

# Burden of the Disease and Management in COVID-19 Hospitalized Patients in MSO and Home Care in France: COVID-Hosp Study (2020-2022)



EPH178

Poster presented at ISPOR, November 12-15, 2023

Pozzar M<sup>1</sup>, Petrica N<sup>1</sup>, Ben Romdhane H<sup>2</sup>, Fiévez S<sup>2</sup>, Crépey P<sup>3</sup>, Mongazon-Cazavet M<sup>2</sup>

<sup>1</sup>Alira Health, Paris, France, <sup>2</sup>Pfizer SAS France, Paris, France,

<sup>3</sup>EHESP, Université de Rennes, CNRS, IEP Rennes, Arènes - UMR 6051, RSMS - Inserm U 1309, Rennes, France



## OBJECTIVES

COVID-19 is an acute viral disease, which can be life-threatening, mainly in its severe form, due to complications. It is a major public health problem of worldwide scope because of its contagiousness, severity, and impact on the organization of the health system, particularly in hospitals and intensive care units.

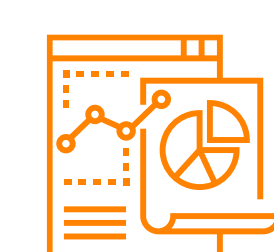
This study aims to assess the burden of this disease and its management in medical, surgical and obstetrics (MSO) and home care (HC) hospitalizations for COVID-19 in France (2020-2022) by patients' risk status and epidemic waves.



## METHODOLOGY

This is a retrospective study based on French national hospital discharge database (PMSI). All patients hospitalized for COVID-19 (MSO or HAD) were identified between 2020 and 2022. High-risk patients (HRP) were defined according to the French HTA methodology<sup>1</sup>.

The disease management includes either an emergency entry or a planned hospitalization (without emergency entry), the admissions in conventional hospitalization (CV), intensive care unit (ICU) and the use of mechanical ventilation (MV) during the hospitalization. A follow-up care and rehabilitation (SSR) or a HC hospitalization after an MSO hospitalization is also studied. Mortality is based on in-hospital deaths. Epidemic waves were defined according to the incidence peak observed<sup>2</sup>.



## RESULTS

Overall, 800,093 admissions for COVID-19 (97% MSO) and 674,376 unique patients were recorded. In MSO, a peak occurred in 2021 (300,813), followed by a decrease of 27% in 2022. The peak in HC hospitalizations was observed in 2020 (14,117), followed by a decrease of 40% per year. (Figure 1)

