Invasive meningococcal disease vaccination – a targeted literature review of adolescents and parents/caregivers' preferences This review underscores vaccine characteristics such as number of injections/visits, discomfort associated with injection and disease awareness as key considerations from parents/caregivers and adolescents/young people when making vaccination decisions. An IMD combination vaccine offering benefits such as reduced injections may be preferred.



SCAN ME

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Objective

This targeted literature review synthesized evidence of factors influencing Invasive Meningococcal Disease (IMD) vaccination preferences in 16–23-year-old adolescents or young adults and parents/caregivers (P/CG)

Methods

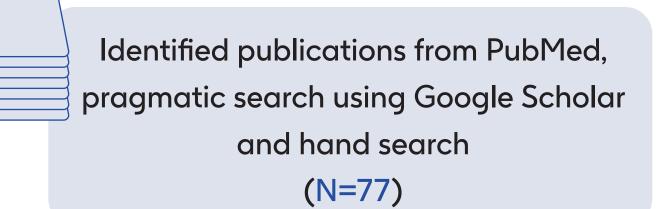
- The literature search was conducted on 1 August 2022 in PubMed (supplemented with additional materials provided by hand search) and a pragmatic brief search in Google Scholar using the terms "preferences" AND "meningococcal vaccine".
- Additional searches were conducted on Google Scholar specifically for the combination vac-

of 16–18-year-old adolescents.

Results

- Figure 1 outlines the results of the screening process and inclusion of abstracts based on the PICOS criteria outlined in Supplementary Table 1.
- The list of included studies as well as the summary of study characteristics are presented in Supplementary Table 2 and Supplementary Table 3, respectively.

Figure 1. Prisma flow chart



- cine-related attributes using the terms "vaccine preferences" AND "meningococcal ABCWY vaccines" OR "combination vaccines".
- Studies were included based on the eligibility criteria (PICOS) demonstrated in Supplementary Table 1.
- The data from the included studies were extracted and synthesized to understand the factors driving IMD vaccination/ vaccine preferences.

Figure 2. Key emerging themes from the literature review



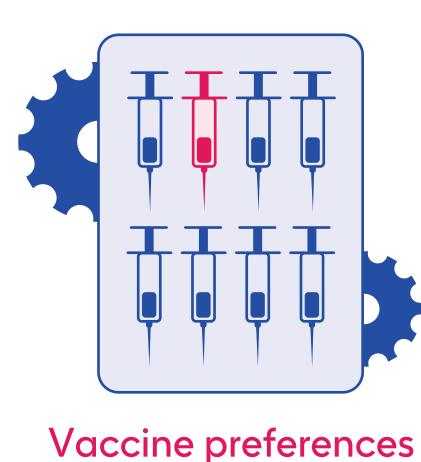
Awareness of existing vaccination strategies to prevent IMD

Experience and concern of injection site discomfort associated with the number/frequency of injections

Number/frequency of injections and the associated direct healthcare resource use/costs as well as indirect costs such as productivity losses

Effectiveness of IMD vaccines and its duration of protection

Possibility of herd immunity through IMD vaccination



Consecutively excluded following Table 1 during title, abstract and full-text screening (N=58)

Included for evidence synthesis (N=19, 17 of which relevant for Ado/YA and P/CG)

Evidence synthesis results pointed to a multitude of disease, vaccine and vaccination attributes that drive adolescent, young-adult and parents/caregivers preferences towards IMD prevention. Knowledge of disease severity (20% of Ado/YA articles) and vaccine (29% of P/CG articles) were the most reported factors influencing vaccine preference.

> Severity of disease increased vaccine preference for both groups (14%), while low disease awareness limited P/CGs' willingness to vaccinate children (14% of P/CG articles).

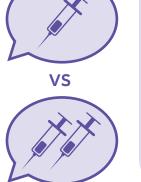
Some Ado/YA preferred fewer injections in the immunization series due to reduced injection site discomforts (13%). P/CG preferred less injections due to less time and less physician visits, as it may reduce vaccine preparation/injection/administration and indirect costs associated with parental work loss (7%).



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However, their concerns over injection-related pain were a Vax barrier (14%).

Longer duration of protection was important for P/CG (14%), whilst herd immunity and direct protection was preferred in Ado/YA (13%).







 Invasive meningococcal disease serogroups A, B, C, W, Y are commonly prevented by MenACWY and MenB vaccines¹.



 MenABCWY candidate vaccines could potentially provide benefits such as less injections, simplified schedules, and increased uptake ².



However, there is limited insight on factors influencing preferences for IMD vaccines/vaccination.

Abbreviations

Ado: Adolescents; IMD: Invasive Meningococcal Disease; P/C: Parents/-Caregivers; YA: Young adults

References

(1) Mbaeyi S et al. *JAMA Pediatr.* 2020;174(9):843-851 (2) Marshall G et al. *Infect DIs Ther.* 2022;11(3):937-951

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Conclusions

- Findings highlight IMD vaccination characteristics and disease awareness/knowledge as key considerations among adolescents/young people and parents/caregivers when making vaccine decisions.
- To improve vaccination coverage and protection, vaccinations offering benefits such as reduced injections and visits may be important.
- Trade-offs between factors relevant for a MenABCWY candidate vaccine need further research.

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