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### Letter

# The pandemic in French intensive care units

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In response to Annane et al. [1], we aim to clarify the French organisation of intensive care units (ICU) during the COVID-19 pandemic. There are around 5400 ICU beds in France. However, 5954 specialised critical care and 8217 intermediate care unit beds must be added, resulting in 19,571 beds [2]. The question is whether this number is sufficient to manage the patients during the pandemic. Indeed, the poor accessibility of ICUs has been associated with a higher proportion of COVID-19 deaths [3]. Transforming intermediate care unit beds into ICU beds, designed as temporary ICUs, was an efficient response to the sharp increase of needs. In France, no significant association was found between ICU bed capacity and mortality related to COVID-19 [4].

French anaesthesiologists acquired the intensive care medicine speciality by a minimum two-year ICU training during their residency. Hence, 473 anaesthesiologists are trained yearly and 50% of them will keep an activity in ICU. Those working in the operating rooms can expand the number of ICU physicians during sanitary crisis. Of course, the permanent and temporary ICU staffs should work hand-in-hand to optimise the efficiency of this system [5].

We agree with the authors that the geographical distribution of the ICU beds is unequal, with a deficit in some rural and overseas territories. There is also an imperative need to increase ICU nursing staff. Beyond the pandemic, a real policy of recruitment, training, and development of ICU nurses should be developed.

### **Author contributions**

All authors have contributed equally to the design, conduct, interpretation, and writing of this letter. HB, as the president of the French

Society of Anaesthesiology and Intensive Care Medicine, is responsible for the dissemination of this information and submission to the Journal.

#### **Declaration of interests**

The authors have no conflict of interest to disclose in relation to the manuscript.

ML received fees from Aspen, MSD for lectures and Amomed, Gilead for consulting.

HB is President of the French Society of Anaesthesiology and Intensive Care Medicine.

LD is Vice-President of the French Society of Anaesthesiology and Intensive Care Medicine.

ML is Vice-General Secretary of the French Society of Anaesthesiology and Intensive Care Medicine.

### References

- Annane D, Federici L, Chagnon JL, et al. Intensive care units, the Achilles heel of France in the COVID-19 battle. Lancet Reg Health 2021 March;2:100046. doi: 10.1016/j.lanepe.2021.100046.
- https://drees.solidarites-sante.gouv.fr/article/nombre-de-lits-de-reanimation-desoins-intensifs-et-de-soins-continus-en-france-fin-2013-et
- [3] Bauer J, Brüggmann D, Klingelhöfer D, et al. Access to intensive care in 14 European countries: a spatial analysis of intensive care need and capacity in the light of COVID-19. Intensive Care Med 2020;46:2026–34.
- [4] Gaudart J, Landier J, Hulart L, et al. Factors associated with the spatial heterogeneity of the first wave of COVID-19 in France: a nationwide geo-epidemiological study. Lancet Public Health; 2021 February 5. doi: 10.1016/S2468-2667(21)00006-2.
- [5] Lefrant JY, Fischer MO, Potier H, et al. A national healthcare response to intensive care bed requirements during the COVID-19 outbreak in France. Anaesth Crit Care Pain Med 2020;39:709–15. doi: 10.1016/j.accpm.2020.09.007.

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