Economic Burden of Geographic Atrophy: A Systematic Review and Meta-Analysis

EE256

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INTRODUCTION

- Geographic atrophy (GA) is an advanced form of dry age-related macular degeneration and may lead to vision loss
- Over 8 million people having age-related macular degeneration are affected worldwide with GA. The incidence of GA is expected to rise as the age-burden of developed countries is increasing
- The prevalence of GA increases with age, and it is more commonly seen in individuals over the age of 65
- There are currently limited treatment options for GA

OBJECTIVE

- To evaluate the economic burden associated with GA through a systematic literature review

METHODS

- **Key eligibility criteria:** Studies published in English between 01/2013-06/2023 assessing economic burden (cost and resource use) associated with GA (Figure 1)
- **Literature databases searched:** Embase® and MEDLINE
- **Cost conversion**: Costs were converted to 2023 Euros (€)
- **Statistical software:** Stata® used to meta-analyse resource use data

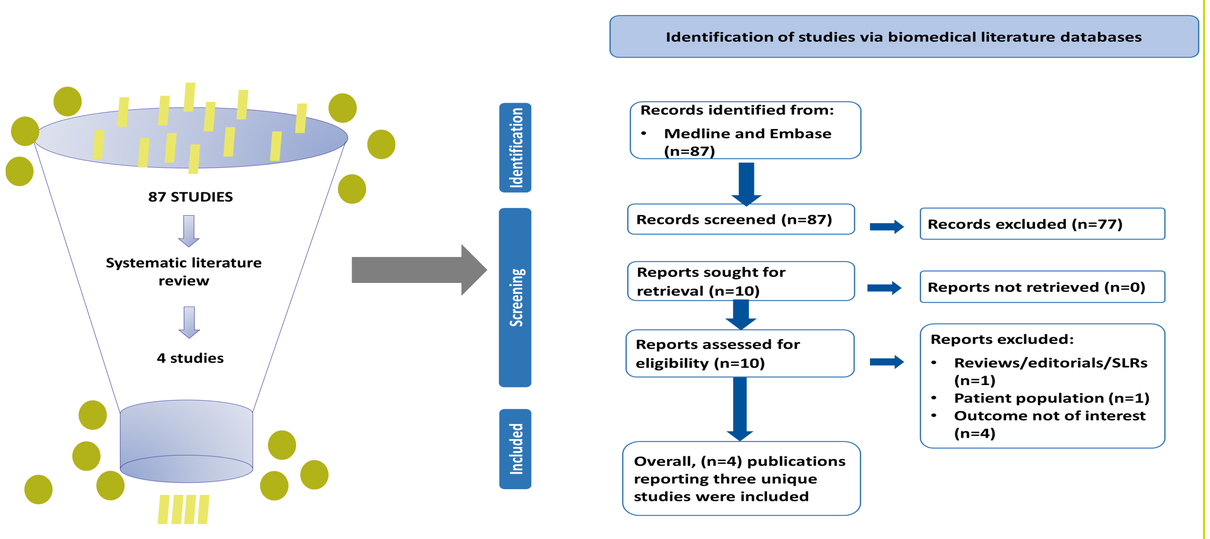
Figure 1: PICOS

POPULATION (P)	INTERVENTION/COMPARATORS (I/C)	OUTCOME (O)	STUDY DESIGN (S)
Adult (≥ 18 years) with Geographic atrophy	ANY OR NONE	Measure of costs (direct costs, indirect cost, caregiver cost) Measure of resource use	Any studies reporting original cost and/or resource use data

RESULTS

- Figure 2 presents a detailed PRISMA diagram depicting finalisation of three unique studies out of a total of four included publications

Figure 2: PRISMA diagram



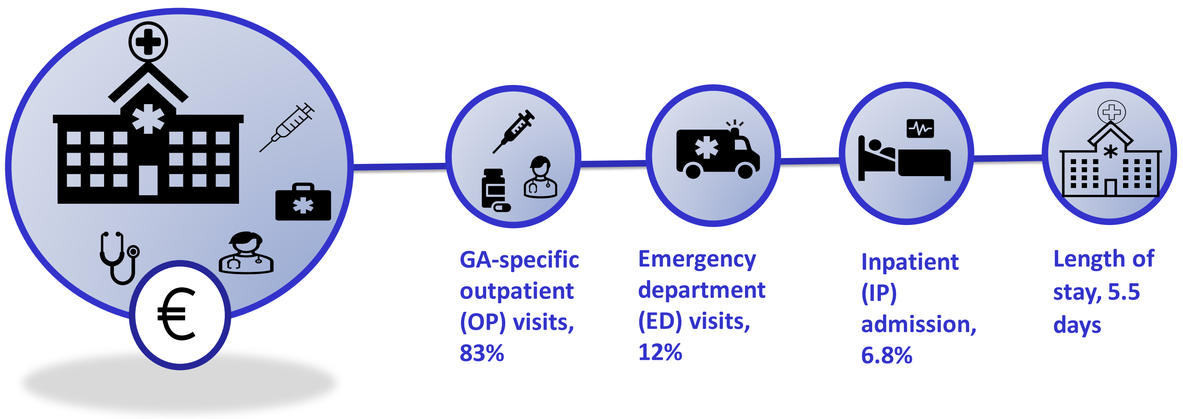
- Key details of the included studies are presented in Table 1

