

Utilisation of Hospital in The Home Services in Management of Infective Endocarditis

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Introduction:

Infective Endocarditis (IE) is a common pathology requiring admission to hospital. The length of stay in these patients can often be prolonged due to the need for prolonged courses of intravenous antibiotics. This can be associated with poor outcomes for the patient due to medical complications from prolonged hospital stay as well as increasing the costs to the healthcare system. One way of reducing length of stay is utilising Hospital In The Home (HITH) services for administration of intravenous antibiotics in patients who are otherwise stable and can be discharged home safely, but still require completion of several weeks of antibiotics.

Methods:

A retrospective records-based review of patients with a diagnosis of active IE between July 2016 to January 2018 at Prince Charles Hospital (Brisbane, Australia) was carried out.

Results:

One hundred and twenty-six (126) patients had a diagnosis of active IE. Twenty-one (21) (16.6%) patients had an initial stay >30 days (range 1-62) and 44 patients (34.9%) were readmitted to hospital with (32) 72.7% of these having no more than 1 readmission. Forty-two patients (33.2%) were discharged to HITH with no deaths during the episode.

The initial length of say (LOS) median (and mean +/- SD) for HITH was 16 (19.5 +/- 13.4) vs overall non-HITH LOS of 14 (17.6 +/- 12.7) days. Of the 84 non-HITH patients, 45 (53.6%) were transferred, 26 (31.0%) were discharged home (2 at own risk), 7 (8.3%) to rehab, palliative care or other healthcare establishment and 6 (7.1%) died in hospital.

Total LOS for transferred patients was 41 days, median LOS for discharged to home was 14 (17.6 +/- 11.5), and LOS for discharge to rehab, palliative or other health care establishment was 29 (26.3 +/- 14.8).

Discussion:

HITH has been used since the 1970's for administration of intravenous antibiotic therapy for a range of infections, and has been shown to be a cost effective alternative to prolonged hospital admissions^{1,2,3}. Patients deemed suitable for HITH are clinically more stable than those that remain in hospital to complete the required course of intravenous antibiotics. This is reflected in our cohort as there were no deaths in HITH group compared to the 6 deaths in the Non-HITH group. The LOS for HITH and Non-HITH patients who did not require transfer to another hospital appear to be similar, however, LOS in Non-HITH patients requiring hospital transfers was over 50% greater than the HITH group.

Conclusion:

The treatment of infective endocarditis is complex and prolonged. Hospital in the home is a reasonable alternative for a select group of patients to reduce the LOS. Outcomes following IE are multifaceted; further investigation of the patient benefit, health service utilisation and barriers of HITH for IE is warranted.

