

ABSTRACT

Cirrhosis or advanced stage of chronic liver disease (CLD) is an increasingly prevalent cause of morbidity and premature mortality in the Australian population. Furthermore, it is associated with increased health expenditure due to recurrent hospital admissions. These often occur due to inadequate monitoring, education and self-management support for cirrhotic patients after discharge from hospitals under the current models of care (MOCs). New MOCs with chronic disease management (CDM) principles are required to manage the increasing burden of CLD on the healthcare system. This thesis evaluated innovative MOCs in cirrhosis by studying the following:

- Impact of a coordinated care model on hospital readmissions and survival.
- Validation of a newly developed knowledge questionnaire.
- Assessment of a self-management tool, the Partners in Health (PIH) scale.
- Qualitative and cost-effectiveness analysis of a novel MOC, nurse-led cirrhosis clinics (NLCCs).
- Innovative MOC in delivering hepatitis C virus (HCV) screening and treatment in psychiatric inpatients as a micro-elimination project.
- Cost-effectiveness of decentralised MOCs in HCV treatment.

In the first study, liver-related emergency readmission (LREA) rates and survival in patients with decompensated cirrhosis managed within a coordinated MOC were compared to those managed with standard care. The study demonstrated lower incidence of LREAs and improved survival, supporting coordinated MOC in cirrhosis.

The second study aimed to develop and validate a knowledge questionnaire for cirrhotic patients. A 14-item questionnaire was evaluated for face, construct and known-group validity in 116 patients. A three-factor construct with seven items on ascites, variceal bleeding and hepatic encephalopathy was validated. Patients managed within a CDM model had higher knowledge scores.

The PIH scale is a validated tool for assessment of self-management knowledge and behaviours in patients with chronic diseases. The aim of the third study was to validate its use in cirrhotic patients. Prospective evaluation in 133 patients confirmed its four-factor structure: partnership in treatment, knowledge, recognition and management of symptoms, and coping. Patients managed within a CDM model had higher self-management scores.

The fourth study aimed at a qualitative and cost-minimisation analysis of NLCCs, a unique MOC for patients with compensated cirrhosis. Patients expressed satisfaction and a good understanding of the model. Upskilling and provision of professional care in a holistic manner were important to the nurses. Hepatologists expressed confidence and satisfaction with the model, which was also cost effective.

The fifth study investigated HCV seroprevalence, risk factors and treatment model in an Australian cohort of psychiatric inpatients, who are under-served with HCV screening and treatment. The study established a high HCV seroprevalence and confirmed the efficacy of a multidisciplinary treatment model.

The sixth study evaluated the cost-effectiveness of four MOCs in HCV treatment, in a real-life cohort of non-cirrhotic HCV patients treated statewide. Using a Markov model-based analysis of liver disease progression the cost-effectiveness of general practitioner-led model and mixed consultant nurse model were demonstrated.

In conclusion, this thesis explored the unmet need for innovative, multidisciplinary CDM models in CLD management. It demonstrated positive clinical, economic and qualitative outcomes of alternative MOCs and evaluated tools to assess educational and self-management needs in cirrhotic patients.

