

# Factors that influence variation in clinical decision-making about thrombolysis in the treatment of acute ischaemic stroke: results of a discrete choice experiment

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## Plain English summary

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## Plain English summary

Intravenous thrombolysis (blood thinner or 'clotbuster') is an effective emergency treatment for patients with a stroke due to a clot which blocks a blood vessel in the brain. Although this is recommended for carefully selected patients, treatment rates vary across the UK. Since the introduction of '24/7' stroke services (services available 24 hours per day, 7 days per week), continuing differences may represent differences in clinicians' decision-making on patients' suitability for treatment. Decision-making is complex, owing to the emergency context of the decision (treatment must be given within 4.5 hours of symptom onset) and the many factors that influence the levels of benefit/risk for patients. These differences in decision-making could result in undertreatment or in the inappropriate treatment of patients who do not meet treatment criteria.

We conducted a study describing hypothetical patients with different characteristics [e.g. age, gender, seriousness of symptoms using the National Institutes of Health Stroke Scale (NIHSS)] to understand which characteristics influence doctors' decision-making. We found that patients with the following characteristics were more likely to be offered thrombolysis (compared with reference levels in brackets): stroke onset time of 2 hours 30 minutes (50 minutes); moderate pre-stroke dependency on others (moderate to severely dependent); systolic blood pressure of 185 mmHg (140 mmHg); higher stroke severity scores (NIHSS 2 without aphasia); age 85 years (65 years); and Afro-Caribbean (white). Factors linked with the decision not to offer treatment were age 95 years; symptom onset time of 4 hours 15 minutes; severe dementia (compared with no memory problems); and systolic blood pressure of 200 mmHg. Three clinician-related characteristics were linked with an increased likelihood of offering treatment (perceived strength of the evidence for the treatment; treating more patients in the past 12 months; and high discomfort with uncertainty) and one characteristic was linked to a decreased likelihood of offering treatment (comfort treating patients outside treatment criteria).

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