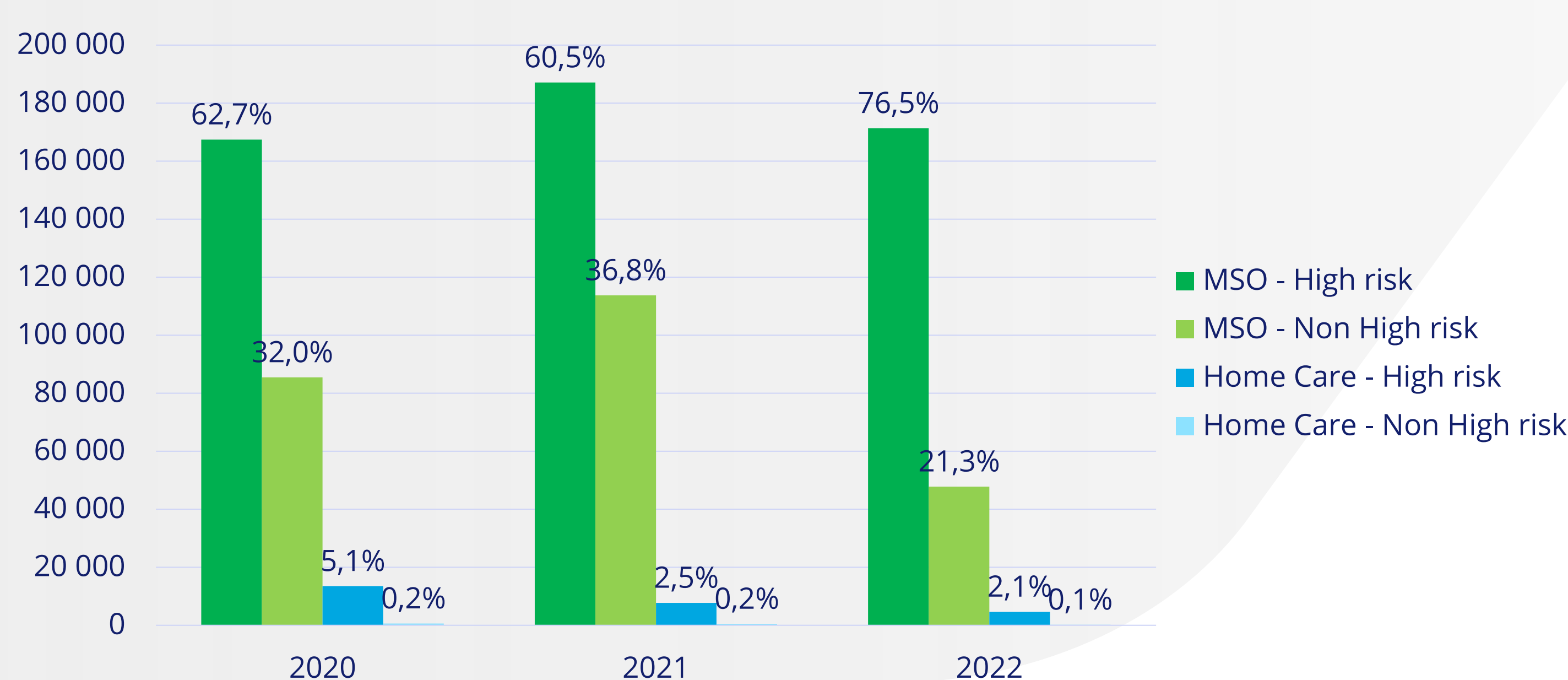


Figure 1 - Number of hospitalizations in MSO or HAD for COVID-19 - 2020-2022

Among MSO hospitalizations, the proportion of hospitalizations of HRP was high, and varied somewhat according to the year studied. Conversely, among HC hospitalizations, the proportion of HRP remains constant over time and was very high. (Figure 1)

The most observed HRP sub-group was the elderly patients (65+). (Figure 3)

