

Treatment Patterns and Economic Burden of Guillain-Barré Syndrome: A Systematic Review

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INTRODUCTION

- Guillain-Barré Syndrome (GBS) is a serious neurological disorder with significant health and financial impacts. This poster reviews treatment patterns and the economic burden of GBS based on 23 studies.
- Key findings show intravenous immunoglobulin (IVIg) and plasmapheresis as primary treatments, with high costs averaging \$16,428 per patient in the first year. Early detection and standardized protocols are crucial for better outcomes and cost reduction. Further research is needed to address rising incidence rates, especially in children under 10.

OBJECTIVE

- This study aims to assess the treatment patterns and economic burden of Guillain-Barré Syndrome (GBS) through a systematic review of available literature.

METHOD

Data Sources and Search Strategy

A comprehensive search was conducted across PubMed, Embase, and Google Scholar databases to identify relevant studies on Guillain-Barré Syndrome (GBS).

Study Selection

Out of 430 identified studies, 23 were selected for data extraction after a thorough screening process.

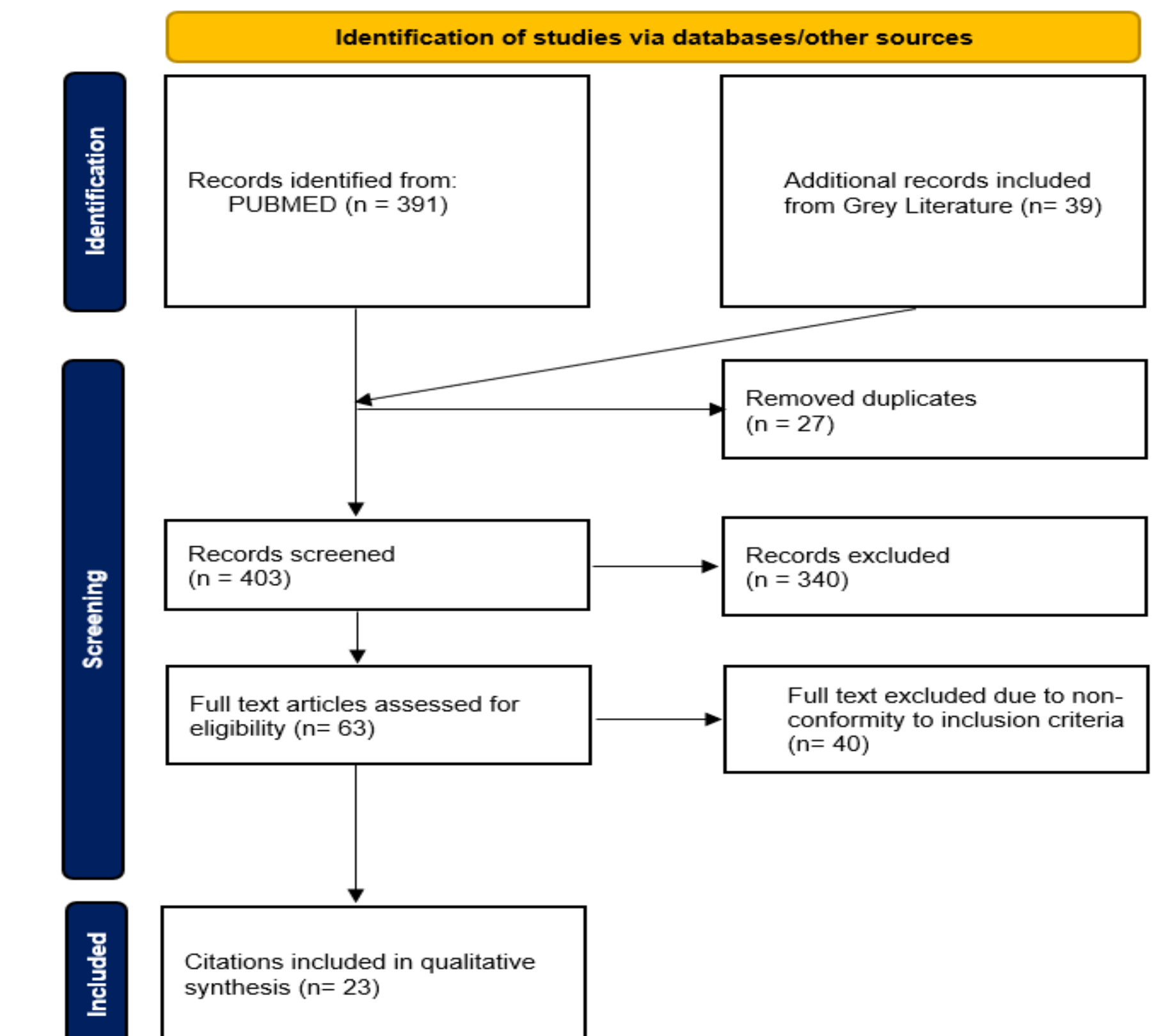
Data Extraction

Data were extracted from a societal perspective, encompassing both direct and indirect costs related to GBS.

Analysis

The analysis focused on treatment patterns, specifically the use of intravenous immunoglobulin (IVIg) and plasmapheresis, and the economic burden associated with GBS, including hospitalization, rehabilitation, and long-term disability management costs.

Figure 1: PRISMA flowchart to summarize selection process



RESULTS

Treatment Patterns

- Primary Treatments:** The review identified intravenous immunoglobulin (IVIg) and plasmapheresis as the main treatment strategies for Guillain-Barré Syndrome (GBS). These treatments are widely used due to their effectiveness in managing the symptoms and progression of GBS.
- Variability in Protocols:** There was notable variability in treatment protocols and outcomes across different healthcare settings. This suggests that while IVIg and plasmapheresis are common, the specific approaches and success rates can differ significantly depending on the healthcare provider and region.

Economic Burden

- High Costs:** The economic evaluations revealed a substantial financial burden associated with GBS. The average direct medical cost per patient in the first year was estimated at \$16,428. This includes expenses related to hospitalizations, treatments, and ongoing care.
- Comparison with Other Illnesses:** The costs associated with GBS were found to be 30 times higher than those for common illnesses like diarrhea. This stark difference highlights the significant economic impact of GBS on both patients and healthcare systems.
- Components of Costs:** The major contributors to the overall costs were hospitalizations, rehabilitation, and long-term disability management. These elements underscore the extensive care required for GBS patients, which drives up the financial burden.

Incidence and Impact

- Increased Incidence in South Korea:** A study conducted in South Korea reported an increased incidence rate of GBS, with 72% of cases linked to preceding infections. This was particularly notable among children under 10 years of age, indicating a higher vulnerability in this age group.
- Implications for Healthcare:** These findings emphasize the need for effective management strategies and healthcare policies to mitigate the financial impact of GBS. The significant costs and rising incidence rates call for standardized treatment protocols and early detection measures to improve patient outcomes and reduce economic strain.
- Overall, the results highlight the critical need for comprehensive strategies to manage GBS effectively, both in terms of medical treatment and economic impact. Further research is essential to develop standardized protocols and enhance patient care while addressing the financial challenges posed by this disorder.

CONCLUSIONS

The findings underscore the importance of early detection and standardized treatment protocols to improve patient outcomes and reduce healthcare costs. Additionally, the rising incidence rates, particularly among children under 10, call for targeted healthcare policies and further research to mitigate the financial impact of GBS. Effective management strategies are essential to address the significant economic and health burdens posed by this rare neurological disorder.

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