

## ABSTRACT

This thesis deals with a part of the treatment process in patients with acute ischemic stroke. Specifically, it examines the time interval from patient entry to a healthcare facility to initiation of treatment with intravenous thrombolysis - so called Door-to-Needle Time.

The theoretical part describes the stroke and its division according to etiology. Furthermore, there are summarized clinical studies that have taken place in the world since the 1960s to the present, the development of care for patients with stroke in Czech Republic, recommended procedures of professional organizations in Czech Republic and the identification and management of treatment of stroke patients. In conclusion, the theoretical part summarizes the studies focused on the reduction of the Door-to-Needle Time, which took place in the world and in the Czech Republic.

The aim of the practical part is to evaluate work procedures and conditions of health teams of individual stroke centers and to identify causes of Door-to-Needle Time median differences. The chosen method of research is a quantitative questionnaire survey in the form of an online Google Forms questionnaire sent to the leading members of these teams.

Based on the research results, factors affecting reduction of Door-to-Needle Time median consists in to deepen and streamline collaboration with the emergency services, thorough team preparation prior to the patient's arrival, including CT screening secure, bed-side analyzers utilizing, and targeted and regular training all professions involved in acute care for stroke patients. All these measures are economically unpretentious and therefore easy to apply in all healthcare facilities.

**Keywords:** Door-to-Needle Time. Stroke centre. Intravenous trombolysis. Acute ischemic stroke. Complex cerebrovascular centre.