10 DISCHARGE AND OUTCOME

The median length of stay was 19 days for the whole study population and 28 days for patients who had an amputation (F5.1). Patients who have an amputation typically require longer admissions. The mean number of dedicated vascular surgery beds in vascular hubs was 26.4 (range 15-60) with two stating that they had no dedicated beds. Vascular hubs must have the infrastructure and staffing necessary to support their commissioned services.

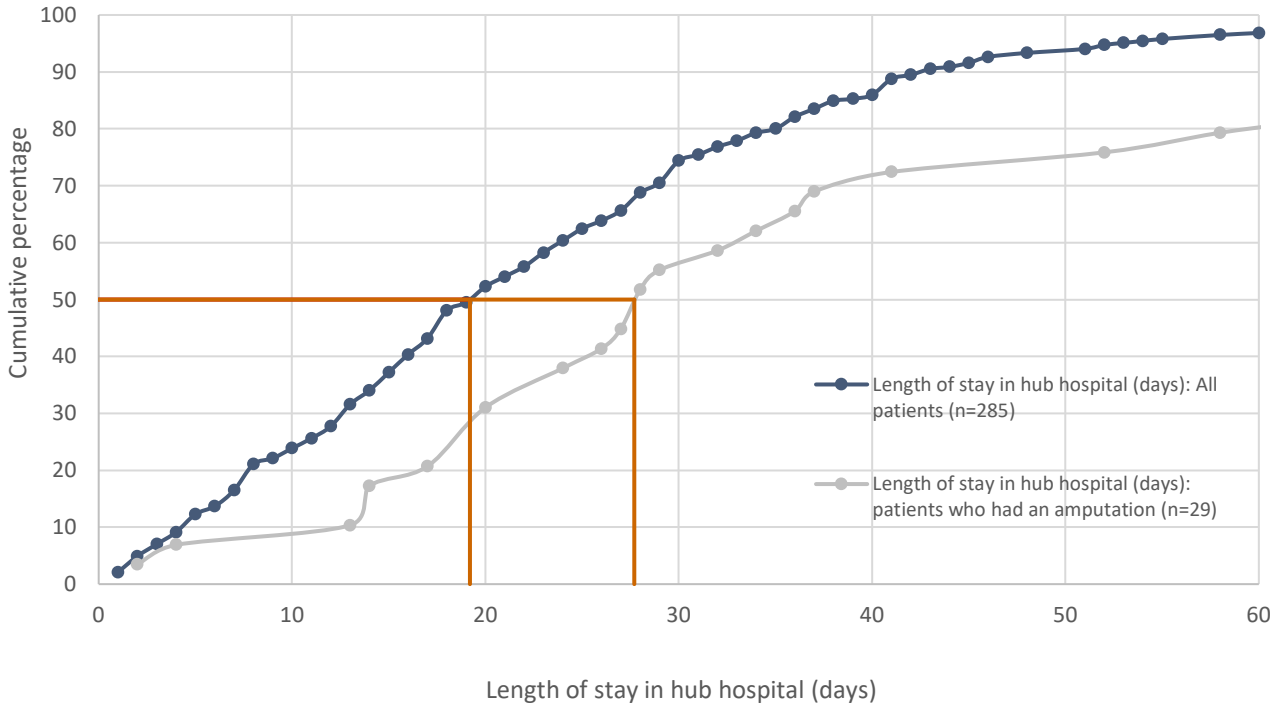

Figure 10.1 Length of stay in hospital for the study population; *n=285* and for patients who had an amputation; *n=29*
Case review data

Where possible and appropriate, networks can improve access to services by using other facilities when vascular hub care is no longer required. However, this process currently appears to be under-developed as only 10/291 (3.4%) patients who survived were discharged back to a spoke hospital and 13/291 (4.5%) were transferred to a step-down or rehabilitation unit.

