

Clinical and economic burden of transthyretin amyloidosis cardiomyopathy (ATTR-CM) in Belgium: a real-world evidence study



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Background

- Transthyretin amyloidosis cardiomyopathy (ATTR-CM) is a progressive, life-threatening cardiac disease increasingly recognized in older adults.
- Hospital admissions drive clinical and economic burden, yet comprehensive Belgium wide evidence has been limited. European insights emphasize the importance of earlier recognition, structured pathways²⁻³ and data driven detection⁴.
- The advent of new medication classes with potential to slow progression towards heart failure may reshape care.

Objective

We examine Belgium's national picture of ATTR-CM using data provided by the Federal Public Service Health¹ (FPS) to inform capacity planning and future pathways, focusing on demographics, cardiovascular/heart failure presentations, and regional activity.

Methods

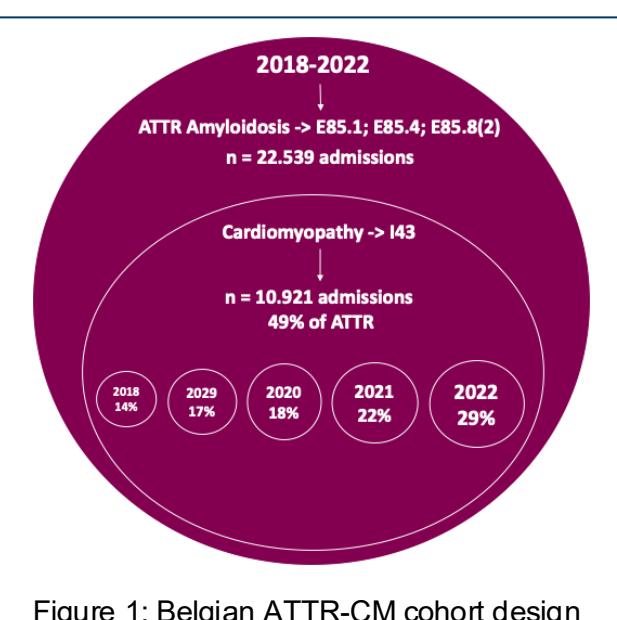


Figure 1: Belgian ATTR-CM cohort design

- Retrospective analysis of Belgium wide hospital admissions (2018–2022) using FPS Health Minimal Hospital Data¹
- ATTR-CM stays were identified via the International Classification of Diseases (ICD 10) coding system, using an inclusion approach that combined amyloidosis codes (E85.1; E85.4; E85.8(2)) combined with cardiomyopathy (I43)
- We assessed admission dynamics (total/first), diagnostic profile (primary/secondary; cardiovascular and heart failure), care and resource use (procedures, pharmaceuticals, nursing/clinical services), patient trajectories (readmissions, length of stay), regional activity (standardized per capita), and hospital costs
- Descriptive statistics and trend assessments were applied

Results

Cohort context:

ATTR-CM comprised 49% of all ATTR related hospitalizations (Figure 1; 10,921 validated cases), increasing in share over time.

Regional differences:

Incidence rates per capita in 2022 were twice as high in Brussels and Flanders, compared with Wallonia (Figure 2).

Utilization and costs:

Readmissions decreased over the period; length of stay ~12–14 days; 2022 average cost €8,178 per stay; national total cost reached €25.5M in 2022 of which ~7–14% were attributed to pharmaceuticals

Admissions:

Total admissions increased between 2018 and 2022 (1,555 → 3,107) with increasing share of new (first) admissions (791 → 1,552 Figures 3).

Diagnostic mix:

Growing proportion of cardiovascular primary diagnoses, reaching 73.4% in 2022; heart failure codes are predominant within this group (Figure 3).

Age and sex:

≥70 years majority, rising to ~2,291 (70.4%) by 2022 (Figure 4); Age categories <70 stable over time; sex stable at ~two thirds male.

Discussion

Admissions almost doubled between 2018 and 2022, led by an ageing (>70 years) predominantly male population and driven by growing numbers of first admissions, not readmissions (Figures 3-4).

Regional growth is widespread with notable per capita differences (Brussels and Flanders highest - Figure 2), there may be potential to invest in Wallonia to support diagnostic uptake.

Growth in admissions is dominated by heart failure admissions (Figure 3), mirroring European recognition and detection trends²⁻⁴.

Declining readmissions with stable stays indicate improving continuity; costs remain substantial.

Conclusion

Looking ahead, earlier detection and optimized pathways are priorities given rising first admissions, heart failure presentations, regional disparities and substantial costs. Prospective evaluation should test whether real-world use of therapies that may slow progression reduces future admissions and the national cost burden.

