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## Post-COVID-19 syndrome: A call for continuity of multidisciplinary care



### Síndrome post-COVID-19: Un llamado a la continuidad de la atención multidisciplinaria

Dear Editor,

The pandemic caused by the new SARS-CoV2 was responsible for the death of more than 579,010 Brazilians and 4,470,969 people worldwide until August 28, 2021, despite the lack of adequate reporting of deaths in some countries. Additionally, thousands of people died without confirmed diagnosis of COVID-19, and part of the population still feels discouraged to seek hospital treatment due to precarious health care conditions and reduced access.<sup>1</sup> Besides impacts caused by mortality, the period of hospitalization due to the disease and complications four to twelve weeks (on average) after infection led to thousands of individuals with physical, functional, emotional, and cognitive impairments. This condition is called post-COVID-19 syndrome, persistent post-COVID-19 syndrome (PPCS), or long COVID.<sup>2,3</sup>

This syndrome represents a grey area of scientific knowledge regarding COVID-19. If, on the one hand, attention is given to prevention and elimination of the disease, on the other hand, thousands of people face its sequelae after overcoming the infectious phase. These people must also adapt to a ‘new health condition’, which may aggravate underlying chronic diseases.<sup>2,3</sup>

In this scenario, the World Health Organization created a guideline on how cities should include strategies for rehabilitation of these patients in the national emergency health planning for COVID-19. Thus, this letter to the editor aims to alert the scientific community, health managers, and society about the need for early screening and continuity of multidisciplinary care in post-COVID-19 syndrome, especially in patients with high risk factors for developing long COVID, such as those who required hospitalization.<sup>4</sup>

Although hospital discharge is a reason to celebrate, few services provide de-hospitalization or guidance regarding next steps and further health care. This generates a false expectation that everything has been overcome. To date, more than 50 different types of post-COVID-19 sequelae were already confirmed, despite mortality due to these sequelae when patients are not well managed or treated.<sup>3</sup>

Below, we propose an initial model to maintain a line of multidisciplinary care based on previous studies<sup>3-5</sup>:

1. Identify patients with higher risk factors for developing post-COVID-19 syndrome. Priority should be directed to patients who were hospitalized in intensive care units or had prolonged hospital length of stay;
2. Clinical, functional, nutritional, and psychological check-up before hospital discharge, guidance for reassessment within the first 30 days after discharge, and periodic reassessments at least in the first year;
3. Create public and private reference services for rehabilitation of these patients (whether individual or group face-to-face care), home care, or teleconsultation/telerehabilitation, and refer patients to these locations at hospital discharge;
4. Implement screening and treatment for all levels of health care.

Continuity of care, especially rehabilitation, is essential and urgent for individuals with post-COVID-19 syndrome. In the same way that an international task force rapidly searched for disease prevention, the time has come to join efforts to mitigate sequelae and restore functionality and quality of life of those affected.

### Authors' contributions

Conceptualization, methodology, formal analysis, writing-review: Bárbara R.A.F Barros-Leite and Lívia Barboza de Andrade. All authors have read and agreed to the published version of the manuscript.

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### Conflicts of interest

The authors declare no conflict of interest.

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## Drug abuse as a cause for ICU admission in Spain<sup>☆</sup>



### Las drogas de abuso como causa de ingreso en las unidades de cuidados intensivos en España

Dear Editor,

We read the article written by Socías Mir et al. where they analyze the time-line of admissions due to intoxications in Spanish intensive care units (ICU).<sup>1</sup> It is surprising to see that there are several drugs among the top 10 most common toxic drugs available (except for ethanol, and benzodiazepines) from 2002 through 2006, a period that amounts to 26.7% of the cases reported (cocaine, 9% of the cases; opioid analogues, 9%; heroin, 5%, and methadone, 3%). Also, that such prevalence has been reduced to less than half (13.2%) during the period from 2013 to 2014 with a change in the representation of the most prevalent drugs (opioid analogues, 6%; *cannabis*, 4%, and cocaine, 4%). Although in a small percentage, it is also surprising to see the presence of *cannabis* as the drug that triggered the ICU admission during the second period—which is probably associated with its progressive increase of agonist power on the CB1 and CB2 receptors—its greater consumption prevalence, and more side effects associated.<sup>2</sup>

Given that the emergency medical services (EMS) are a good medical resource from which to monitor these changes since most patients with drug-related clinically relevant adverse events seek medical care in these services,<sup>2,3</sup> we would like to comment on 2 multicenter registries we participated in where patients intoxicated with drugs were prospectively included.

Two Spanish hospitals (Hospital Clínic de Barcelona, Catalonia, Spain, and Hospital Son Espases de Palma de Mallorca, Spain) participate in the European EuroDEN-Plus network.<sup>4</sup> From 2014 to 2018, a total of 43 633 cases were reported out of which 2982 came from these centers. A total of 61 patients (2.0%) were admitted to the ICU setting and 13 patients died (0.44%). On the other hand, the REDUrHE is a Spanish network of 11 EMSs from 6 different autonomous communities that reported on 4526 patients who sought medical attention due to drug-related emergency cases between 2017 and 2019,<sup>3</sup> 90 (2.0%) out of whom were admitted to the ICU, and 12 (0.27%) died at the hospital. Table 1 includes the drugs involved both in the cases of ICU admission and in the deaths reported. Also, the relative frequency with which each drug triggered these situations reported. As Socías Mir et al. indicate<sup>1</sup> the mortality rate reported is very high (although it drops down to 6.06% in the 2013-2014 period), which means that, with the obvious limitations, the mortality rate of patients admitted to the ICU setting due to drug intoxications is much lower compared to the mortality rate reported due to intoxications.

On the other hand, regarding the observation conducted by Socías, Mir et al. on the probable presence of dangerous consumption patterns like ethanol, our group found that, in the REDUrHE registry, in 3925 patients in whom ethylic alcohol consumption was reported with co-intake in 58.3% of the cases, such co-intake did not impact the need for ICU admission (OH<sup>+</sup>, 2.2 vs OH<sup>-</sup>, 1.9%; OR, 1.103; 95%CI, 0.688–1.770).<sup>5</sup>

In conclusion, it is uncommon that patients assisted by the EMS due to drug-related adverse events will also need ICU admission and, when that is the case, the mortality rate is low.

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