

7 TRANSFER FROM A SPOKE HOSPITAL TO A VASCULAR HUB

In total, 7/78 spoke hospitals described a network where they referred to two or more vascular hubs. A more complicated picture emerged with the number of spoke hospitals from which the vascular hub received referrals. This ranged from zero to 22, with a mean of 3.54 and mode of two. The total number of spoke hospitals this was based on was 170, suggesting that there are 36 spoke hospitals referring to more than one vascular hub. Since the first stage of defining a vascular network is determining the hospitals it includes, this variation suggests some confusion in network boundaries.

All the patients in this study were admitted to a vascular hub. In 16/50 vascular hubs, at least one spoke hospital within the network was more than an hour away by blue light ambulance in working hours. The median time from arrival at the spoke hospital to arrival at the vascular hub was 8.16 hours, exceeding the recommended target for treatment of immediately threatened limbs (Rutherford IIb) from relevant sensory-motor symptom onset.

For 34/138 (24.6%) patients the reviewers reported that the time spent at the spoke hospital was too long. Waiting for an ambulance was the most common reason for the delay (11/34) (T7.1).

Table 7.1 Details of the delay in the transfer to a vascular hub	Number of patients
Waiting for an ambulance for the transfer	11
Decision-making in the spoke hospital	9
Referral/acceptance at the vascular hub	7
Distance needed to travel to the vascular hub	2
Unclear	4

Answers may be multiple; n=34

Case review data

There were 13/81 (16.0%) patients who had a delay of greater than 24 hours (F7.1). The nine patients who had a deterioration in their Rutherford category in the spoke hospital had a mean transfer time of ten hours (range 3.9 to 19.4 hours). Reviewers stated that eight patients would have benefited from being admitted directly to the vascular hub.

All responding ambulance trusts stated that a Category 2* transfer would be booked if the clinician booking the transfer considered that there was a risk to a limb. It appears that the existing vascular network and ambulance pathways and protocols are not fulfilling the needs of patient networks for those with ALI. *Category 2 is a target response time average of 18 minutes, with 90% of calls being responded to within 40 minutes. For 2023/24 and 2025/26, the national target is an average of 30 minutes.

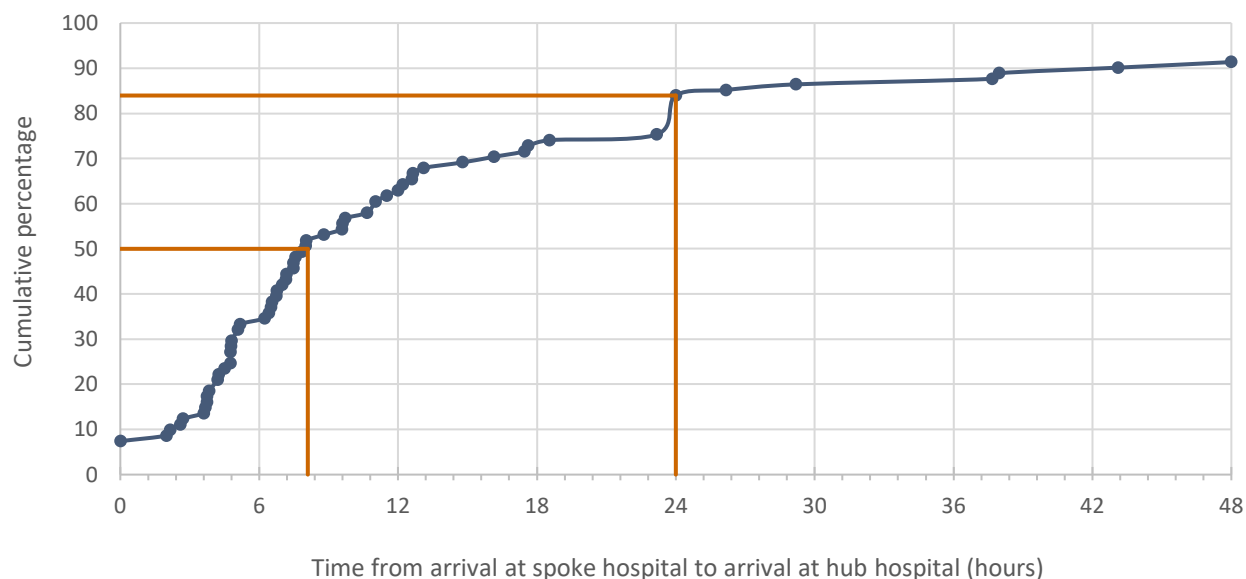


Figure 7.1 Time from presentation to spoke hospital to arrival in vascular hub; $n=81$

Case review data

A well-organised vascular network should be able to reduce the issues that have been identified with presentations to spoke hospitals. Written guidance specific to the management of suspected ALI was available in only 56/91 spoke hospitals (7.2), and where it existed key components were often missing. In 18/56 there was no single referral contact point at the vascular hub and 16/56 had no description covering the referral. The urgency of the ambulance transfer was not documented in 31/56 and expected timeframes were only documented in nine. The Rutherford category was included in only 8/56 spoke hospital guidelines which may explain why it was so infrequently used.

Table 7.2 Details of ALI guidance in spoke hospitals	Number of hospitals
A protocol covering the process of referring the patient to the vascular hub	40
Referrals to the vascular hub via a defined vascular surgical single point of contact	38
A protocol for the assessment and recognition of ALI	31
Category/urgency of ambulance transfer	25
Preferred imaging modalities for patients with symptoms of ALI	24
A transfer protocol covering the patient transfer to the vascular hub	24
A protocol covering medical treatment of patients who are not transferred	13
Recommended timeframes for the completion of required steps on the pathway	9
A protocol covering the discharge of repatriated patients ensuring all necessary onward referrals and follow-up appointments are made	9
Inclusion of a 'Rutherford' or other severity scale	8
A protocol/standard operating procedure covering the process of repatriating the patient to the spoke hospital following treatment at the vascular hub	8

Answers may be multiple; $n=56$

Spoke hospital organisational data

When patients are transferred between hospitals sharing their medical records and imaging is essential for safe and expeditious treatment. There were 34/91 spoke hospitals in which medical

records could be shared electronically and 56/91 in which images could be shared immediately (T7.3). All other systems that were described, such as email and paper copies, risk delays or other harm.

Table 7.3 Record sharing in vascular networks for patients treated for ALI	Number of spoke hospitals
The spoke hospital and the vascular hub are on the same electronic imaging archiving system, which allows immediate sharing of image reporting	56
The patient case notes sent to the vascular hub are primarily on paper and travel with the patient	42
The spoke hospital and the vascular hub are on the same electronic patient record system, allowing immediate sharing of written case notes	34
Patient case notes are normally emailed to the vascular hub	6

Answers may be multiple, n=91

Spoke hospital organisational data