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Background

- Respiratory syncytial virus (RSV) is a major cause of lower respiratory infections in older adults, which can lead to hospitalisations and even death.
- In adults, only the more severe cases, once hospitalised, are typically diagnosed.
- Severe forms of RSV infection are more common in adults with cardiopulmonary and other immunosuppressing conditions than in healthy individuals.

Objective

- To estimate the RSV-associated hospitalisation burden in the European Union (EU) and Norway.

Methods

- In Stage 1, we gathered the RSV Consortium in Europe (RESCEU)-estimated RSV-associated hospitalisations for adults in Denmark, England, Finland, Norway, Netherlands, and Scotland from 2006 to 2017.
- In Stage 2, we extrapolated these estimates to the EU using two different approaches (the nearest neighbour matching and multiple imputations), and two sets of 10 indicators which generated four sets of estimates and the averages of these results are reported.

Results

- On average, **158,229** (95% Confidence Interval (CI): 140,865-175,592) RSV-associated hospitalisations occur annually among adults in the EU and Norway (≥ 18 years).
- About **92%** of hospitalisations occur in adults ≥ 65 years.
- Among adults aged 75-84 years, **74,519** (95% CI: 69 923-79,115) admissions occur per year at a rate of **2.24** (95% CI: 2.10-2.38) per 1000.
- Among adults aged ≥ 85 years, the annual average is estimated at **37,904** (95% CI: 32,444-43,363) at a rate of **2.99** (95% CI: 2.56-3.42) per 1000.
- Persons aged 18-64 years have the lowest hospitalisation rate of **0.04** (95% CI: .03-.05 per 1000 adults per year) and average annual hospitalisation of **13,127** (95% CI: 10,904-15,350).

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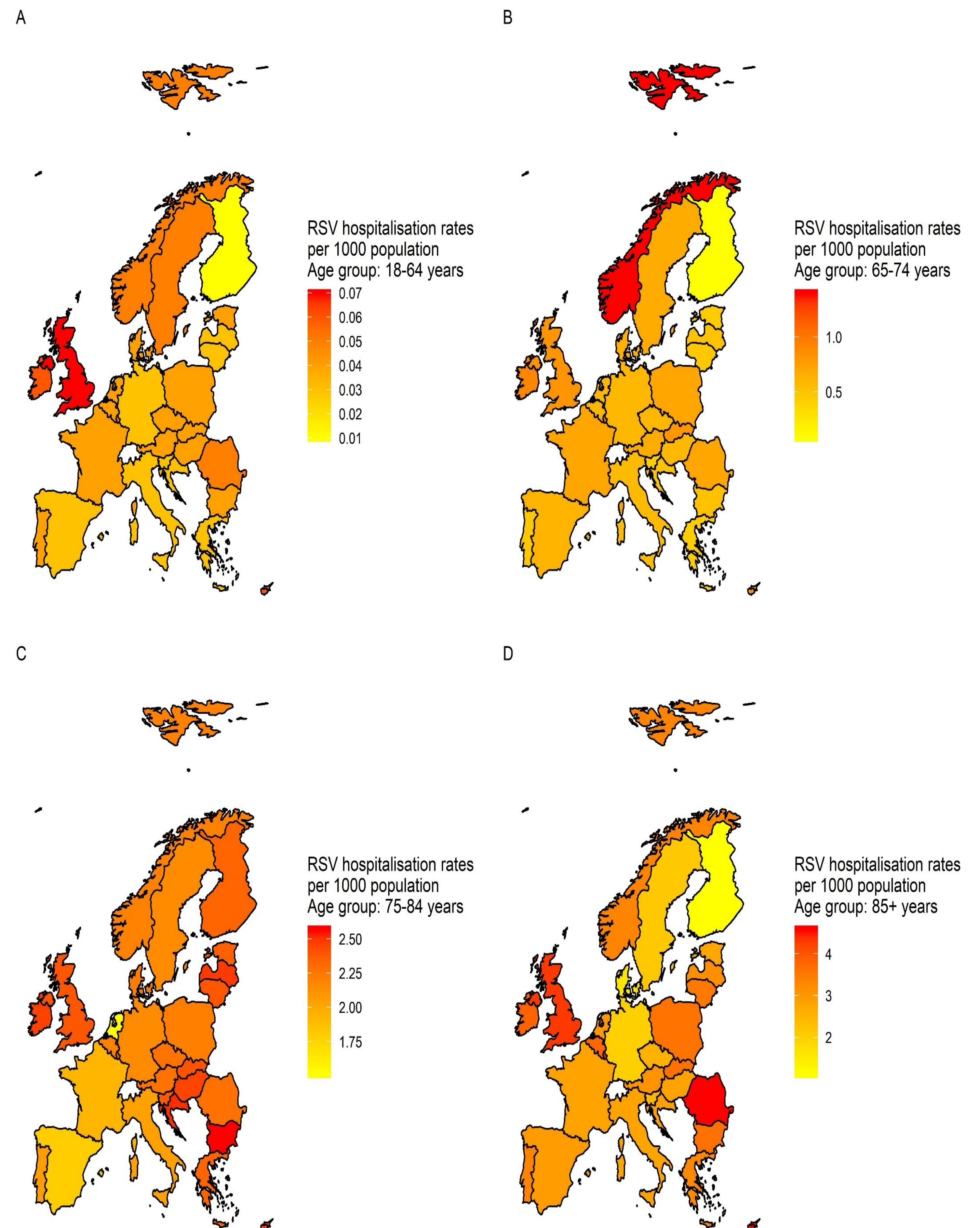


Figure 1: RSV-associated hospitalisation rates per 1000 population in 28 EU countries and Norway. A: RSV-associated hospitalisation rates per 1000 in adults aged 18-64 years. B: RSV-associated hospitalisation rates per 1000 in adults aged 65-74 years. C: RSV-associated hospitalisation rates per 1000 in adults aged 75-84 years. D: RSV-associated hospitalisation rates per 1000 in adults aged ≥ 85 years.

Conclusions

- Our estimates are the first analysis integrating available data to provide empirical evidence of the disease burden in this population across the EU.
- Importantly, for a condition considered in the past to be primarily a disease of young children, the average annual hospitalisation estimate in adults was lower but of similar magnitude to the estimate in young children (0-4 years): 158,229 (95% CI: 140,865-175,592) versus 245,688 (95% CI: 224,688-265,799) [RESCEU EU estimate using the same methodology].
- These data will significantly contribute to decision-making and policy formulation toward scaling up relevant diagnostics and healthcare service delivery for this population.