

Evolution of neurovascular emergency care in the Auvergne Rhône-Alpes region (France)

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Introduction and purpose

Objectives of the European Stroke Plan 2018-2030:

- 90% of stroke patients treated in a stroke unit (SU)
- reduced median time to access intravenous thrombolysis (IVT)
- rates of IVT higher than 15% and endovascular treatment (EVT) higher than 5%



Study aim: to assess the neurovascular care offer in a French region and its evolution in 10 years

Methods

Settings:

- Auvergne Rhone-Alpes region : 2nd French region with 8 millions of inhabitants
- 16 stroke unit (SU) in the region including 5 comprehensive stroke center

Data:

- Retrospective observational multicenter study: hospitalized strokes and transient ischemic attacks (TIAs) selected from the PMSI (French medico administrative database)
- Thrombolysis and thrombectomy data: from the stroke registries of the region's emergency networks from 2011 to 2021.
- Rates were calculated by SU

Results

- Stroke were managed in SU and emergency department (ED) in our region. The repartition was spatially not homogenous (fig. 1).
- More than 14,000 strokes were hospitalized in 2021, 78% were ischemic strokes and 4.600 were TIAs.
- Between 2011 and 2021, the number of ischemic strokes increased by 25%. Since 2015, the number of hemorrhagic strokes has decreased by 15%.
- More than 6,600 strokes were managed in 2021 in the 16 regional SUs, representing 47% of all hospitalized.