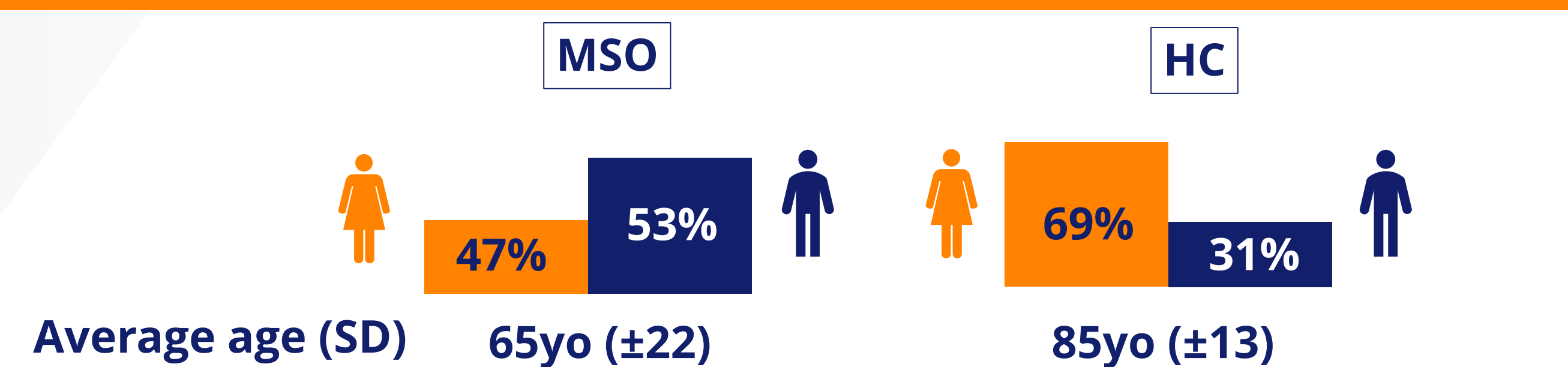
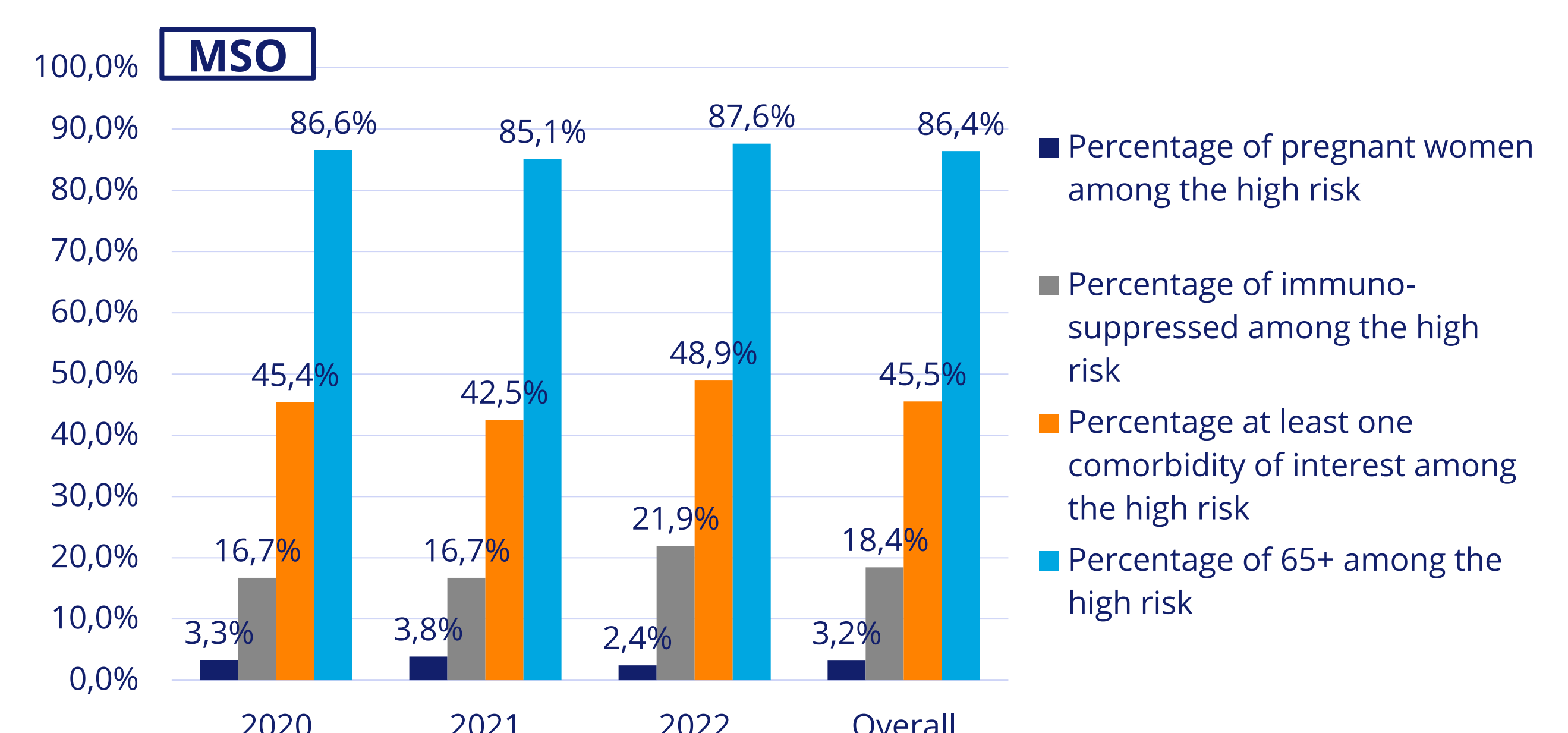