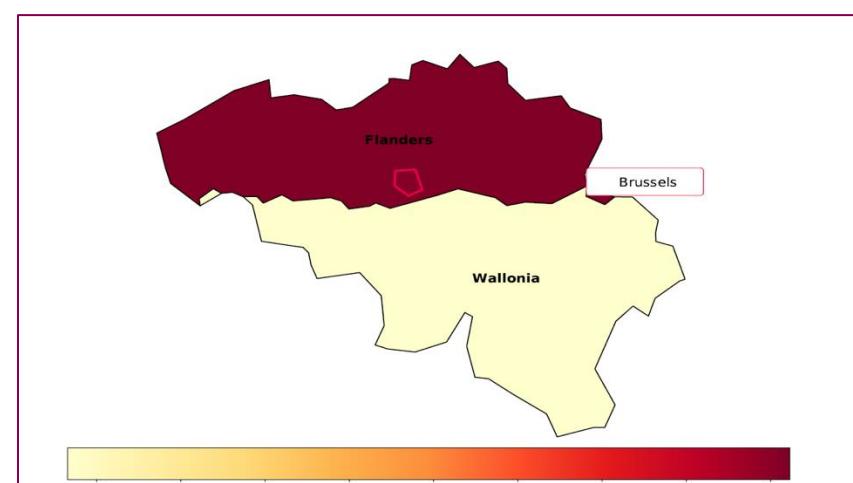


Figure 2: Regional difference in ATTR-CM admissions per 100,000 people across Belgium (incidences 2022)

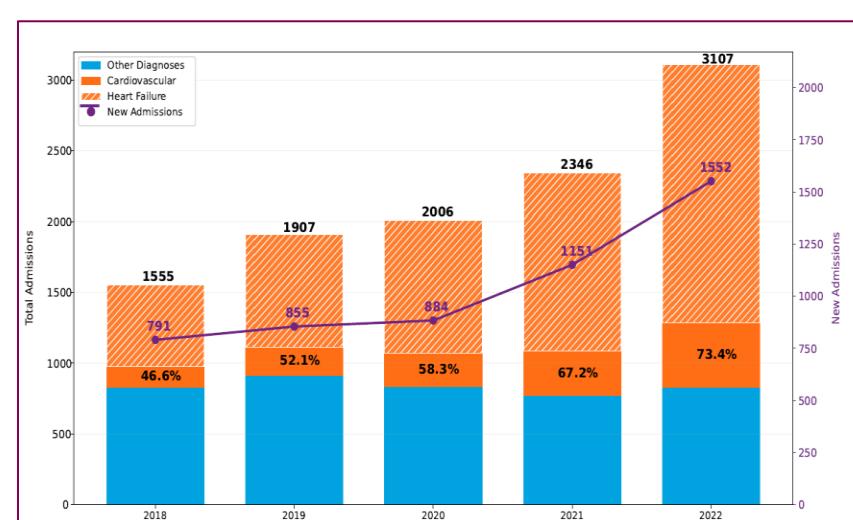


Figure 3: Admission composition and first admissions

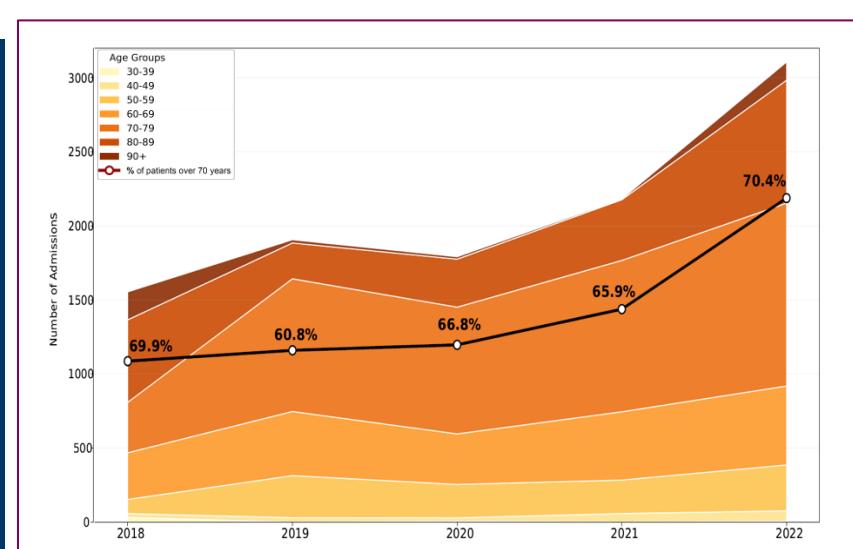


Figure 4 : ATTR-CM Admissions by Age Group

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