



In-hospital mortality rates in older COVID-19 inpatients : literature review at the end of spring 2020

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Introduction

- Little was known in spring 2020 about in-hospital mortality (IHM) rates of older inpatients with COVID-19.
- A valid IHM rate calculation requires a cohort with complete follow-up of patients until hospital discharge.
- The aim of this study was **to describe IHM rates in older patients (≥ 65 years) with COVID-19**.

Conclusion

- ❖ Up to mid-June 2020, **only four COVID-19 cohort studies** including older patients have reported the vital status of all patients at hospital discharge.
- ❖ The average **IHM rate** was **high** (35 %).
- ❖ **Completed cohorts are needed to determine the intra-hospital mortality rate** in the older population, in particular in the patients aged above 75 years in whom the majority of COVID-19 related hospital deaths occur.

Methods

- **Medical literature search** up to June 17, 2020 for cohort studies including hospitalized older patients (≥ 65 years of age) with COVID-19.
- Main **endpoint** : patient's vital status (death or alive) upon hospital discharge.

Results

Up to June 17, 2020, twenty cohort studies of older COVID-19 inpatients reported the vital status, most of which at a certain hospital date (censoring bias).

Four cohort studies completed the hospital follow-up, allowing calculation of the IHM rate ::

- ✓ 26.2% in 65 older patients of the Pulmonary hospital in Wuhan [1],
- ✓ 34.5% in 55 older patients of the Zhongnan hospital in Wuhan [2],
- ✓ 35.3% in 17 older patients of the Dabieshan Medical Center in Huanggang [3],
- ✓ 41.0% in 117 older patients of the Chelsea & Westminster hospital in London [4].

Pooling these four cohorts (710 COVID-19 inpatients), we calculated an **average IHM rate of 35.4%** [95%CI: 29.6 - 41.3%] in the 254 older patients, which was six times higher than the IHM rate of 5.9% [95%CI: 3.6 - 8.2%] in the 456 patients aged < 65 years

References :

- [1] Du RH et al. Eur Respir J. 2020;55(5):2000524.
- [2] Chen T et al. J Gerontol A Biol Sci Med Sci. 2020;75(9):1788-1795.
- [3] Yao Q et al. Pol Arch Intern Med. 2020;130(5):390-9.
- [4] Khalil K et al. J Infect. 2020;81(3):e85-e89.

This study was accepted in June 2020 as a letter to the Editor of the Journal of the American Geriatric Society (JAGS), entitled "In-Hospital Mortality Rates in Older Patients with COVID-19 »