The 'Provision of Vascular Services 2018' describes repatriation 'rules' as "*making or breaking the capacity of an arterial centre to deliver good, timely care ....this needs to be at executive level because of the implications it has on the wider functioning of all hospitals concerned.*"[2] Only 18/58 vascular hubs returning an organisational questionnaire stated that they had a policy or standard operating procedure for repatriating patients to their referring hospital. Care closer to a patient's home also makes it easier for friends and relatives to visit, assisting recovery.[40]

Discharge planning

NCEPOD reports frequently identify issues with the quality of discharge summaries which results in incomplete communication between hospital services and primary care, affecting continuity of care and safety-netting.

The reviewers identified a discharge summary for 262/291 (90.0%) patients who survived to discharge. Information was missing in 44/262 (16.8%), and the discharge planning was considered inadequate in 19/257 (7.4%) (T10.1). The most common omission was details of the vascular follow-up (27/44; 61.4%). Referrals to community services, including diabetic clinics, were missing in 26/44 (59.1%). The diagnosis was not recorded in 23/44 (52.3%) patients. Of note was the fact that just 6/61 (9.8%) patients who had recently undergone an amputation were referred for psychological support. ALI-specific discharge proformas may help to improve oversight of the discharge process and communication.

Table 10.1 Information missing from the discharge summaries	Number of patients	%
Details of a follow-up appointment with the vascular surgeon	27	61.4
Referrals to community services	26	59.1
Diagnosis	23	52.3
Referral for psychological support	6	13.6
Risk of return of symptoms	5	11.4
Telephone number to call if the patient has problems	4	9.1
Medications prescribed at discharge	4	9.1
Care plan	4	9.1
Details of the procedure/s performed	3	6.8
Wound care advice	2	4.5
Case worker's details	1	2.3

Answers may be multiple; n=44

Case review data

Currently, there is no standardised risk management package for people with ALI. Risk management is individualised based on the cause of ALI and patient risk factors.[28]

Anticoagulants were prescribed in 148/291 (50.9%) patients and antiplatelet medication in 114/291 (39.2%) (F10.2). Any medications not documented on a discharge plan with a specified duration of prescription may be discontinued at the first primary care review. Although published studies show that 25% of patients with ALI have evidence of thrombophilia, there is no consensus on what, if any, therapy is indicated after an ALI.[28]

