

## **Sepsis-related mortality: long-term trends in Northeastern Italy, including pandemic years**

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**Ugo Fedeli, Claudio Barbiellini Amidei, Evelina Tacconelli, Elena Carrara**

### **Background**

Global estimates of sepsis mortality are based on multiple causes of death (MCOD, any mention of the condition on death certificates); however, MCOD data are sparse and mainly referring to the pre-pandemic period.

### **Objectives**

To investigate recent trends in sepsis-related mortality, associated sites of infection, and comorbidities in Veneto (Northeastern Italy).

### **Methods**

Mortality records from 2008 to 2022 were extracted, and sepsis-related mortality was assessed based both on the underlying cause of death (UCOD) and on MCOD. The average annual percent change in age-standardised rates was estimated by join point regression through the whole study period. MCOD records were investigated to retrieve infection sites and comorbidities.

### **Results**

Sepsis was mentioned in 63,479 death certificates, growing from 4.9% out of all deaths in 2008 to 12.9% in 2022. Age-standardised mortality rates increased yearly by 8.2% (95%CI 2.1-14.7%) based on the UCOD and by 5.9% (95%CI 5.3-6.5%) based on MCOD. Sharp peaks in monthly mortality were observed in correspondence with flu epidemics, COVID-19 pandemic waves, and periods of extreme heat. The percentage of sepsis-related deaths associated to urinary tract infections, and with mention of neurodegenerative disorders and chronic kidney disease increased over time.

### **Conclusion**

Raised awareness of physicians, ageing of the population, spread of antimicrobial resistance further fuelled by the COVID-19 pandemic are among reasons of increasing sepsis-related mortality in Italy. Continuous monitoring of sepsis by means of MCOD data and other surveillance tools is warranted.

**Keywords:** COVID-19; Sepsis; antimicrobial resistance; mortality; multiple causes of death.

### **FULL TEXT PER GLI UTENTI REGISTRATI ALLA RIVISTA**

<https://www.tandfonline.com/doi/full/10.1080/23744235.2024.2340728?scroll=top&needAccess=true>