

Multi-disciplinary healthcare research/publications

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Rural Hospital Capabilities to Participate in Acute Stroke Care.

Poster presented at the American Academy of Neurology: San Diego, CA, April.

Objective: To determine the capabilities of rural hospitals to participate in acute stroke care.

Background: Rural areas often lack access to proximate stroke centers. Essential capabilities for acute stroke care in rural hospitals have not been assessed.

Design/Methods: A survey of resources for treatment of acute stroke patients was distributed to all hospitals in a mostly rural 31-county region. Administrators were asked to indicate whether their hospital provided acute stroke care components, considered essential, which included: CT scanning within 30 minutes, physician with stroke knowledge available within 15 minutes, 24-hour laboratory, and emergency services.

Results: Of the 55 hospitals surveyed, 51 responded. Of respondents, four provided none or only one of the essential stroke care components. Hospitals with all essential components (N=15) were larger (median of 200 versus 76 beds, $p=0.001$), had more ICU beds (median of 12 versus 7 beds, $p=0.001$), and admitted more stroke patients per year (median of 141 versus 31, $p=0.005$). Of all respondents, 49% had stroke protocols, 22% had clinical pathways, and 8% had stroke teams. Of the 30 hospitals utilizing t-PA protocols in the emergency room, 77% utilized stroke protocols, 73% had CT scans read by radiologists or neurologists within 45 minutes, 40% had physicians with stroke expertise available within 30 minutes, and 60% participated in quality improvement (QI) related to stroke. Hospitals that provided nurse stroke education were more likely to have stroke QI activities ($p < .001$).

Conclusions/Relevance: While most surveyed rural hospitals possessed some or all of the essential components necessary to participate in emergency stroke treatment, smaller hospitals often lacked the expertise on hand to properly supervise acute stroke care. A regional care plan including acute access to specialists by telemedicine, and urgent transport to essential services might improve care for rural populations at high risk for stroke.

Study supported by Health Resources and Services Administration. Grant Number: 1 D1BTH01044-01-00.