THE LONG-LASTING IMPACT OF INVASIVE MENINGOCOCCAL DISEASE (IMD) – MAPPING THE COMPREHENSIVE RANGE OF SEQUELAE IN IMD SURVIVORS

Shen J¹, Begum N², Ruiz Garcia Y³, Meszaros K¹

¹GSK, Wavre, Belgium; ²Apsida Life Science, C/O GSK, Wavre, Belgium; ³GSK, Rockville, MD, United States of America
Disclosures

Conflicts of interest: JS, KM and YRG are employees of GSK group of companies. JS and KM hold shares in the GSK group of companies. NB was a freelance consultant for the GSK group of companies and therefore received consulting fees during the conduct of the study. GlaxoSmithKline Biologicals SA funded this study. Authors declare no other financial and non-financial relationships and activities.

Acknowledgments:
Business & Decision Life Sciences platform provided editorial assistance and publications coordination, on behalf of GSK. Pierre-Paul Prévot coordinated publications development and editorial support. Kavi Littlewood (Littlewood Writing Solutions, on behalf of GSK) provided medical writing support. The authors acknowledge the contributions of Mohamed Neine, Ekkehard Beck and Rafik Berkat (GSK) for their involvement in the discussions.
The long-lasting impact of invasive meningococcal disease (IMD) – mapping the comprehensive range of sequelae in IMD survivors

**BACKGROUND**

**Invasive meningococcal disease (IMD)**
- IMD is an uncommon severe and life-threatening disease which can lead to devastating long-term sequelae in survivors.
- Severe physical and neurological sequelae and short-term sequelae are well recognised, but long-term and other wide-ranging IMD sequelae are less well described.

**Objectives**
- Comprehensive map to capture the full range of sequelae of any severity or duration over the patient’s lifetime.
- Health economic (HE) list of sequelae: to capture relevant types and probabilities of sequelae for future HE models to inform decision-making.

**METHODS**
- A previous systematic literature review was updated to obtain data from 2001-2020: Medline/Embase were searched for observational studies (OS) and cost-effectiveness models in IMD.
- 34 HE modelling studies – 18 on MenB, 18 on MenACWY.
- Invasive meningococcal disease (IMD) sequelae reported in ≥1 OS for map, and ≥1 OS plus ≥1 HE for economic evaluation selection.
- Comprehensive map was developed to systematically characterise all published observed IMD sequelae.

**RESULTS**

**IMD long-term burden is considerable with 4/4 sequelae identified in the comprehensive map below:**
- Psychological/behavioural sequelae: 96%.
- Neurological sequelae: 85%.
- Physical sequelae: 82%.

**CONCLUSIONS**
- In addition to well-known IMD sequelae, high rates of a wide range of physical, neurological and psychological/behavioural sequelae were identified, that were not fully captured in most studies.
- Psychological/behavioural sequelae may develop later and are more difficult to observe, potentially leading to their underestimation.
- Better understanding of the disease and the need for potential prevention (e.g. routine vaccination programs) is warranted.

**THE LONG-LASTING IMPACT OF INVASIVE MENINGOCOCCAL DISEASE (IMD) – MAPPING THE COMPREHENSIVE RANGE OF SEQUELAE IN IMD SURVIVORS**

**Shen J**, Begum **N**, Ruiz Garcia **Y**, Mazzarol **K**

*GlaxoSmithKline Biologicals SA, Belgium; GSK, Wavre, Belgium; 4GSK, Rockville, MD, United States of America*

**Funding:**
GlaxoSmithKline and disclosure available on the QR code.

**Presenter:**
Jing Shen (jing.shen@gsk.com)
Copyright © 2021 GSK group of companies

**ESPID 2021**
- 24-29 May: Online, Local & Geneva, Switzerland