

611 Acute stroke: emergency management, stroke units and complications

Introducing Telemedicine in Acute Stroke: Patients' and Carers' perspectives

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Acute Stroke Telemedicine: Utility, Training and Evaluation (ASTUTE)

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Background: Telemedicine can facilitate the delivery of thrombolysis in acute stroke. Development of reliable and acceptable telemedicine systems necessitates taking account of patients' and carers' perspectives. We constructed a Standardised Telemedicine Toolkit for the implementation of telemedicine in the UK. The Toolkit is currently being tested in practice and the consequences for patients evaluated.

Method: The Toolkit was used in the real-time assessment of patients with suspected stroke. Subsequently, patients' and carers' views of its acceptability and feasibility were explored through semi-structured interviews to gain their views of the delivery of telemedicine assessment, e.g. acceptability of the technology and perceptions of the knowledge and skills of clinical users. Interviews were transcribed verbatim and analysed using thematic analysis.

Results: We analysed findings from interviews with 24 service users; 19 were patients and 5 were carers. No patients experienced significant post-thrombolysis complications. Sixteen codes, clustered into four themes, were identified from initial coding and refined via further analysis. Themes were: information and understanding of telemedicine; the telemedicine process; support; evaluation. **Key findings included:** Positive opinions of the value and importance of telemedicine; willingness to be involved in the telemedicine consultation even from self-stated "technophobes"; confidence in the skills of bedside staff and decision-support providers; positive appraisal of the system; opinions of the system compared to face-to-face consultation varied.

Conclusions: Telemedicine appears to be mostly well-accepted by patients and carers. Staff training and experience with the system seem important in improving its acceptability. The findings will inform the further development of the online Standardised Toolkit at <http://www.astute-telestroke.org.uk>.

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A regional emergency stroke network yields a high rate of thrombolysis. The Resuval (Rhône Valley, France) thrombolysis registry.

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Background We present the first data following the establishment of a regional emergency stroke network in the Rhône Valley, France (Resuval stroke network - five stroke units) covering a population of 3 million people. This network focuses on dense regional stroke unit coverage and on the establishment of a standardised protocol for pre-hospital management with high priority of emergency transport, and neurologist and radiologist pre-notification of the arrival of a suspected stroke victim. **Methods** We prospectively evaluated all patients receiving thrombolysis for acute ischaemic stroke (AIS) in the network from October 1, 2010 to June 30, 2012. **Results** Six hundred fifty-six AIS patients have received urgent reperfusion treatment (96% IV thrombolysis, 2% combined IV and IA thrombolysis, 2% thrombectomy alone). During the observation period, a total of 7 193 AIS occurred in the population covered by the network (thrombolysis rate: 9.1%). Median age of patients who received reperfusion therapy was 73 (161 patients \geq 80 years - 24.5% of all thrombolytic treatments). Fifty-five % were men. Median distance from the place of stroke to the stroke unit was 19 km. Initial reaction was direct activation of Emergency Medical Services in 76% of cases. Eighty-three % of patients were primarily referred to a hospital with stroke unit on site. Median baseline NIHSS score was 11. Pre-treatment MRI was performed in 74% of cases. The rate of proximal arterial occlusion was 41% (Internal carotid artery: 13%, M1 middle cerebral artery: 24%, basilar artery: 4%). Median time from stroke onset (SO) to first medical contact was 38 min, from SO to admission: 1 h 35 min, from admission to brain imaging: 17 min, from SO to thrombolysis: 2 h 35 min. Sixty-seven % of patients were treated within the first three hours and 30% between 3 h and 4.5 h. The rate of symptomatic haemorrhage (ECASS criteria) was 3.5%. At 3 months, 41% of patients had a modified Rankin Scale (m-RS) score \leq 1 and 54% had a m-RS score \leq 2. **Conclusion** The establishment of a regional stroke network yields high rates of early stroke unit admission, thrombolysis and clinical recovery.