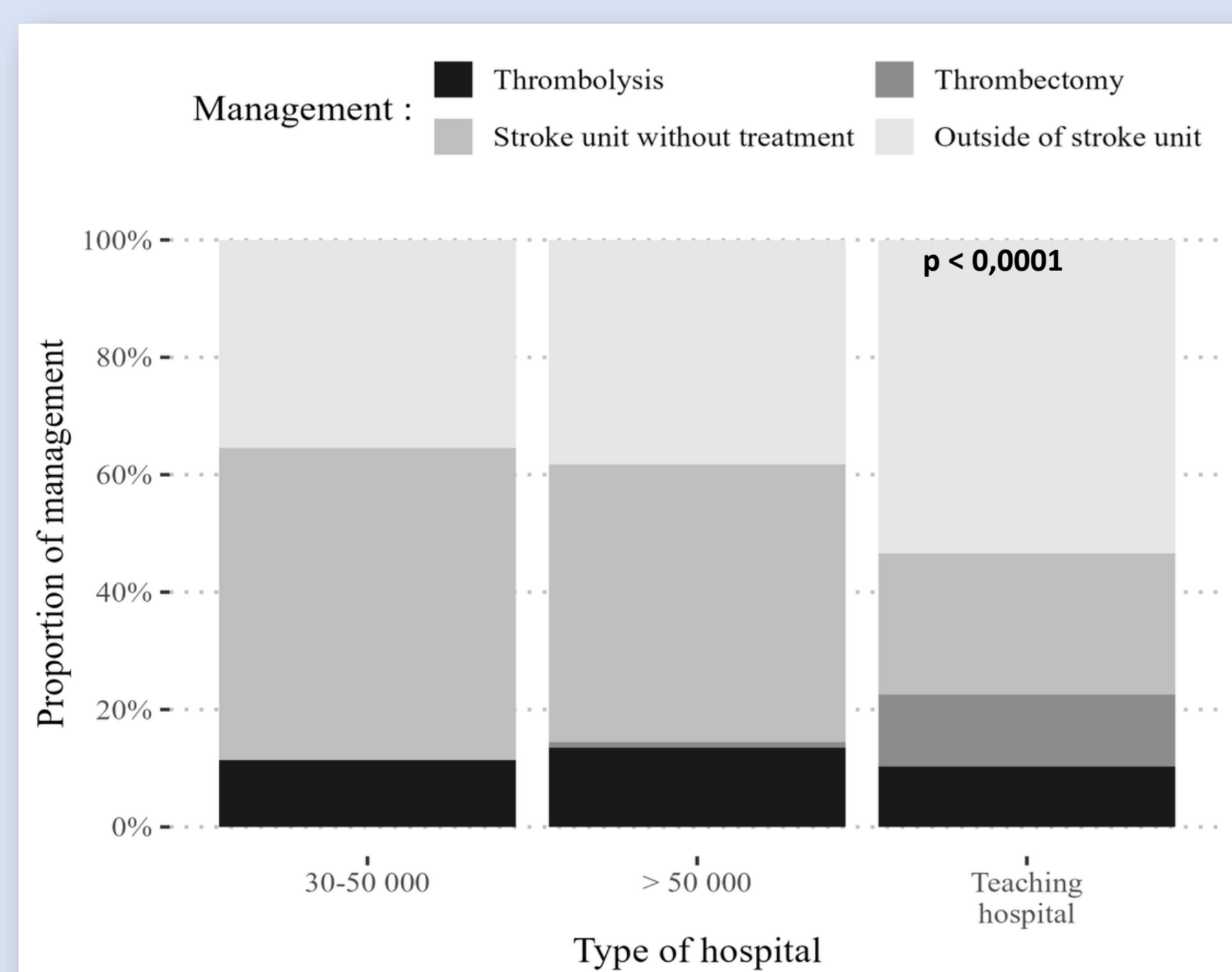


Fig 2. Stroke management regarding the type of hospital

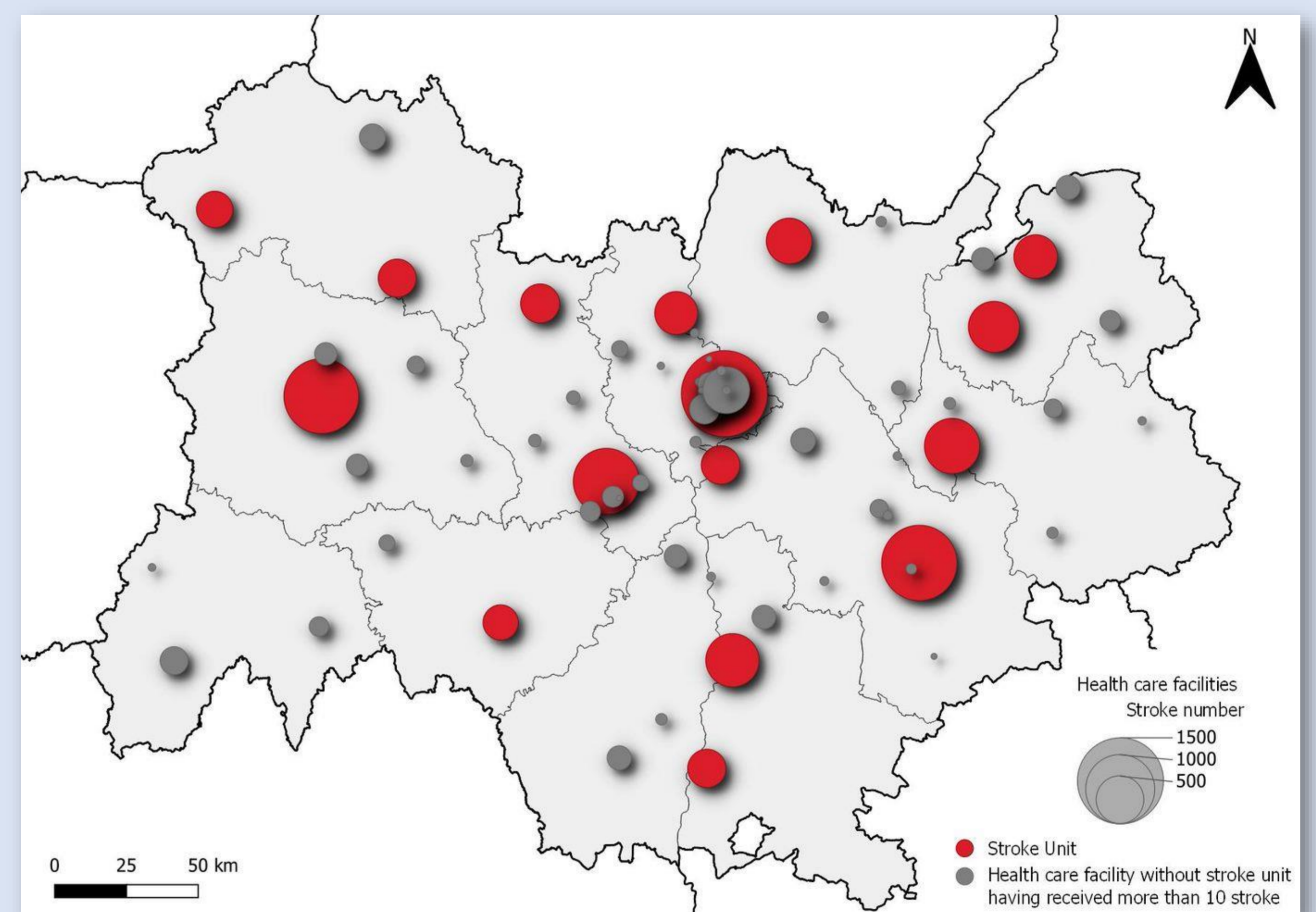


Fig 1. Stroke admitted in a Stroke Unit or an Emergency Department without Stroke Unit in 2021

- In 2021, more than 12% of ischemic strokes managed were treated by IVT and 7% by mechanical thrombectomy (+10% per year on average over the past 5 years).
- Groups were performed using the number of visits in Emergency Departments available in the medico administrative database « Résumés de Passages aux Urgences ». SUs with thrombectomy have a lower rate of stroke patients admitted to the SU than those without (fig. 2).

Conclusions

- The hospitalization rate in SU is **far from the objectives of the European Stroke Plan**.
- On a regional scale, there is **inequality of access to neurovascular emergency care**, and despite an increase in the number of SUs beds over the last 10 years, the **supply remains insufficient to allow a large and uniform access to care** over the territory, and emergency structures are directly affected.

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