

Improved outcomes in people with Advanced HIV disease in Intensive Care Units in Australia and New Zealand over 30 years



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BACKGROUND

- A substantial proportion of people living with HIV (PLWHIV) present or re-enter care with Advanced HIV disease (AHD)
- ICU admission for people with AHD was historically controversial due to the poor prognosis of AHD
- Survival of people critically ill with AHD is likely to have improved with advances in medical care
- This study describes demographic and outcome data for people with AHD requiring ICU care across three decades in Australia and New Zealand

METHODS

- Retrospective registry-based cohort study of people admitted to ICU with confirmed diagnosis of AHD
- Data collected through ANZICS-APD; an ICU registry of ICU admissions in Australia & New Zealand between 1993 and 2022
- AHD defined as presence of relevant comorbidities (formerly "AIDS defining illnesses")
- Exclusion criteria:
 - Readmission to ICU during same hospitalisation
 - Discharged to an alternative ICU
 - Admitted for palliation or organ donation

RESULTS

- We identified 1505 ICU admissions (Figure 1)
- Changes over time (Table 1 and Figure 2)
 - ↑ number of people with AHD admitted to ICUs
 - ↑ median age
 - ↓ ICU and hospital mortality
 - ↓ mechanical ventilation
 - ↔ No difference in proportion of patients with at least one comorbidity
- Change in mortality not explained by changes in illness severity

CONCLUSIONS

- More people with AHD are being admitted to ICUs
- Mortality has reduced significantly in last 30 years
- Mechanisms of improved outcomes for people with AHD warrant further investigation