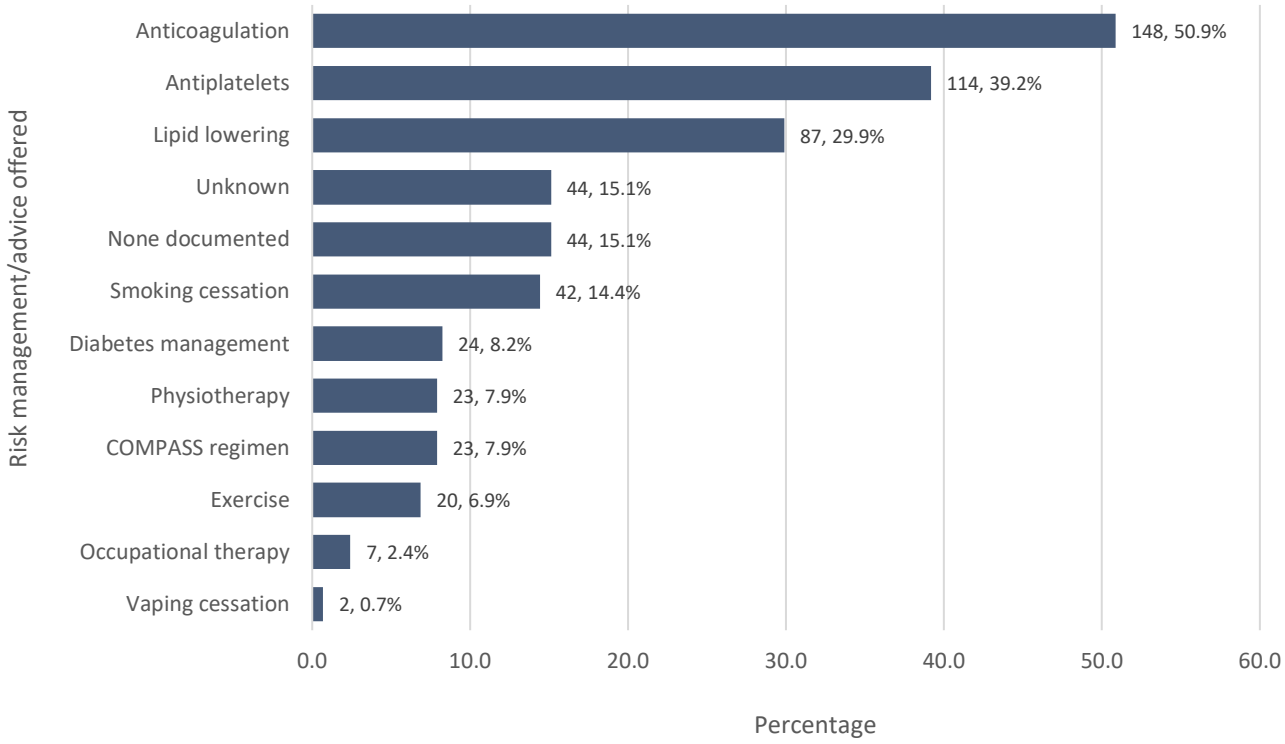

Figure 10.2 Long-term risk management/advice at discharge *Answers may be multiple; n=291*
Case review data

In the broader population of people with peripheral arterial disease (PAD), there is good evidence that low-dose rivaroxaban (2.5 mg twice a day) plus low-dose aspirin once a day improves outcomes compared to aspirin alone. In the Cardiovascular Outcomes for People Using Anticoagulation Strategies (COMPASS) trial this combination reduced major adverse limb events (including ALI and major amputation) by 46% and major adverse cardiovascular events by 28%, with no increase in severe bleeding.[25]

In total, 166/330 (50.3%) patients in this study had a revascularisation procedure and were discharged with an intact limb. For patients in the VOYAGER PAD trial who had undergone revascularisation, the combined medications significantly lowered the composite incidence of ALI, major amputation, myocardial infarction, ischaemic stroke, or death. However, the effects on major bleeding were mixed, with one measure showing no increase and another showing a significant increase compared to aspirin alone.[24]

Only 23/291 (7.9%) patients were documented as being commenced on the 'COMPASS/VOYAGER PAD regimen', with a possible additional 55/291 (18.9%) patients (those taking a DOAC and antiplatelet medication) being prescribed it without naming it. It is unknown if alternative focused strategies may be more effective in specific causes of ALI or patient subgroups. The role of antiplatelets, the various available anticoagulants or a combination of the two requires evaluation across the various causes of ALI. Future national guidance should include a consensus and data-based best practice post-ALI pharmacological regimen until data specific to ALI become available.

Of the 76 patients with known diabetes prior to their ALI, 70/76 (92.1%) had type 2 and 6/76 (7.9%) had type 1. In 43/76 (56.6%) a need for improved diabetes management was identified.

A follow-up appointment was not arranged for 45/291 (15.5%) patients. The reviewers considered that this was inappropriate for 16/45 patients.

No risk management was documented for 44/291 (15.1%) patients and where documentation existed, it was considered inadequate in 20/291 (6.9%) cases, including 15 patients who should have had smoking/vaping cessation advice. Smoking cessation advice was offered to 58/92 (63.0%) current smokers.

Support and functional status

ALI is a life changing event for many patients. For those who survived, 210/330 (63.6%) patients were discharged home without the need for additional support, whereas at admission this figure was 162/330 (49.1%) (F10.3).

