, including work. Also, most Brazilian younger people are under informal labor, and as such, they are more exposed to virus in infection crowded public transportations and lack access to good masks and social protection<sup>9</sup>. Moreover, we need to clarify the intersectional issues and analyze the impacts of race/ethnicity, gender and social class and evaluate different vulnerabilities and inequities in the Global South<sup>10</sup>.

The message is clear: we need to look to the young adults, especially the most vulnerable, engaging with them urgently. While the vaccination priority calendar does not include more young age groups, non-pharmaceutical public health measures continue to be essential. This recommendation must be made responsibly, guaranteeing the necessary social protection from government so that people can stay safe at home without compromising minimum subsistence conditions for now and in the future of this population.

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None

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#### Contributions

Raphael Guimarães contributed to the conceptualization, methodology, formal analysis, validation, writing and reviewing the final manuscript.

Margareth Portela contributed to the methodology, formal analysis, validation, writing and reviewing the final manuscript.

Daniel Villela contributed to the formal analysis, validation, writing and reviewing the final manuscript.

Gustavo Matta and Carlos Freitas contributed to the project administration, writing, and reviewing the final manuscript.

All authors read and approved the submission of the final version of this manuscript.

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