FIGURE 1: Diagnosis on admission, stratified by infection vs other

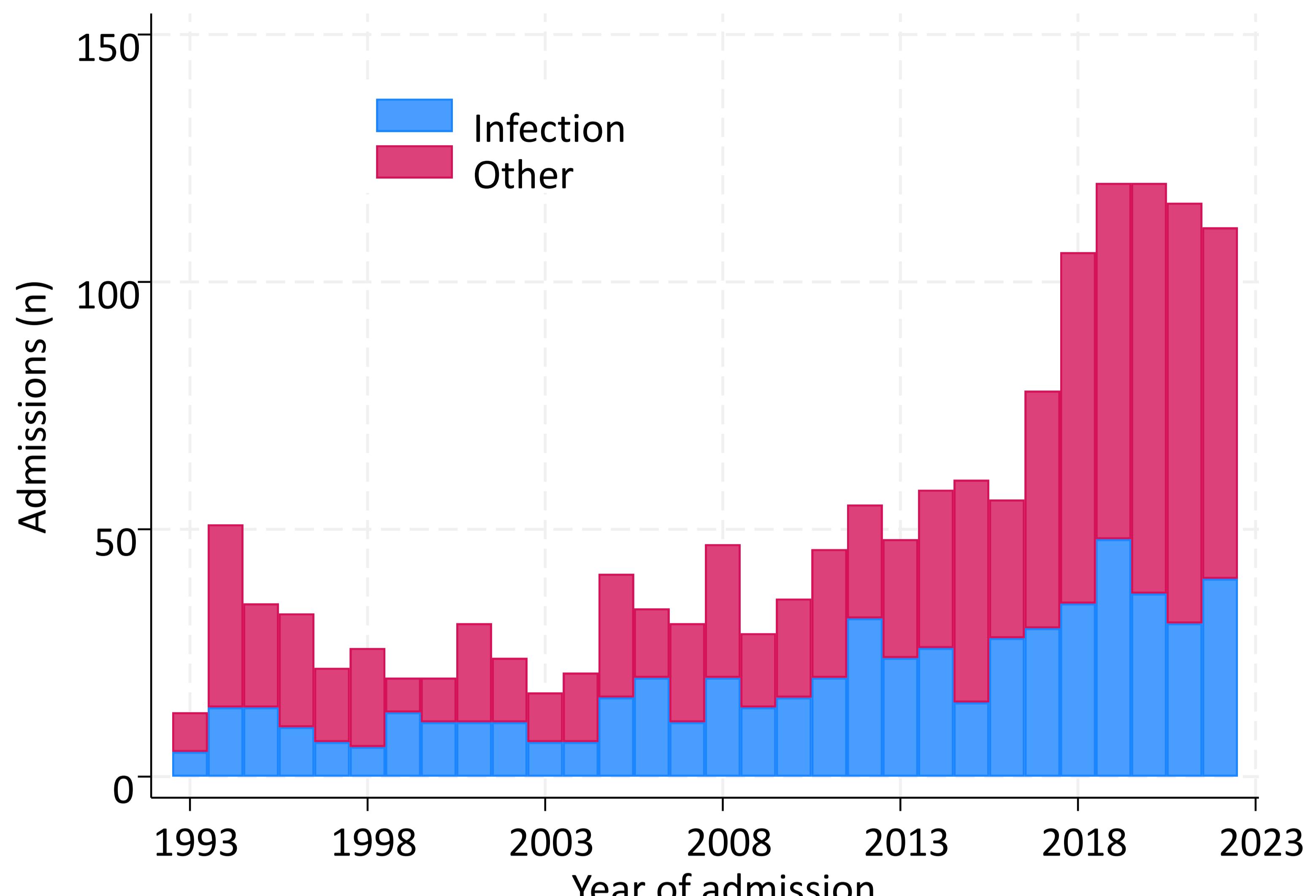


FIGURE 2: Mortality split into three decades

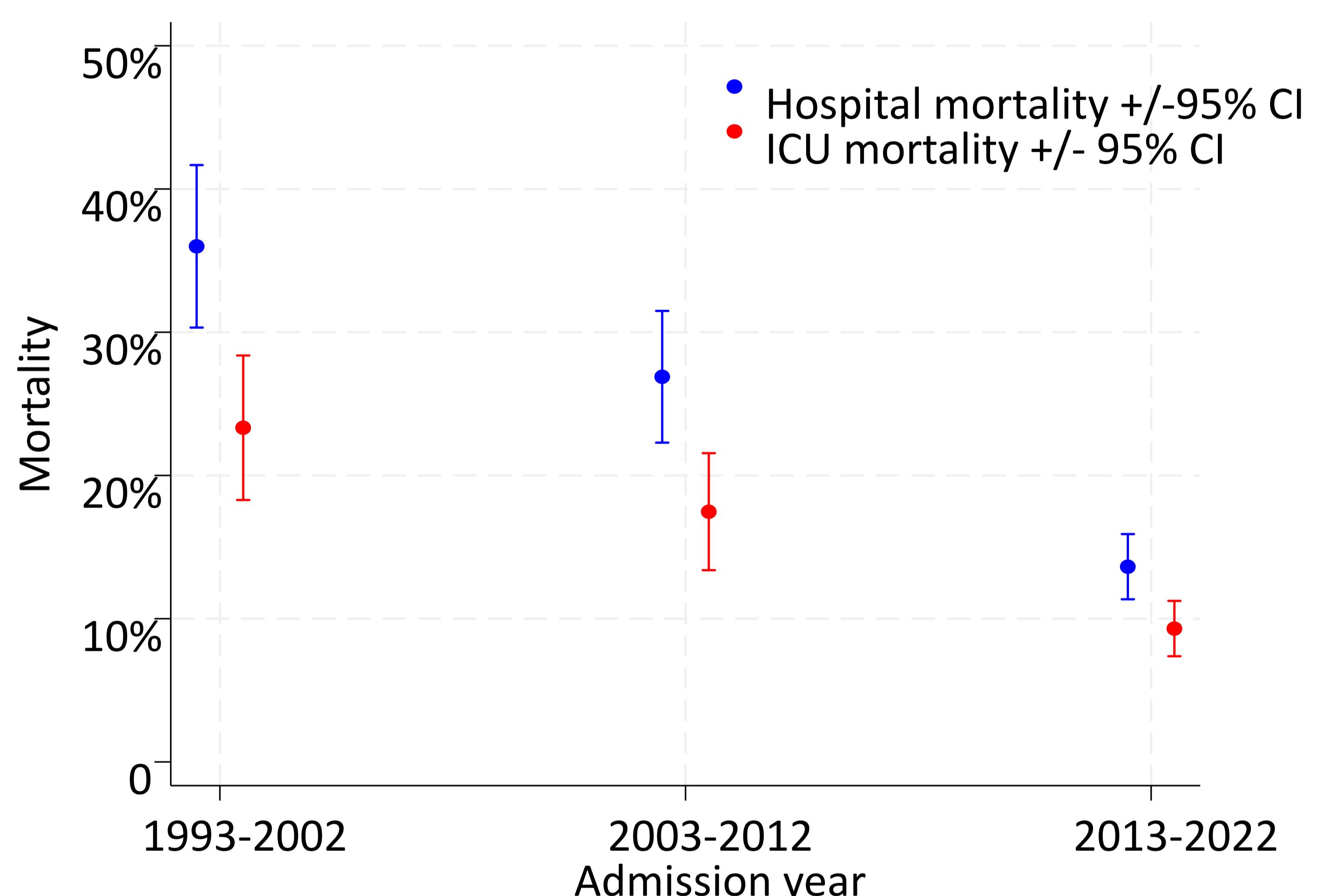


TABLE 1: RESULTS (n=1505)

Factor (n, %)	1993-2002	2003-2012	2013-2022
Admissions	275	357	873
Male gender	235 (85.5)	309 (87)	778 (89)
Median age (IQR)	41 (34, 53)	47 (39, 56)	53 (44, 63)
ICU length of stay, median days (IQR)	2.1 (1, 5.5)	2.8 (1.6, 5.4)	2.3 (1.05, 4.6)
Mechanical ventilation	158 (57.5)	182 (51)	343 (39)
Comorbidities			
≥ 1 comorbidity	46 (17)	59 (16.5)	160 (18)
Respiratory	31 (11)	18 (5)	56 (6)
APACHE-III risk of death			
Median (IQR)	15% (37-40%)	26% (9-51%)	20% (5-40%)
Mean (SD)	27% (28%)	34% (28%)	27% (26%)

Bold = p<0.001, IQR – Interquartile range, SD – Standard Deviation

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