

Title: Organizational barriers to acute stroke care in the Pomeranian Voivodeship: A mixed-methods study.

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Stroke remains one of the leading causes of death and long-term disability in Poland. In recent years, modern medicine has made significant advances in treating acute stroke, with effective therapies such as intravenous thrombolysis and mechanical thrombectomy. However, these interventions are highly time-dependent – they must be administered within minutes after hospital arrival to be effective. Every delay leads to the irreversible loss of millions of brain cells.

Unfortunately, not all patients reach stroke centers in time or receive care that meets clinical guidelines. Most existing studies in Poland focus on national statistics or individual hospital data. There is a lack of comprehensive regional analyses that could uncover the root causes of treatment delays and explain discrepancies in care quality between facilities. This project aims to address this gap by thoroughly investigating the organization of stroke care in the Pomeranian Voivodeship.

The study will adopt an interdisciplinary, mixed-methods approach combining quantitative data analysis with qualitative interviews. On the one hand, we will examine clinical and organizational data from hospitals, stroke registries, and accessibility maps – including transport times, key decision points, and the number of patients receiving reperfusion therapy. On the other hand, we will conduct interviews with medical professionals – doctors, nurses, paramedics – to understand which real-life factors influence the speed and quality of care. The project will also include case studies of patients who received either exceptionally fast or delayed treatment to illustrate how system-level factors affect outcomes.

The project will result in a detailed diagnosis of the current functioning of the regional stroke care system and provide practical recommendations for healthcare decision-makers. The findings will help improve, hospital procedures, access to specialist interventions, and resource planning. Ultimately, the project aims to enhance the quality of stroke care and increase patients' chances of recovery.