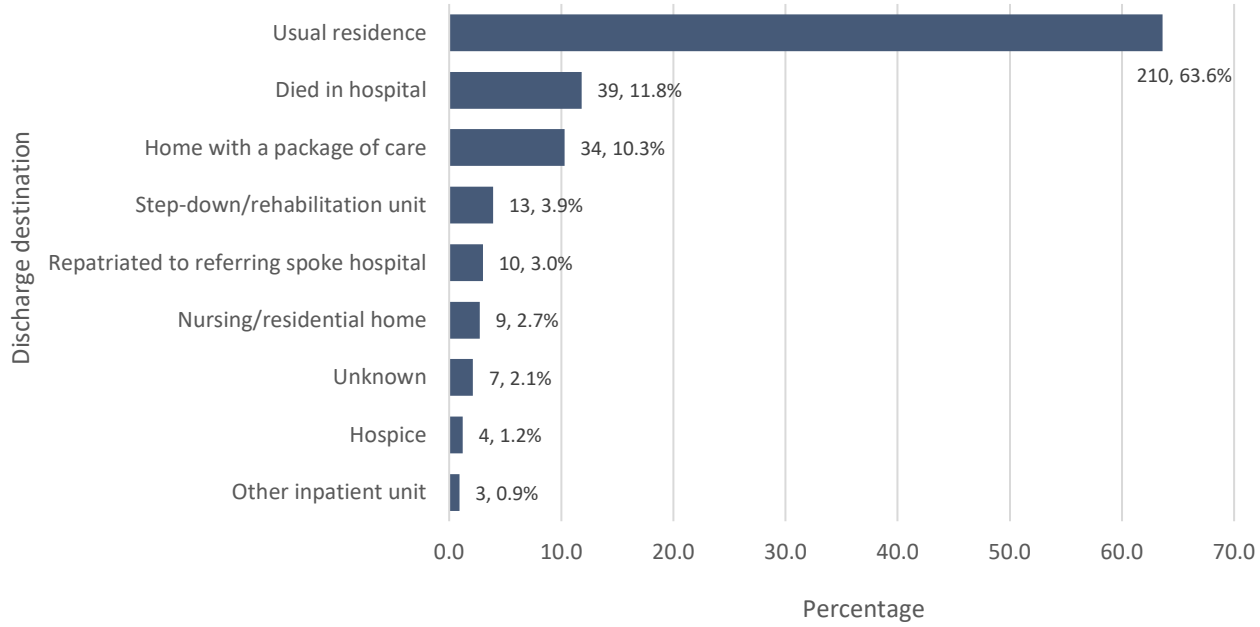

Figure 10.3 Discharge destination of the study population; *n=330*
Case review data

While the Rockwood frailty score for 141/255 (55.3%) patients was unchanged at discharge, a small number showed an improvement (18/255; 7.1%), and the reviewers identified a deterioration in functional status in 68/255 (26.7%) patients (T10.2).

Table 10.2 Change in Rockwood frailty score between admission and discharge	Number of patients	%
No change	141	55.3
Decrease in functionality	68	26.7
The patient died	28	11.0
Increase in functionality	18	7.1
Subtotal	**255**	
Unable to answer	38	
Total	**293**	

Case review data

Readmission

Readmissions within 30 days were uncommon (16/291; 5.5%); 7/16 were for issues with the same limb including infection and/or worsening ischaemia requiring another procedure.

Mortality

The 30-day mortality for this group of patients was 12.7% (42/330), of which the inpatient mortality for patients admitted to a vascular hub was 11.8% (39/330) patients. This included 13 patients who had a revascularisation procedure, nine amputations and 17 who did not undergo a procedure in the vascular hub. The mortality for those who underwent surgery was 6.7% (22/330).

Of the inpatient deaths, 26/39 were considered predictable with all receiving palliative care at some point in their care pathway. There were 16/39 patients who had a medical certificate of cause of death, and ALI was listed in part 1a for seven of these patients.