Figure 2 - Patient characteristics by type of hospitalization



Similar proportions were observed for HC hospitalizations.

Figure 3 - Percentage of sub-groups among HRP

## Disease management

Among MSO hospitalizations 17% were managed in ICU, including 40.3% with MV. The proportions were similar in the HRP sub-groups. Death proportion was 9.7% after CV, 33.1% after MV and 20.4% after HC, and was systematically higher in HRP sub-groups (results not presented here).

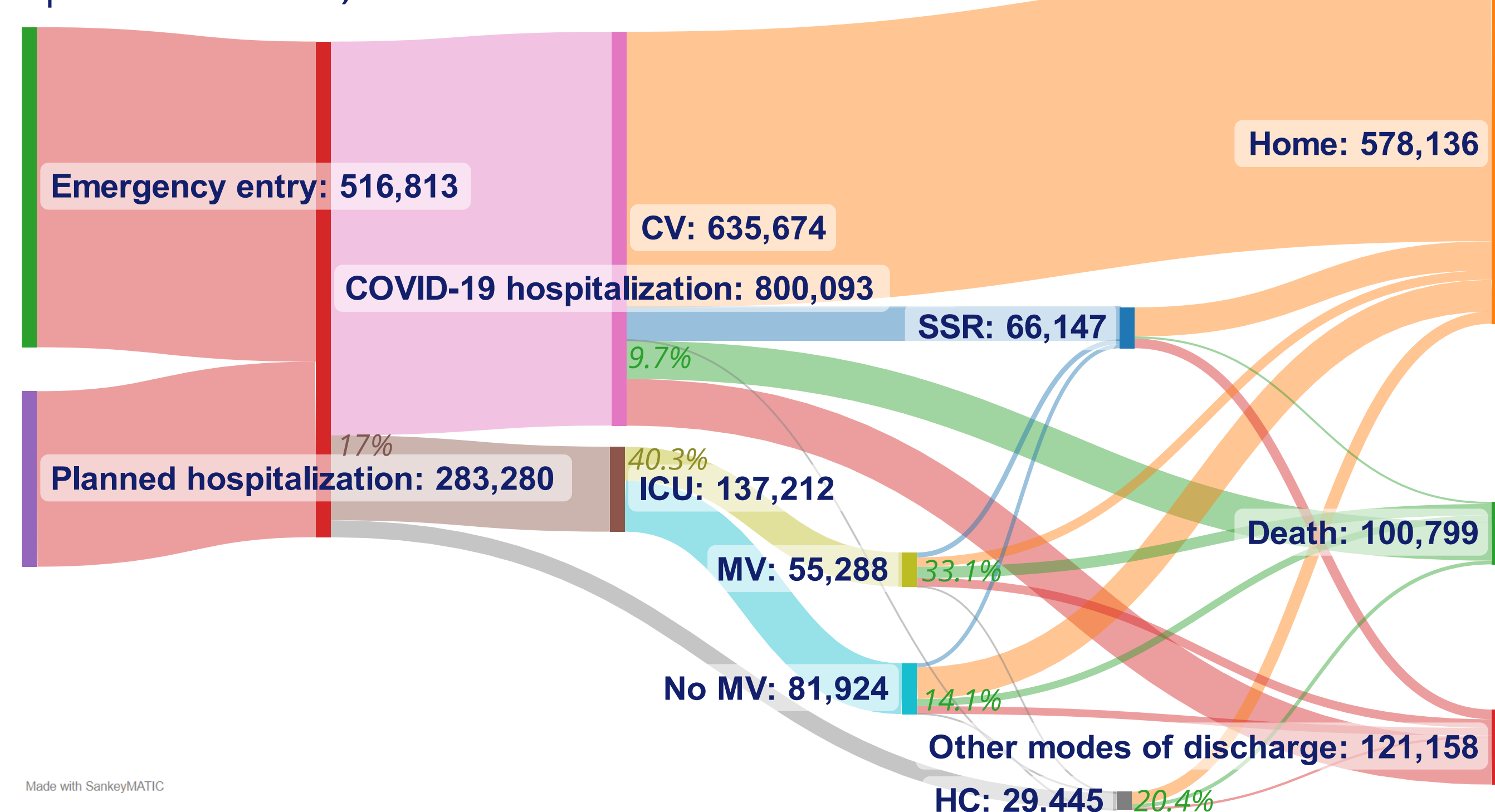
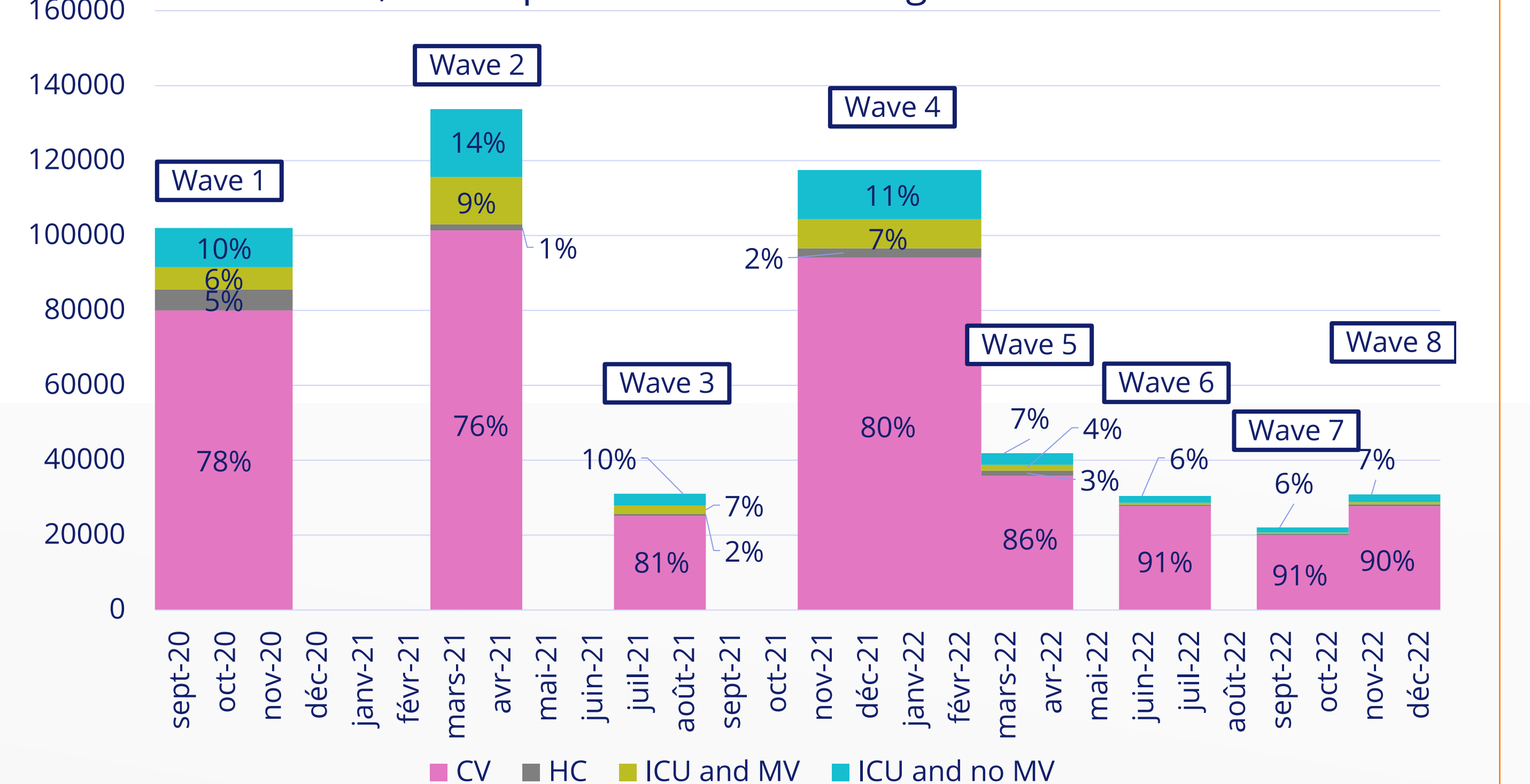


