

QUALITY & SERVICE
IMPROVEMENT AWARD

TEAM LEAD APPLICANT:

Dr Ahmed Yaser Elshabrawi Ibrahim, SpR Hepatology
South Tees Hospitals NHS Foundation

TEAM MEMBERS:

Mrs Stephanie Goodman, Specialist Hepatology Nurse
Mrs Zoe Cox, Specialist Hepatology Nurse

TEAM MENTOR:

Dr Darren Craig, Consultant Hepatologist

TITLE OF PROJECT:

Transforming Hepato-cellular Carcinoma (HCC)
Through an Automated Cirrhosis Call/Recall System



“ The award funding will support further development and implementation of the automated HCC surveillance pathway and the development of patient engagement resources to improve surveillance participation.

Dr Ahmed Ibrahim

* British Association for the Study of the Liver

Dr Ibrahim explained the pilot:

'Our trust covers an area with high liver disease burden and increasing incidence of HCC. As a result, we have a very active liver unit carrying out many ongoing quality improvement projects, clinical trials and research activities.

The team had already noted that there had been incidences of failure to correctly follow-up on surveillance of patients at risk of HCC. It was decided that there was a need to evaluate factors contributing to these failures and secondly, to determine if there were any system or service-related issues that could be improved. Ultimately, we were aiming to identify the issues around this service failure and, from that, to implement a system level change to a process that was more sustainable and effective. I joined the hepatology team early in 2025, just as this project was starting out and was very keen to take the lead. I come from Egypt, a country which unfortunately has very high rates of liver disease and HCC so working in this area particularly appealed to me.

The initial part of the project involved reviewing 4,485 abdominal ultrasound requests carried out between January 2019 and August 2024 containing the terms “cirrhosis” or “HCC” and the subsequent follow-up surveillance pathway. This was a very large number to work with and required a huge team effort, with input from hepatologists, gastroenterologists, IT staff, hepatology nurse specialists, HCC coordinators, and service coordinators. It was my job to co-ordinate everyone’s work and then to pull the data together to produce the relevant conclusions.

We found that of the 4,485 ultrasound episodes reviewed, 1,409 patients potentially required HCC surveillance. 570 cirrhotic patients were identified as suitable for biannual surveillance, of whom 188 (33%) were currently not receiving guideline-compliant surveillance. Furthermore, of those 570 patients suitable for surveillance, 138 were classed as waiting for overdue surveillance scans, with 82 overdue by more than six months. We also identified significant inequalities in care delivery. 75% of patients under specialist gastroenterology/hepatology care received appropriate biannual surveillance, compared to only 12.2% of cirrhotic patients managed outside gastroenterology services. When we looked at the reason behind these service failures, we identified both patient-related and service-related causes, including delayed ultrasound requests, loss to follow-up, and disengagement from services. Overall, service-related failures accounted for 38.7% of incomplete surveillance episodes.

In response to our findings, we developed and implemented an electronic cirrhosis database which integrated with a radiology-linked automated call/recall pathway. This is capable of generating surveillance requests for up to five years, ensuring continuity of care. Using this system, by March 2026, 625 patients had been identified as suitable for surveillance, with 611 (97.8%) invited and 571 (91.4%) attending surveillance within six months.

Along with improved patient safety and more equitable access to guideline compliant care, this system also provides infrastructure for future audit, quality improvement, and research activity. Overall, this project demonstrates how multidisciplinary collaboration can deliver sustainable improvements in liver cancer surveillance pathways.'

The team mentor, Dr Darren Craig notes:

'Ahmed and our wider hepatology team have delivered an important improvement in our HCC surveillance. The success of this project reflects outstanding multidisciplinary working. The liver nursing team have provided enormous commitment to maintaining accurate patient tracking and supporting patient engagement, while the radiology team have been instrumental in developing and embedding the call/recall process. Ahmed has shown considerable clinical leadership, determination and attention to patient safety throughout, bringing different teams together to deliver this improvement for our patients.'

Dr Ibrahim comments on winning the award:

'I was delighted to learn that I’m one of the winners of this well-regarded award and it is certainly a reward for the work and effort the team have put into this project over the last few years.

We believe that our model is readily transferable to other liver and gastroenterology units across the UK and, as this award will make our work more visible to the liver community across the UK, we hope that others in our field may want to learn more about how it could benefit their practice and their patients.'

