Digital poster

SCAN ME

Systematic Literature Review on the Burden and Economic Impact of Invasive Meningococcal Disease in Adolescents and Young Adults in France, Italy, Spain, and Germany

IMD causes a high burden with severe complications and high costs among European adolescents and young adults, **underscoring the importance of prevention.**

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Background and aims

- **Invasive meningococcal disease (IMD) is a serious and unpredictable disease** that can cause severe complications, long-term sequelae, and even death.[1]
- Although IMD is most common in infants, **a second incidence peak occurs in adolescents and young adults, contributing to a substantial health and economic burden.**[2]
- We assessed the epidemiology, disease burden, and economic burden of IMD in France, Italy, Spain, and Germany, in this systematic literature review, **with a focus on adolescents and young adults (10–24-year-olds).**

Study design

Searches in March 2025 included peer-reviewed literature from MEDLINE and Embase (past 10 years), conference proceedings (past 3 years), and relevant websites and governmental/non-governmental organisations.

Outcomes included **epidemiology, disease burden**, as well as **acute** and **long-term healthcare resource utilisation** and **costs**.

Results

Figure 1: **Country-level serogroup data.**
⇨ MenB was predominant in all 4 countries in the most recent years.[3]

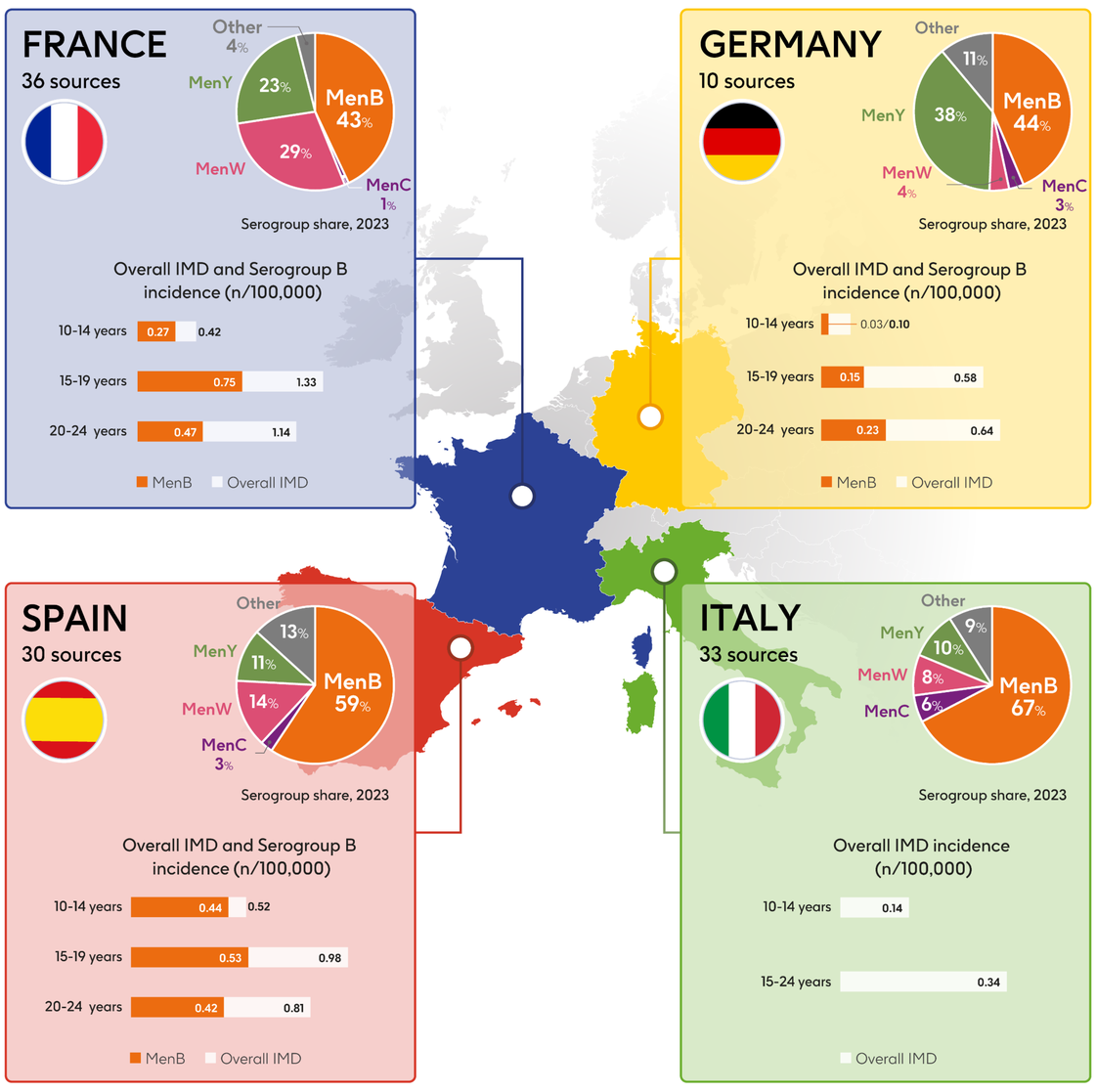
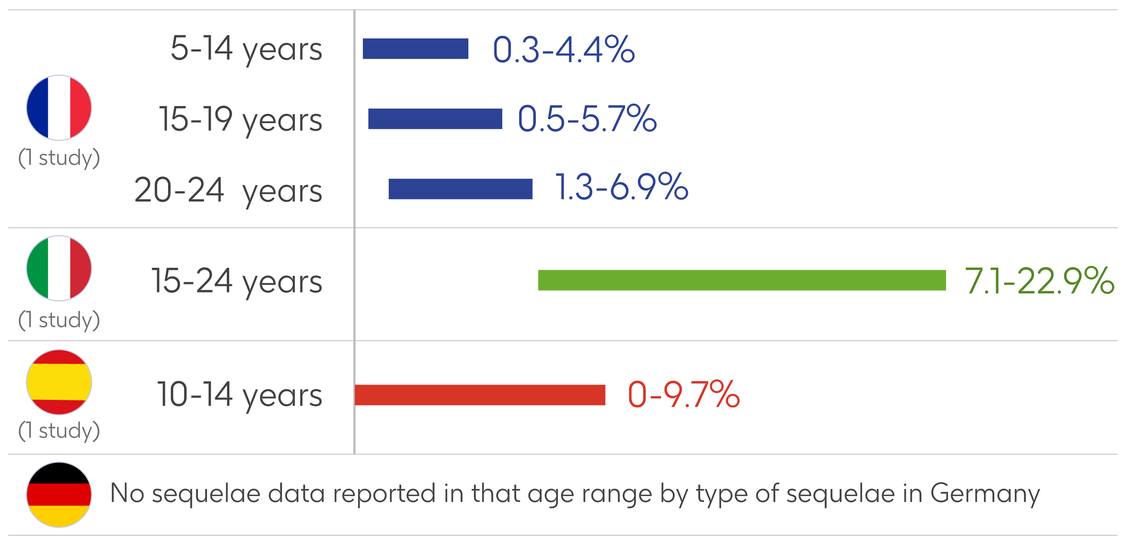
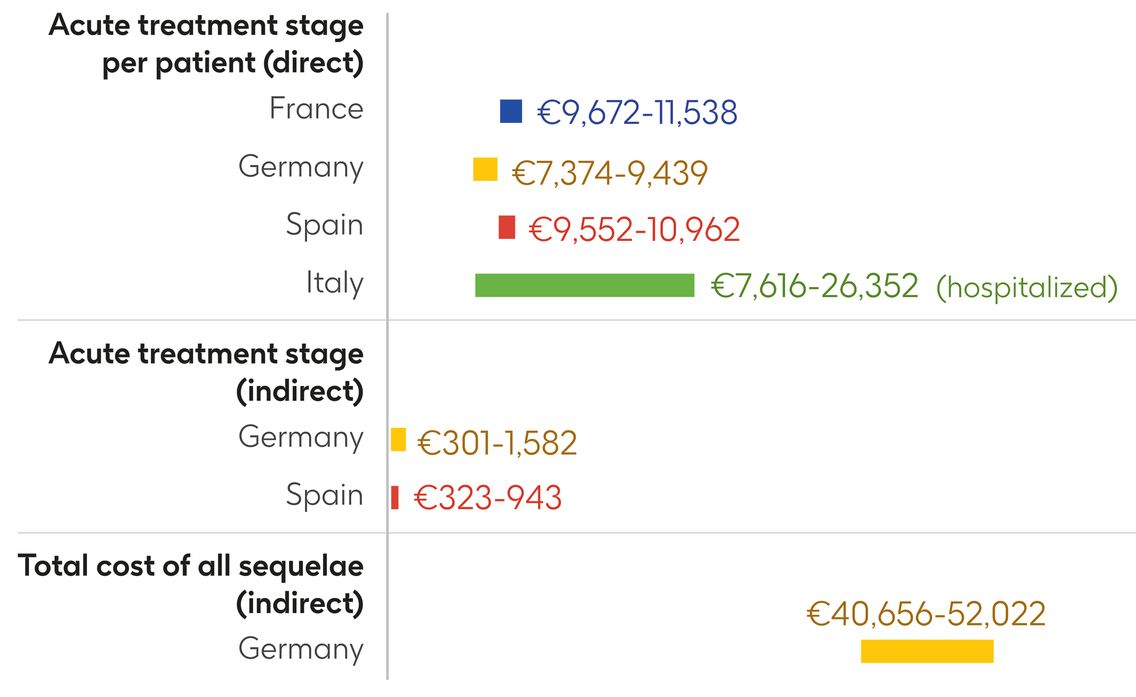


