

Mission Statement

To increase the *uptake* of Advanced Care Planning (ACP) amongst patients with **End Stage Liver Disease*** (ESLD) admitted to the **Gastroenterology (GE) General Ward** from 40% to 70% in 6 months.

*Cohort: Patients with liver cirrhosis who are admitted to the General Ward (GW) with any form of decompensation e.g. (but not limited to) Ascites, Variceal Bleed, Hepatic Encephalopathy.

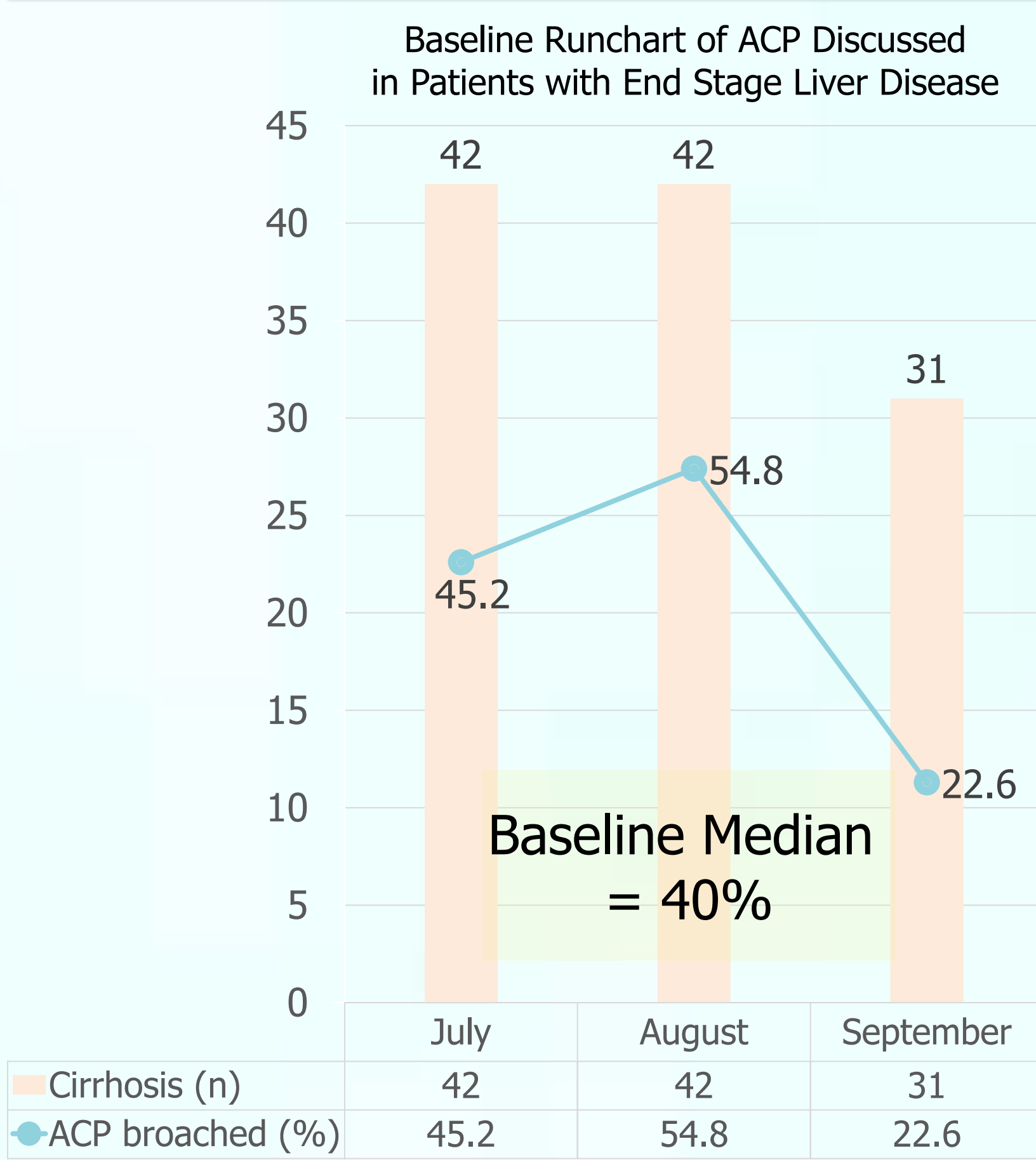
Team Members

	Name	Designation	Department
