Impact of home-based hepatology nurse-led care on disease knowledge in patients with cirrhosis

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RESEARCH WEEK 20-24 OCTOBER 2025 INSPIRED RESEARCHERS Northern Health

INTRODUCTION

- Insufficient disease knowledge in patients with cirrhosis contributes to suboptimal disease management.
- Liver At Home (L@H), a novel 12-week home-based care program offered at a tertiary metropolitan health service designed for recently hospitalised patients with cirrhosis, provides continued outpatient care through regular hepatology nurse home visits/telehealth reviews with a focus on the management of cirrhosis-related complications.
- We aimed to evaluate baseline knowledge pertinent to chronic liver disease in patients with cirrhosis, and the impact of the L@H program on patient knowledge.

METHODS

- Patients with cirrhosis admitted under the Gastroenterology Unit and enrolled to L@H between **01/03/2023 and 01/09/2024** were offered the Cirrhosis Knowledge Questionnaire (CKQ), validated in patients with cirrhosis[1]
- The questionnaire was aimed to be completed at the time of enrolment and culmination of L@H (at the end of 12 weeks).
- The questionnaire comprised 14 questions, each scored out of 1, covering the management of ascites (/5), varices (/3), hepatic encephalopathy (HE) (/3), and other complications/lifestyle factors pertinent to cirrhosis (/4).
- The primary outcome was **change in total knowledge score**.
- Secondary outcome was **change in breakdown scores** for each knowledge category.
- Baseline + final scores were compared using Chi square test for categorical, and Mann-Whitney U test for continuous variables.

RESULTS

- Of 89 patients enrolled to L@H, 67.4% (n=60) completed the baseline CKQ at time of enrolment.
- The median baseline total knowledge score was 8/14 (IQR 7-10), with the following breakdown scores:

Ascites (out of 5)	Varices (out of 3)	HE (out of 3)
3 (IQR 2-4)	2 (IQR 2-3)	0 (0-1)

- Baseline knowledge scores about HE was poor, with 21/60 (35%) scoring 0 out of 3.
- 20 patients completed the CKQ both at time of enrolment (baseline) and completion of the program:
  Median age 56 years (IQR 43.5-70.5)
  30% (n=6) female
  Median MELD-Na score 17.5 (IQR 12.5-20.5)]

- Of these 20 patients, during index admission:

80% (n=16) had ascites

25% (n=5) had ≥ Grade 2 HE

10% (n=2) had variceal bleeding

- Median total knowledge score in these 20 patients **significantly improved** at L@H completion: 9/14 (IQR 9-12) vs. 7.5/14 (IQR 7-9), p<0.001)
- Most patients (n=17, 85%) demonstrated improved total knowledge scores

Comparison of baseline and final median knowledge breakdown scores revealed:

Significantly improved knowledge regarding ascites
4/5 (IQR 3-5) vs. 3 (IQR 2-3.5), p=0.003

A trend towards improved knowledge regarding HE
2/3 (IQR 1-3) vs. 1 (IQR 0.5-2), p=0.08

Stable knowledge regarding varices
2/3 (IQR 2-3) vs. 2 (IQR 1.5-3)

CONCLUSION

- Baseline knowledge regarding hepatic decompensation in hospitalised patients with cirrhosis is quite poor
- Clinician-led education for inpatients with cirrhosis should focus more on insidious complications such as encephalopathy.
- A nurse-led transitional care program such as L@H may provide further opportunity for improved education for patients with cirrhosis following discharge from hospital.