Figure 2: **Range of IMD sequelae by type.**
⇨ An important proportion of cases result in sequelae in all age groups 10-24 years.



Definitions and reporting periods may vary by study.

Figure 3: **Estimated annual IMD-related costs per patient.**



Indirect costs: caregiver burden, productivity loss, premature death, etc.
Only including data per patient and for age groups 10-24 years. Year of costs vary by study, some studies did not report cost year.

Data updated post-abstract submission.

For 10–24-year-olds, IMD resulted in **sequelae in 0–23%** (mainly **epilepsy** and **anxiety**) and **death** in **0–22%** of cases.

In 10–24-year-olds, acute hospitalisation duration averaged **8–13 days**

Conclusions

A **second peak of IMD incidence** is observed **among adolescents and young adults,** among whom **serogroup B remains dominant**.

Individuals who contract IMD are at **risk of severe complications,** which poses a **high financial burden** for their **family, friends and society.**

These findings highlight the current status of IMD in Europe, and can be used to inform health strategies.

Abbreviations

IMD: invasive meningococcal disease; **MenA/B/C/W/Y**: meningococcal serogroup A/B/C/W/Y; **n**: number

References

1. Marshall GS et al. Infect Dis Ther. 2024;13(11):2213–2220. doi: 10.1007/s40121-024-01026-w.
2. Judelsohn R and Marshall GS. J Pediatric Infect Dis Soc. 2012;1(1):64–73. doi: 10.1093/jpids/pir003.
3. ECDC. Available from: https://atlas.ecdc.europa.eu/public/index.aspx [accessed 10/03/2025].

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