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## The challenge of an intensive care unit in a fairground<sup>☆</sup>

### El reto de una unidad de cuidados intensivos en un recinto ferial

To the Editor,

The SARS-CoV-2 pandemic that causes COVID-19<sup>1</sup> has become a challenge for the entire healthcare system and other contexts. The rapid growth in the number of cases that require healthcare, hospitalization, and intensive care has led to implementing unparalleled contingency plans<sup>2</sup> in the history of intensive medicine in our setting; the number of ICU beds has grown exponentially in hospitals and multiple areas have changed dramatically to accommodate these beds. Given the exceptional situation lived in Madrid, Spain 2 huge pavilions were opened in a local fairground as dedicated hospitals with 1250 beds and a 16-bed ICU with possibility to increase the number of beds—the so-called «COVID-19 IFEMA Hospital». In barely 24 h, in March 22nd, another interim resource was opened in another pavilion to alleviate pressure on conventional hospitals. At the same time, sectorization, logistics, computing, pharmacy, laboratory, medicinal gases canalization, etc. were set up in the «definitive» hospital that would start receiving patients 4 days later.

Setting up such a huge hospital like this one in such short notice was an enormous challenge as well as the initial selection of patients who needed hospitalization but whose condition was less serious and who were not multi-pathological. Still, both challenges were met, and healthcare was provided with good results. However, the gradual increase of complexity and the inevitable fact that the clinical condition of a percentage of patients would eventually deteriorate required ICU resources 5 days later.

The ICU requirements regarding infrastructure and central services are much more complex compared to conventional hospitalization. The ICU staff needs to work with standardized criteria and protocols beyond the general protocol for the management of COVID-19. Issues as common in the ICU setting as standard perfusions, artificial nutrition protocols, additional tests, procedures to prevent nosocomial infections, Zero projects,<sup>3,4</sup> etc. need to be well-defined so critically ill patients can be treated while all safety measures are being observed. With this premise in mind, the possibility of creating or expanding an ICU in the add-on pavilion of a large hospital has numerous advantages. On the other hand, having an ICU with expert personnel available in this 1250-bed center, though an enormous challenge, makes intensivists physically available on location and avoids secondary transfers of patients who remain in critical condition.

The first medical equipment was transferred to the ICU by the Spanish Air Force Air Medical Unit of Assistance to the City of Madrid and it was complemented with donations and resources from other centers (ventilators, screens, anesthesia machines, hemofilters, etc.). The multiplicity of different devices requires special dedication by the health team, which translates into hours of training and rounds of adapted safety.<sup>5</sup>

The collapse of hospital-based intensive medicine services made it impossible to only have intensivists as the health personnel available. Two intensivists were relocated in this ICU full-time and teamed-up with other intensivists, anesthesiologists, and cardiologists who worked part-time with a mixed on-call system. The nursing team included mostly volunteers with ICU experience and other non-ICU nurses in rotation shifts plus military nurses and troops from the Spanish Air Force Air Medical Unit of Assistance to the City of Madrid.

Bedside blood tests were drawn, and microbiological analyses were conducted at the *Hospital Universitario La Paz* (8 km away from the pavilion) through a scheduled periodic transportation system of the samples collected. Also, we had ultrasound machines available and a service of radio-diagnosis with simple x-rays and CT scans.

Working in this healthcare setting requires a capacity for adaptation and teamwork. Thanks to the job done, a large number of patients had the invaluable opportunity of receiving treatment in these pavilions.

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## Post-intensive care syndrome after SARS-CoV-2 pandemic<sup>☆</sup>

### Síndrome post-cuidados intensivos después de la pandemia por SARS-CoV-2

Sir,

The worldwide SARS-CoV-2 pandemic is taking health systems to the edge of collapse and Intensive Care Units (ICUs) to work burdens that exceed their capacity. In the first wave of the pandemic, maximum priority has focused on keeping mortality as low as possible, and in this regard critical care has become a crucial factor.

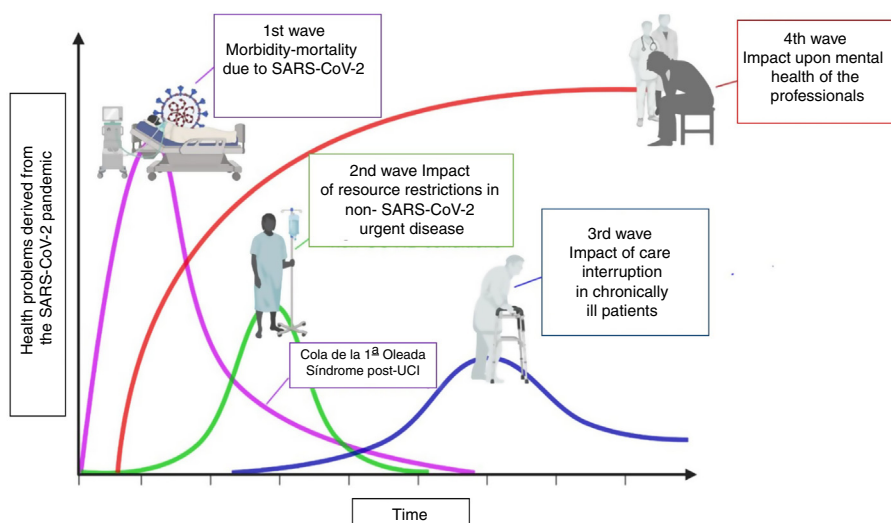
However, the future of the SARS-CoV-2 pandemic comprises different horizons: a second wave is to be expected because of resource restrictions in relation to non-SARS-CoV-2 urgent disease conditions, with a rise in mortality due to a saturated system.<sup>1</sup> Likewise, although reasonably not on an immediate basis, the pandemic will have an impact upon our more chronic patients, who have suffered a decrease in their quality of care during this situation. Lastly,

significantly higher levels of exhaustion, psychological problems and posttraumatic stress are to be expected among our professionals,<sup>2</sup> with the consequent impact upon work performance (Fig. 1).<sup>3</sup>

In this general scenario, the Departments of Intensive Care Medicine must stay alert to identify the “tail of the first wave”, which will comprise a post-intensive care syndrome (PICS) of great magnitude and with special features.

Although the magnitude of the PICS in numerical terms cannot be predicted at this time, it undoubtedly will be large. Under normal circumstances, PICS affects 30–50% of our patients,<sup>4</sup> and its sequelae may persist even beyond 5 years after hospital discharge, particularly in the case of patients recovering from acute respiratory syndrome.<sup>5</sup>

It is reasonable to assume that the characteristics of post-SARS-Cov-2 PICS will have a special affective component. In this context, family-PICS will be of specific relevance. On a daily basis, our “COVID hospitals” are witnessing the way in which the pandemic is causing important family ruptures, impeding adequate care of the ill relative, and with atypical situations of grief and burial of the victims. If other condi-



**Figure 1** Graphic representation of the possible time horizons as a result of the SARS-CoV-2 pandemic. Reproduced with permission from Tseng V<sup>3</sup>.

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