Team Leaders	Dr Lin Huiyu	Senior Consultant	Gastroenterology & Hepatology
	Dr Chen Kok Pun	Consultant	
Team Members	Dr Kalaiyarasi Kaliyaperumal	Senior Consultant	Specialty Nursing
	Dr Kenneth Lee Pei Zheng	Senior Resident	
	Ms Hu Yalan	Senior Nurse Clinician	
	Ms Jacqueline Lin	Nurse Clinician	Ward 9B
	Ms Michelle Wong Shi Qi	Senior Staff Nurse	

Mentors:

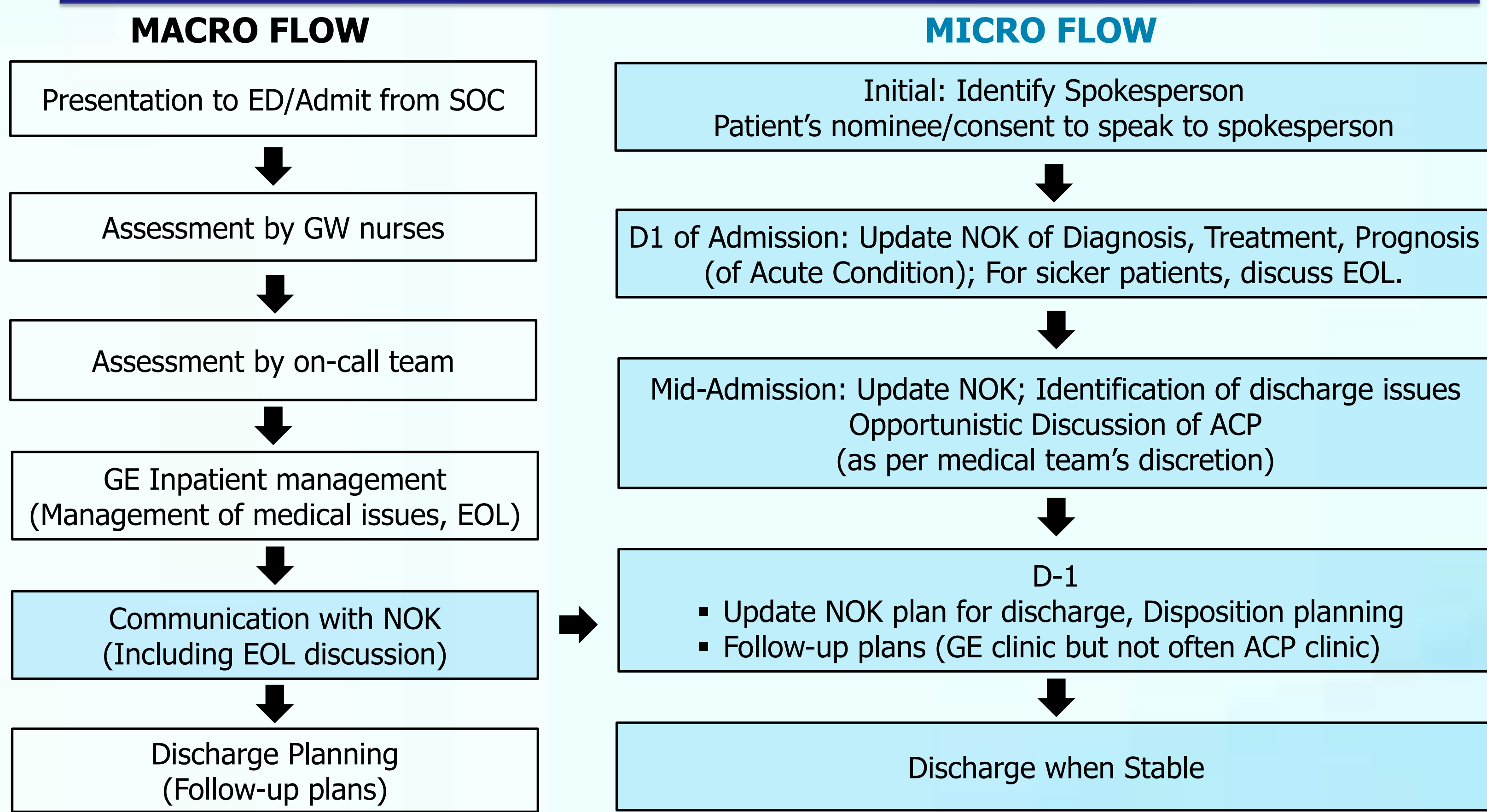
- A/Prof Gervais Wansaicheong (Senior Consultant, Diagnostic Radiology)
- Dr Tan Tong Leng (Senior Consultant, Orthopaedic Surgery)

