Quality Improvement Project:
Impact of FYI teaching on Timely Investigations and Treatment of Decompensated Liver Failure

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Introduction

Decompensated liver disease is a critically serious condition that requires prompt recognition and initiation of targeted investigations within the first 24 hours. The British Society of Gastroenterology (BSG), in collaboration with the British Association for the Study of the Liver (BASL), developed a standardised “decompensated liver care bundle” to support early, structured management (1). Use of this bundle has been shown to improve the standard of care, including reducing the time to specialist gastroenterology review (2)

Objective

.Improve early recognition and management of decompensated liver failure by boosting compliance with the BSG 24-hour bundle through targeted Foundation Year 1 Doctor 1 (FY1) teaching.

Methodology

A retrospective audit was conducted for all decompensated liver failure patients admitted via the St Peter’s Hospital Emergency Department in September–October 2024 (n=17) to assess whether BSG bundle elements were completed within the first 24 hours.

Then a teaching session was delivered to FY1s covering:

1. **Recognition of decompensated liver failure (e.g., ascites, hepatic encephalopathy, coagulopathy, gastrointestinal bleeding).**
2. **The rationale behind each bundle component.**
3. **Using the Cerner “Care Plan” to access bundle tests quickly.**

Finally, a re-audit was performed on admissions in May–June 2025 (n= 20) to evaluate whether completion rates of investigations and interventions had improved following the intervention.

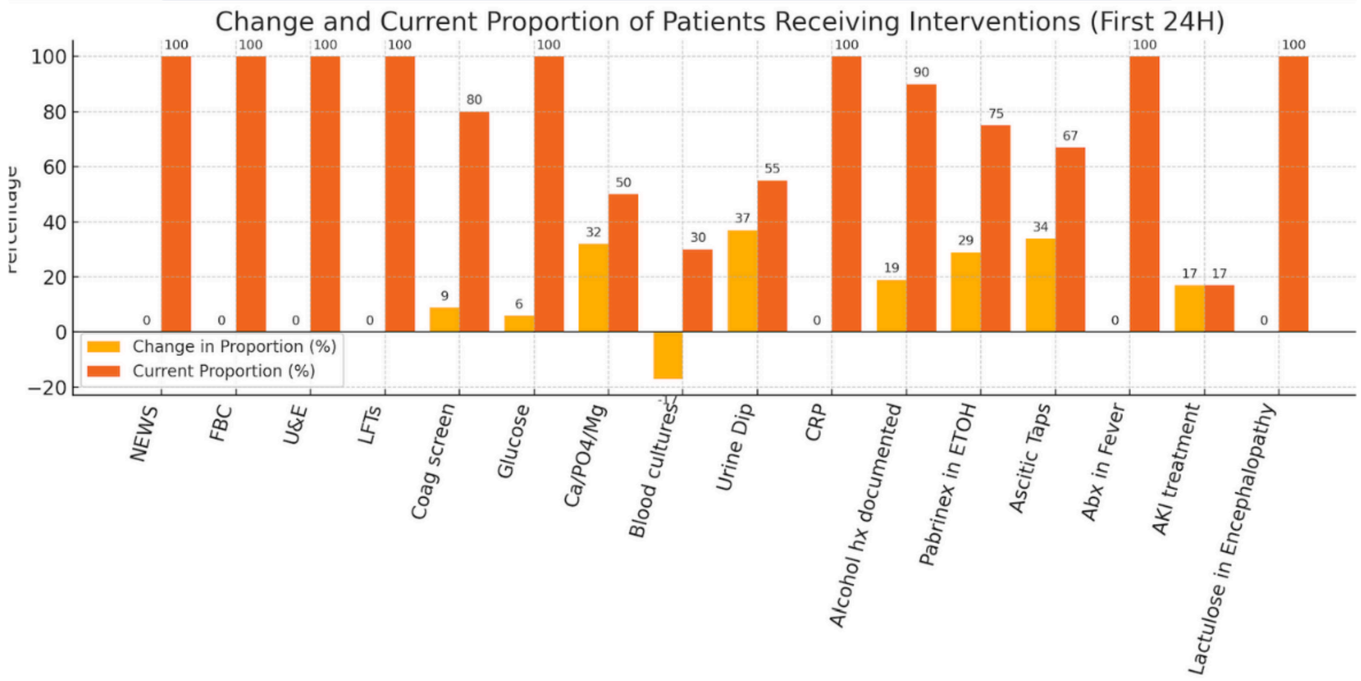
References

(1) Decompensated Liver Disease BASL Care Bundle - 1st 24h | BSG, n.d.;
(2) “The BSG/BASL Bundle for Patients Admitted with Decompensated Chronic Liver Disease Improves Standard of Care but Utilisation Is Poor across the UK,” 2022)

Results

Following the teaching intervention, completion rates for most bundle components improved.

- Complete uptake (100%) was maintained for NEWS, FBC, U&E, LFTs, Glucose, CRP, antibiotics in fever, and lactulose in encephalopathy.
- Marked improvements were observed in:
  - Urine dipstick (+37%, now 55%)
  - Ascitic taps in ascites (+34%, now 67%)
  - Calcium/phosphate/magnesium tests (+32%, now 50%)
  - Pabrinex in alcohol-related cases (+29%, now 75%)
  - Recent alcohol intake documented (+19%, now 90%)
  - AKI treatment (+17%, now 17%)
  - Coagulation screen (+9%, now 80%)
- One area worsened: blood cultures (-17%, now 30%).



Conclusion

The teaching intervention led to marked improvements in the timely completion of most elements of the BSG decompensated liver bundle within 24 hours of patient presentation. Complete compliance was maintained for core investigations, and substantial gains were made in ordering ascitic taps, urine dipsticks, calcium/phosphate/magnesium tests, and administering Pabrinex where indicated. However, areas such as blood cultures, calcium/phosphate/magnesium testing, urine dips, and AKI treatment remain below optimal levels, highlighting the need for ongoing education and targeted reinforcement.

Implication of Findings

- The teaching session demonstrated clear benefits and should be repeated for future F1 cohorts.
- Continued efforts are needed to improve uptake in categories not yet at 100%—for example, by providing refresher teaching sessions and displaying visual aids/checklists in the Emergency Department.