

REPERFUSION AND QUALITY OF ACUTE CARE IN TEENAGE AND YOUNG ADULT STROKE POPULATION: DATA FROM THE UK NATIONAL STROKE REGISTRY (SSNAP)



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Introduction

Extrapolating research evidence for adult stroke to a younger population can be challenging. This study explores the clinical characteristics and access to acute care in teenage and young adult stroke patients.

Method

Data from the UK National Stroke Registry (The Sentinel Stroke National Audit Programme: SSNAP), including all acute hospitals in England, Wales, and Northern Ireland were co-analysed for teenage (16-17 years) and young adult stroke (18-30 years) admitted to hospital between April 2013 and March 2024.

Results

Of 1,033,347 stroke patients admitted to hospital, 497 (0.05%) were teenage and 4958 (0.48%) were young adults. Teenage patients had higher proportion of hypertension (34% vs 6.3%), atrial fibrillation (12.5% vs 1.2%) and previous stroke (16.9% vs 9%) than young adults ($P < 0.001$). Delays in brain imaging were longer with teenage stroke (71, IQR: 25-217 minutes vs 59, IQR: 20-179 minutes, $P = 0.003$). Access to stroke unit care was lower in teenage stroke (63% vs 68%, $P = 0.006$). Thrombolysis rates were 12.7% (teenage) vs 14% (young adult) with faster door to needle times with teenage stroke (55, IQR: 36-85 minutes vs 63, IQR: 41-98 minutes, $P = 0.07$). Symptomatic intracranial haemorrhage rates were not significantly different in teenage stroke (3.3% vs 1.6%) $P = 0.9$. Thrombectomy rates were similar 5.5% (teenage) vs 5.4% (young adult).

Conclusion

Teenage stroke patients had higher levels of vascular risk factors, but reperfusion rates were similar to older patients. In the absence of randomised trials specific to this population, registry data provides an important platform to examine the quality of care provided to young stroke patients including teenage stroke and provides reassurance regarding the safety of thrombolysis in this age group.

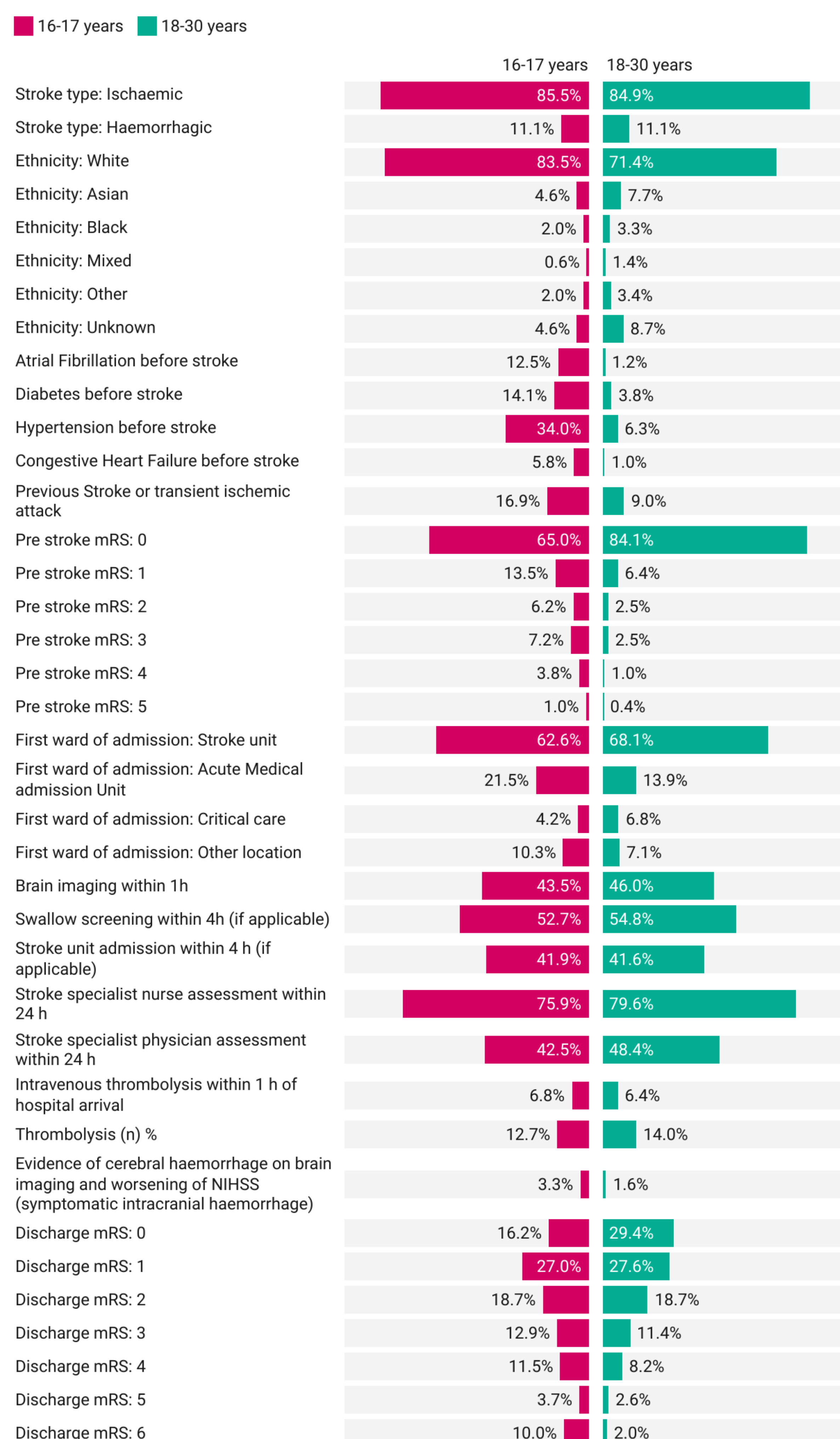


Figure 1. Comparisons of patient characteristics and stroke care process measures (proportions) for teenage stroke patients and young stroke patients

	16-17 years	18-30 years
Total admissions (n)	497	4958
Median NIHSS at arrival	4	3
Symptom Onset to arrival (minutes)	545.5 [110-1626]	509 [110-2077]
Median time to first imaging CT (minutes)	71 [25-217]	59 [20-179.25]
Median door to needle time (minutes)	55 [36-85]	63 [41-98]
Median NIHSS (thrombolysis patients only)	11	8
Median NIHSS at 24h (thrombolysis patients only)	4	2
NIHSS % improvement (thrombolysis patients only)	66.6	70
Median arrival to stroke unit (minutes)	250 [141-813]	243 [129-716]

Table 1. Comparison of median patient characteristics and stroke care process measures for teenage stroke patients and young stroke patients

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