Evidence for a Problem Worth Solving

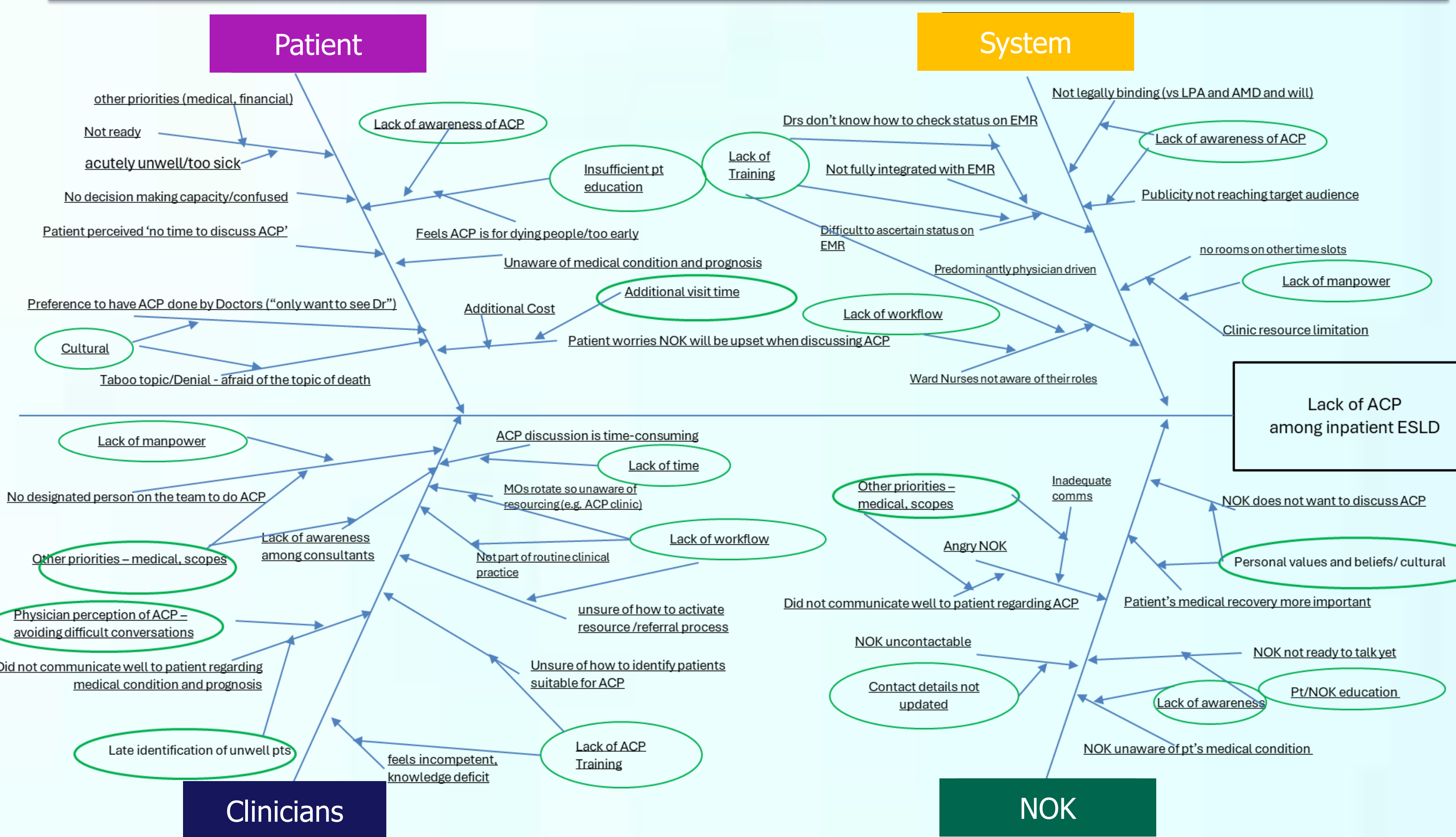


- Patients with end stage liver disease have frequent admissions to Gastroenterology with high in-hospital morbidity and mortality, ICU admissions. Many of our patients are elderly and non-transplant candidates.
- Advanced Care Planning (ACP) discussions regarding goals of care often do not occur until end of life for these patients.

