BYPASSING THE NEAREST EMERGENCY DEPARTMENT
CLINICIAN PREDICTION OF CARDIAC ARRHYTHMIA IN PATIENTS PRESENTING TO THE ED WITH PALPITATION OR PRE-SYNCOPE

Background The recent introduction of major trauma networks throughout England in 2012 has changed how patients with suspected traumatic brain injury (TBI) are managed at the scene of injury. Selecting certain head trauma patients with suspected TBI for bypass to a more distant specialist neurological centre (SNC) is the networks function but may delay resuscitation whilst expediting neurological/critical care. This comparative effectiveness research study analysed the impact of this strategy on the risk adjusted survival rates of patients confirmed to have a TBI on brain CT scan.

Method and results The study employed data from the Trauma Audit and Research Network. Adult patients with a TBI on CT scan were included if they presented between June 2015 to February 2016 to SNCs or non-specialist acute hospitals (NSAH) in the North of England (South Cumbria, Lancashire and the North East Region). Patients were identified as having bypassed a nearer NSAH emergency department (ED) to a SNC using google maps enabling exclusion of patients whose nearest ED was within a SNC. Their risk adjusted survival was compared to TBI patients who received primary treatment at a NSAH with subsequent secondary transfer to a SNC or who remained at the NSAH until discharge or death. A multivariate logistic regression model predicting survival after TBI (Ps14) was utilised to adjust for variation in casemix between the cohorts.

Conclusions 84 of 339 (25%) of TBI patients bypassed a nearer NSAH to a SNC, whilst 75% received primary treatment at an NSAH (n=255). There was no significant difference in the standardised excess survival rate between the two cohorts; shown as +2.55% for bypass (−5.09% to +10.20%) versus −1.49% for non-bypass (−5.34% to +2.36%).

No significant survival benefit was identified for TBI patients who bypassed the nearest ED compared to those receiving treatment at the nearest NSAH.

The IPED study showed that use of a smartphone-based event recorder in ED patients presenting with palpitation or pre-syncope, increased the number of patients in whom an ECG was captured during symptoms over five-fold to more than 55% at 90 days (Reed MJ et al. Lancet eClinical Medicine 2019; 8: 37–46).

This pre-planned analysis looked at the ability of ED clinicians to predict cardiac arrhythmia in patients presenting to the ED with palpitation or pre-syncope.