Figure 4 - Disease management pattern of COVID-19 - 2020-2022

## Epidemic waves

The most important epidemic wave (alpha variant) was observed between March-April 2021 (132,104 hospitalizations). The first four waves recorded the highest proportions of hospitalizations with ICU and use of MV, with a peak observed during the second wave.



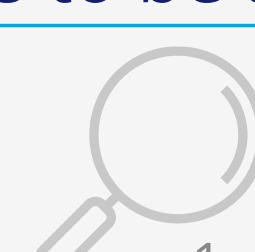
Note: Heights and widths of bars stand for numbers of hospitalizations during the wave and duration of the wave, respectively

Figure 5 - Hospital management (MSO and HC) of COVID-19 by epidemic waves



## CONCLUSION

This study provided a national understanding of the clinical burden of COVID-19 in the French hospital system, which were congested during the crisis. Hospitalizations with ICU represented 17% of hospitalizations for COVID-19. Mortality ranged from 9.7% (CV) to 33.1% (MV) depending on disease management. It should be noted that HC use declines over time, reinforcing the idea that conventional hospital care was under strain at the beginning of the epidemic (as evidenced by the estimated volume of surgical deprogramming in 2020 - 1 million operations<sup>3</sup>), and that HC offered an alternative form of care, as suggested by government recommendations<sup>4</sup>. Nearly 80% of patients hospitalized for COVID-19 in 2020-2022 were discharged at home. Hospital economic burden and the role of vaccination on this burden remains to be assessed.



## REFERENCES

- HAS, Stratégie de vaccination contre la Covid-19 - Anticipation des campagnes de vaccination en 2023 : [https://www.has-sante.fr/upload/docs/application/pdf/2023-02/recommandation\\_vaccinale\\_anticipation\\_des\\_campagnes\\_de\\_vaccination\\_2023.pdf](https://www.has-sante.fr/upload/docs/application/pdf/2023-02/recommandation_vaccinale_anticipation_des_campagnes_de_vaccination_2023.pdf)
- Santé Publique France. InfoCovidFrance- Chiffre clés et évolution de la COVID 19 en France et dans le Monde. Available from: <https://www.santepubliquefrance.fr/dossiers/coronavirus-covid-19/coronavirus-chiffres-cles-et-evolution-de-la-covid-19-en-france-et-dans-le-monde>
- Rapport Charges et produits (Juillet 2022). [https://assurance-maladie.ameli.fr/sites/default/files/2022-07\\_rapport-propositions-pour-2023\\_assurance-maladie\\_5.pdf](https://assurance-maladie.ameli.fr/sites/default/files/2022-07_rapport-propositions-pour-2023_assurance-maladie_5.pdf)
- Ministère de la santé - PRISE EN CHARGE EN HOSPITALISATION A DOMICILE (HAD). <https://sante.gouv.fr/IMG/pdf/priese-en-charge-had-covid-19.pdf>