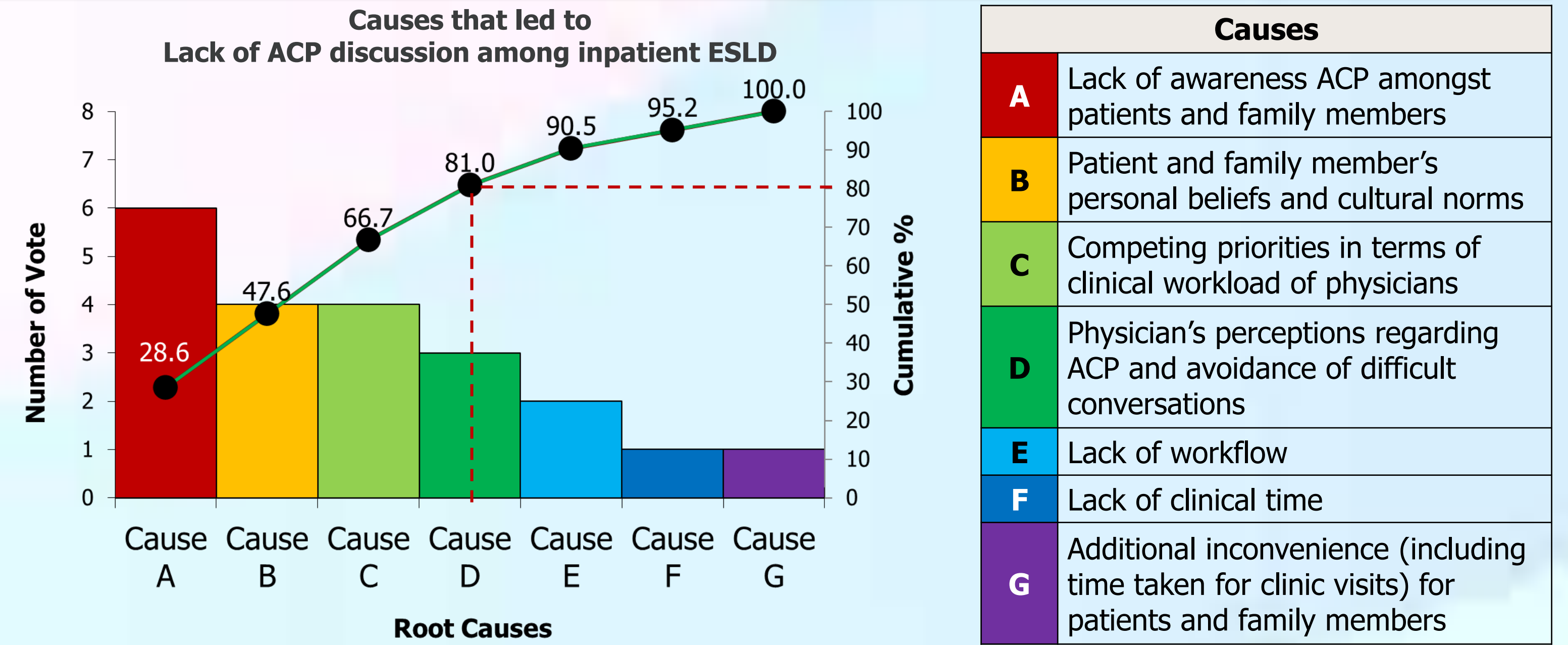
Flow Chart of Process



Cause and Effect Diagram



Pareto Chart

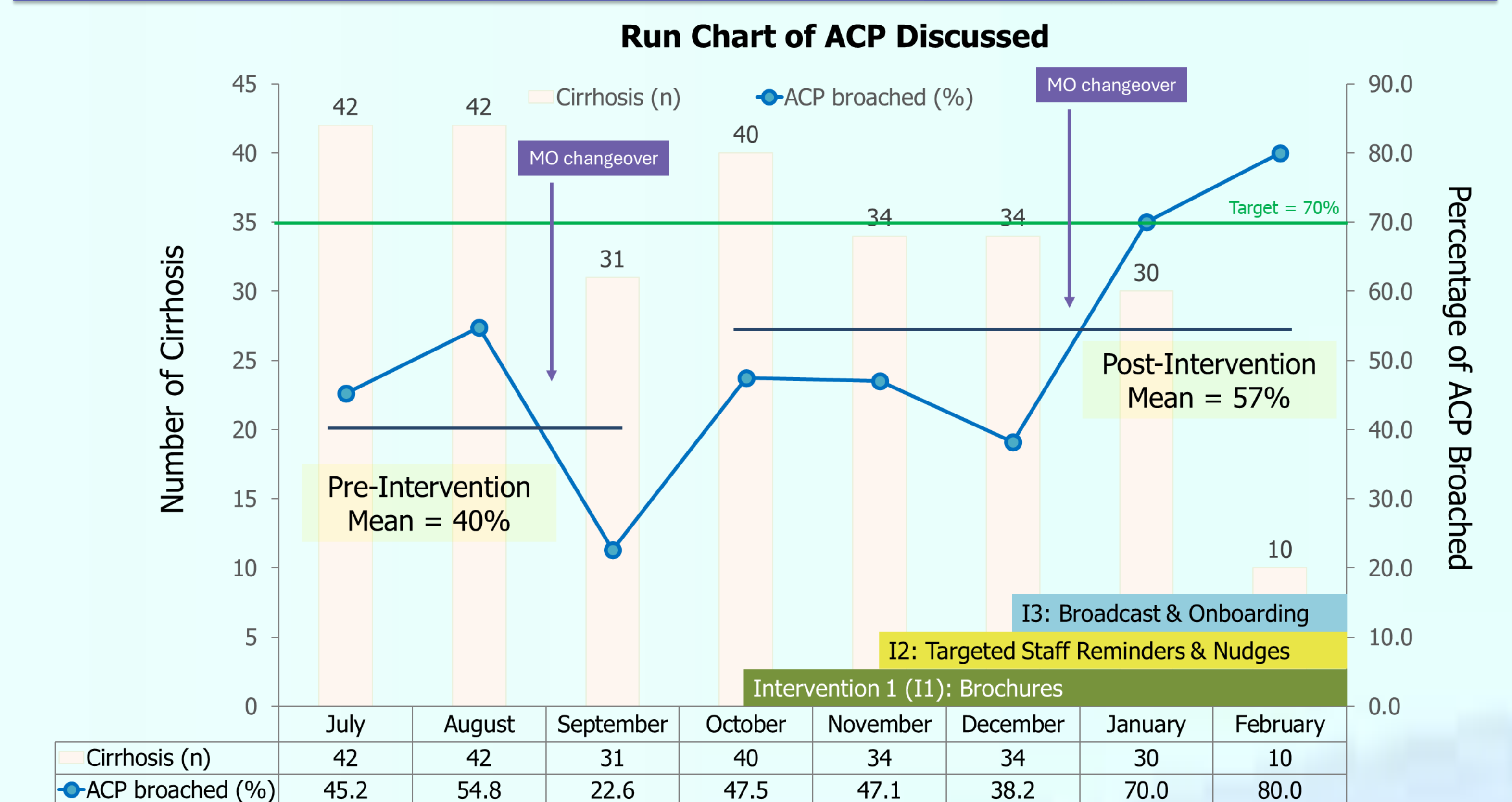


Cause	Description
A	Lack of awareness ACP amongst patients and family members
B	Patient and family member's personal beliefs and cultural norms
C	Competing priorities in terms of clinical workload of physicians
D	Physician's perceptions regarding ACP and avoidance of difficult conversations
E	Lack of workflow
F	Lack of clinical time
G	Additional inconvenience (including time taken for clinic visits) for patients and family members

Implementation

Root Cause	Intervention	Implementation Date (2024-2025)
Cause 1: Lack of awareness ACP amongst patients and family members	Placement brochures containing information on ACP in ward 9B ▪ Bedside education on health condition ▪ Physician to continue to broach ACP	14 to 21 Oct 21 to 28 Oct