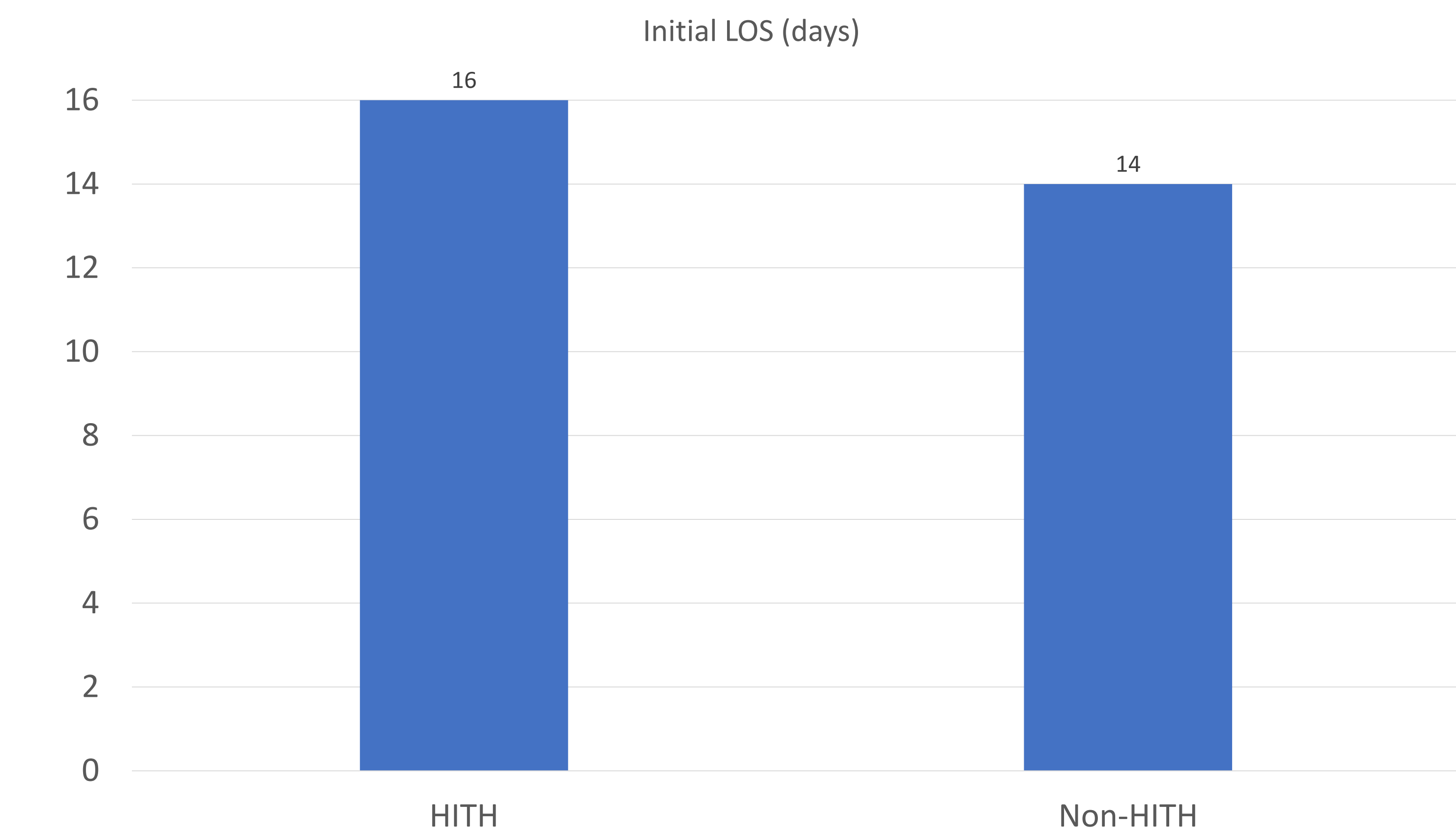


Figure 1: Initial Length of Stay (LOS) in HITH vs Non-HITH patients.

Discharge Destination	N = 84	%
Home	26	31%
Hospital Transfer	45	53.6%
Rehab/Palliative Care	7	8.3%
Died in Hospital	6	7.1%

Table 1: Discharge destinations for Non-HITH patients.

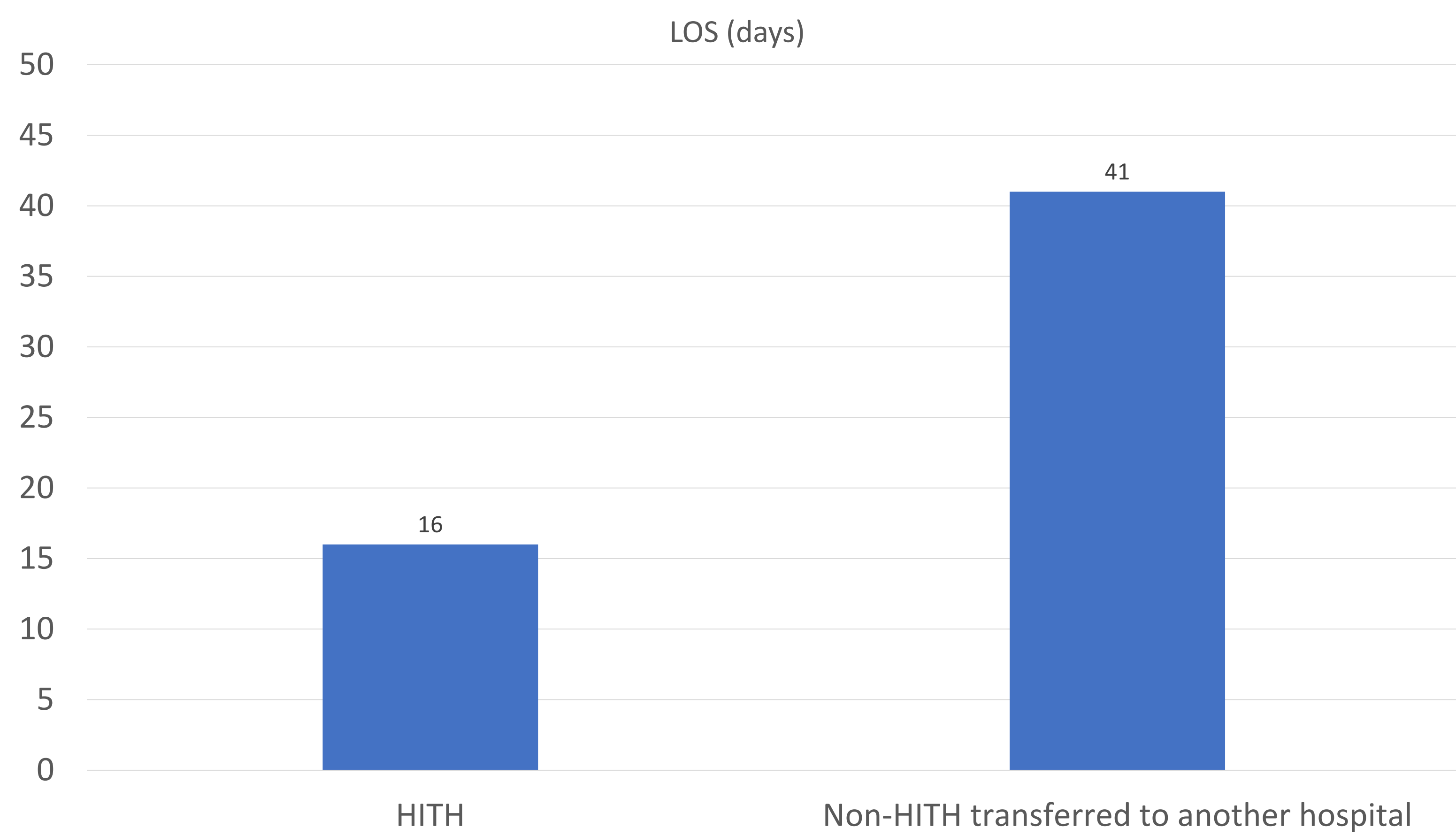


Figure 2: Length of Stay (LOS) in HITH vs. Non-HITH patients transferred to another hospital.

References:

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3. Tice AD, Rehm SJ, Dalovisio JR, Bradley JS, Martinelli LP, Graham DR *et al*. Practice guidelines for outpatient parenteral antimicrobial therapy. *Clin Infect Dis* 2004; 38: 1651–72.