



# Association between Length of Emergency Department Stay with NIHSS and MRS among Patients with Acute Ischemic Stroke

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Article Info	ABSTRACT
<b>Article type:</b> Original article	<b>Background and Aim:</b> Current guidelines for the early management of patients with acute ischemic stroke recommend completion of an evaluation within 60 min of the patient's arrival at the emergency department (ED) because prolongation of ED length of stay (LOS) may reduce the efficacy of acute stroke treatment. To evaluate the LOS in EDs at the public hospitals, we assessed the association between increased LOS with NIHSS and MRS values.
<b>Article History:</b> Received: 20 January 2020 Revised: 04 March 2020 Accepted: 14 May 2020	<b>Materials and Methods:</b> This study carried out an evaluation of the medical records of 1718 patients with stroke and transient ischemic attack who consecutively reported to the Stroke Registry from 2016 to 2019 at Namazi hospital in Shiraz.
<b>Keywords:</b> Emergency departments Length of stay MRS NIHSS Stroke	<b>Results:</b> The median ED LOS in the studied cohort was 75.88 (74.72–77.03) min and was prolonged (>60 min) in the most of patients. Prolongation of ED LOS contributed to a relatively high MRS and NIHSS rate. Functional status at discharge was worse in patients with prolonged versus non-prolonged LOS [modified Rankin scale: 2 (0–3) vs. 1 (0–3) points; $P < 0.001$ ]. Multivariate analysis showed that onset-to-door time more than 270 min or unknown time of symptoms onset, referral to ED in urban areas, living alone, presence of diabetes, motor, sensory, visual, and gait deficits at stroke onset, and NIHSS score on admission contributed toward prolongation of ED LOS.
	<b>Conclusion:</b> A prolonged ED LOS, because of ineffective prehospital logistics, ED urban location, patients' risk factors, and cohabitation profile and stroke symptoms and severity, commonly exists among patients with stroke and transient ischemic attack and contributes toward a relatively high rate of MRS and NIHSS in the Shiraz Namazi hospital.