Table 1: Key study details

Study attribute	Details
Sample size of participants	137 - 28,773
Mean age, years	69 - 83
Design	Retrospective (n=2), Cross-sectional (n=1)
Location	US (n=1), UK (n=1), and one was multinational (UK, Germany, Ireland, and Canada)

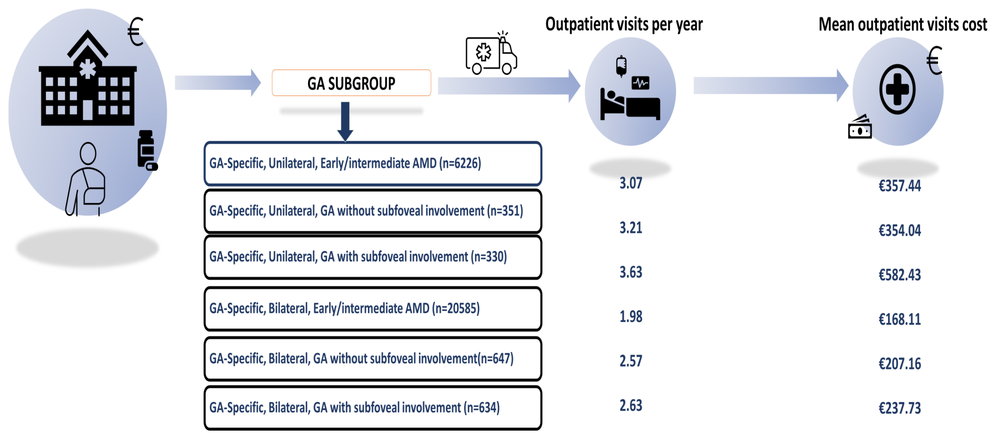
- Figure 3 demonstrates the healthcare resource use burden associated with GA

Figure 3: Healthcare resource use



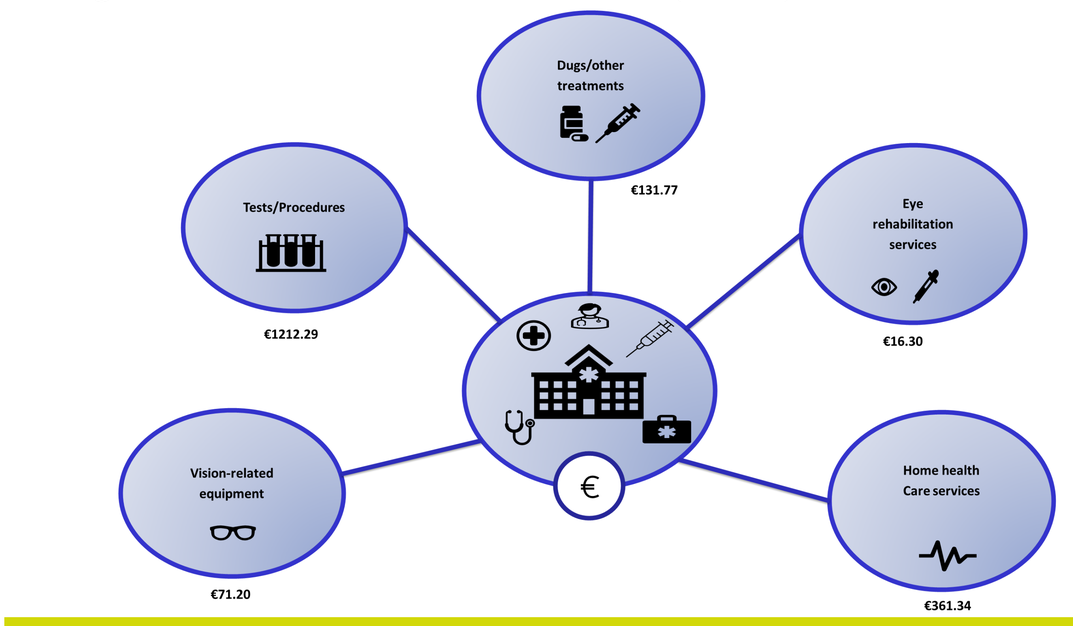
- Patients with GA incur substantial costs, with mean annual GA-specific OP visit costs ranging from €213 to €305. Further, mean annual costs for all-cause OP visits, ED visits, and IP admissions were reported as €2536, €360, and €9959, respectively
- Figure 4 demonstrates that patients who had a higher baseline severity, experienced a notable increase in the annual number of OP visits and payer-related costs

Figure 4: GA-specific outpatient visits and associated costs across GA subgroup



- Figure 5 outlines the extra costs associated with GA, as reported in a multinational study

Figure 5: Healthcare resource utilization (HCRU) and associated cost



CONCLUSION

- There is currently limited evidence regarding the economic burden of GA particularly around indirect costs
- Further research is needed to determine the economic impact of GA and to find effective interventions that can effectively reduce the burden on healthcare systems and patients

FUNDING

None