

Call to hospital times for suspected stroke patients in the North East of England: a service evaluation

Introduction: Stroke is a leading cause of mortality and morbidity. The role of the ambulance service in acute stroke care focusses on recognition followed by rapid transport to specialist care. The treatment options for acute ischaemic strokes are time dependent so minimising the prehospital phase of care is important. The aim of this service evaluation was to report historical prehospital times for suspected stroke patients transported by the North East Ambulance Service NHS Foundation Trust (NEAS) and identify areas for improvement.

Method: This was a retrospective service evaluation using routinely collected data. Data on overall call to hospital times, call to arrival times, on scene times and leave scene to hospital are reported.

Results: Data on 24,070 patients with an impression of stroke transported by NEAS between 01/04/2011 and 31/05/2018 are reported. The median call to hospital time increased from 41 to 68 minutes as shown in Chart 1. Call to arrival from 7 to 17 minutes, on scene from 20 to 30 minutes and leave to hospital from 12 to 15 minutes as shown in Chart 2.

Conclusion: The prehospital call to hospital time for stroke patients increased between 2011 and 2018. The call to arrival phase saw a sharp increase between 2015 and 2017 whereas on scene and leave scene to hospital times saw steadier increases. Factors including increasing demand on the ambulance service and reorganisation of regional stroke services may have contributed to the increase in times. Reducing the on scene phase of prehospital stroke care would lead to patient benefits and is the area where ambulance clinicians have the most influence.

Publication: This work has been accepted for publication in the British Paramedic Journal.

North East prehospital stroke times increased by 66% between 2011 and 2018



Chart 1. Call to hospital times (median and IQR)

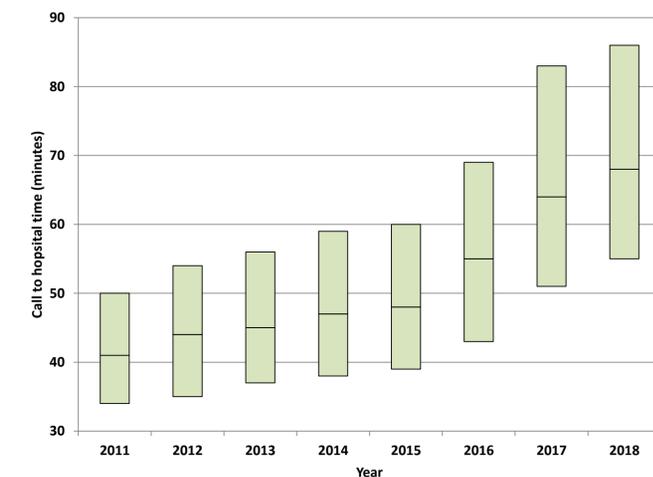
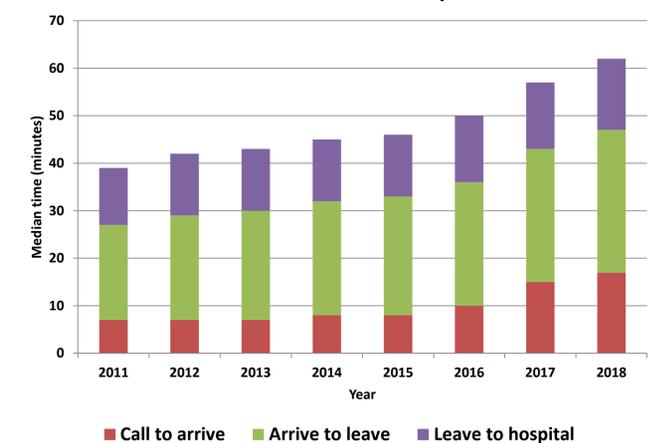


Chart 2. Phases of call to hospital time



Author details

Dr Graham McClelland
Paramedic Research Fellow
Graham.mcclelland@neas.nhs.uk
@mccclg



Daniel Haworth
Consultant Paramedic
Daniel.haworth@neas.nhs.uk
@microman5893