Cause 2: Competing priorities in terms of clinical workload of physicians	▪ Standardised script translated into 4 languages (English, Chinese, Malay and Tamil) - smart phrase on Epic Teams group for MOs, Team Members ▪ Staff Nurse/Assistant Nurse to issue ACP brochure, provide brief ACP introduction using script ▪ Senior Resident/Gastro Nurse Clinician to start active inpatient cirrhotic screening eligible for ACP	28 Oct to 18 Nov 25 Nov - Ongoing
Cause 3: Physician's perceptions regarding ACP and avoidance of difficult conversations	▪ Departmental education ▪ Standardized in GE admission templates; SmartPhrases	17 Dec, 7 Jan 7 Jan - Ongoing

Results



Cost Savings

	Calculations
Improvement in ACP completion rate after CPIP (mean)	20% to 40%
Estimated number of patients per year admitted to Gastroenterology with end stage liver disease	Mean 33 patients per month x 12 = 396
Additional number of ACPs per year as a result of CPIP	(40-20%) x 396 = 79
Expected annual cost savings due to reduction in patients admitted underdoing endoscopy or ICU admissions * assuming cost of endoscopy \$2000	50% x 79 = 39 patients would prefer DNR or not for invasive endoscopic procedures 39 x \$2000 x 5 = \$390 000 (ICU) 39 x \$2000 = \$78 000 (Endoscopy)

Problems Encountered

- Difficulties with data collection → applied for Epic SlicerDicer access
- Patient / NOK require time to decide about ACP, thus often not completed inpatient → given outpatient follow-up in ACP clinic.

Strategies to Sustain

- Introductory briefing to all GE MOs at the start of their 3-6 month rotation including a segment on ACP in patients with ESLD.
- Educational updates throughout the year to encourage primary physicians to refer patients for ACP discussion and track progress / utilisation of ACP clinic resource.
- Empower primary physicians to conduct have serious illness discussions
- Schedule reviews with stakeholders (Hepatologists, NCs) to identify issues, and create solutions with existing resources.
- Future interventions: Expanding the reach of inpatient ACP to other cohorts within GE dept e.g. malignancies, elderly patients with recurrent admissions.