

Inequalities in Gastrointestinal Care Provision in the United Kingdom

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Abstract

Gastrointestinal (GI) and liver diseases impose a substantial burden on the United Kingdom's health system, ranking among the leading causes of mortality, cancer-related deaths, and hospital admissions. Despite the universal framework of the National Health Service (NHS), profound inequalities persist across socioeconomic, geographic, and ethnic lines. This review focuses on colorectal cancer (CRC) and hepatocellular carcinoma (HCC) as exemplar conditions, synthesizing current evidence on disparities across the care continuum. Disease prevalence and outcomes are markedly worse in socioeconomically deprived regions; liver disease mortality is more than twice as high in the poorest deciles, and CRC survival is significantly lower among disadvantaged populations. Access to care is uneven; deprived groups exhibit lower CRC screening uptake, delayed diagnoses, and higher emergency presentation rates; routine HCC surveillance in at-risk patients is inconsistently delivered. Workforce shortages and maldistribution further exacerbate these gaps, with underresourced regions experiencing longer waits and limited specialist access. Systemic challenges, including social determinants, data deficits, and policy underprioritization, hinder progress. However, promising developments include the NHS's expansion of community diagnostic centres, workforce investment, hepatitis C virus (HCV) elimination programmes, and structural interventions like minimum unit pricing for alcohol. Technological innovations, such as noninvasive diagnostics and digital tools, offer additional avenues to bridge care gaps. Targeted actions (e.g., primary-care FibroScan, CRC outreach with GP endorsement, and navigation for HCC surveillance) are critical for reducing inequalities and improving outcomes. By addressing upstream determinants and ensuring that innovations reach underserved populations, the UK can move towards reducing GI health inequalities, improving outcomes, and achieving more uniform digestive health across all communities.

Abbreviations

NHS, National Health Service; UK, United Kingdom; CRC, Colorectal Cancer; IBD, Inflammatory Bowel Disease; MASLD, Metabolic Dysfunction-Associated Steatotic Liver Disease; IBS, Irritable Bowel Syndrome; RCP, Royal College of Physicians; BSG, British Society of Gastroenterology; OHID, Office for Health Improvement and Disparities; HCV, Hepatitis C; HBV, Hepatitis B; MUP, Minimum Unit Pricing; CDC, Community Diagnostic Centers; ACT, Alcohol Care Teams, ARLD; Alcohol Related Liver Disease, GP; General Practitioner

Keywords

Gastroenterology, Hepatology, National Health Service, United Kingdom, Public Health

1. Introduction

Gastrointestinal (GI) and liver diseases represent a considerable burden for patients, the National Health Service (NHS), and the broader UK economy. GI disease constitutes the third leading cause of mortality in the UK, the primary cause of cancer-related deaths, and the most frequent reason for hospital admissions (1). Approximately one in six hospital admissions and one in six major surgical procedures in general hospitals are attributable to GI conditions. A comprehensive review of empirical studies in the UK highlights marked disparities in access to care, health outcomes, and service organisation across different regions (1). These disparities are often driven by underlying socioeconomic inequalities, with individuals from deprived communities experiencing higher incidence rates, poorer access to diagnostic and treatment services and worse overall outcomes. Variations in disease burden, service provision, and mortality patterns are particularly evident in chronic liver disease including hepatocellular carcinoma (HCC) and colorectal cancer (CRC). Understanding the structural and systemic factors that contribute to these inequalities is crucial for informing health policies, improving service delivery, and reducing avoidable morbidity and mortality. This review analyses disparities through three equity lenses: (1) socioeconomic deprivation, (2) geographic access, and (3) ethnic minority outcomes, proposing a framework for NHS action.

2. Disparities in the Prevalence and Outcomes of GI Diseases in the UK

Morbidity and mortality from GI diseases show significant variation across different regions, socioeconomic classes, ethnicities, and education levels across the UK. For instance, mortality from chronic liver disease has been on the rise, with rates more than twice as high in the most socioeconomically deprived areas of England than in the least deprived areas. In 2022, the mortality rate from liver disease among individuals under the age of 75 was 30.4 per 100,000 in the most deprived decile, compared to 13.7 per 100,000 in the least deprived decile. Regions with persistent socioeconomic disadvantages, such as Blackpool, parts of Manchester, Merseyside, and Northeast England, exhibit the highest liver disease mortality rates, whereas more affluent areas in the South of England show the lowest rates (2). Chronic GI disorders, particularly those associated with alcohol consumption such as alcoholic liver disease and pancreatitis, are disproportionately concentrated in socioeconomically disadvantaged populations. In Northern Ireland, for example, alcohol-related hospital admissions are reported to be four times higher in the most deprived areas than in the least deprived areas (31.7 deaths per 100 000 population vs 7.6 deaths per 100 000 population) (3).

Obesity-driven diseases such as metabolic dysfunction-associated steatotic liver disease (MASLD; formerly non-alcoholic fatty liver disease) are on the rise across the UK, but regions with higher obesity (often deprived post-industrial areas) face greater MASLD burden. National data shows that childhood obesity rates in the most deprived areas are twice as high as in the least deprived, a disparity that has persisted for over a decade (4). This growing divide directly

correlates with rising MASLD prevalence and associated GI cancers in post-industrial regions. MASLD is now estimated to affect approximately one in five people in the UK, reflecting the broad impact of metabolic risk factors (5). For instance, local authorities in the Northeast report some of the highest obesity-related liver disease rates in Western Europe, disproportionately affecting young adults in socioeconomically challenged communities (6).

Liver cancer incidence rates in England, as measured using European age-standardised metrics, demonstrate significant socioeconomic disparities. Between 2013 and 2017, the incidence rates were 78% higher among females and 89% higher among males in the most deprived quintile than in the least deprived quintile. These inequalities are estimated to result in approximately 1,200 excess liver cancer cases annually, including 390 cases among females and 810 among males (7). Similarly, while the overall incidence of CRC does not exhibit dramatic variation according to socioeconomic status, there is still a notable disparity. Between 2013 and 2017, the incidence in men from the most deprived quintile was approximately 9% higher than that in the least deprived quintile. In terms of mortality, lower GI cancers exhibit stark inequality, with death rates approximately 25–30% higher among the most deprived populations in the UK. This translates to an estimated 1,700 excess deaths from lower GI cancers each year attributable to socioeconomic deprivation. Furthermore, five-year survival rates highlight a substantial disadvantage for socioeconomically deprived patients. Between 2016 and 2020 in England, 62% of bowel cancer patients in the least deprived quintile survived for at least five years following diagnosis, compared to only approximately 53% in the most deprived quintile. This disparity in survival outcomes reflects the consequences of later-stage diagnoses and unequal access to timely and effective cancer care among the more disadvantaged groups.

These disparities underscore the profound influence of both sociodemographic and geographic factors on GI health in the UK. Individuals residing in affluent areas of southern England are, on average, less likely to develop or die from liver disease or GI cancer than those living in economically disadvantaged, deindustrialized regions in the North. Such findings reflect the broader social determinants that shape the patterns of disease incidence, diagnosis, treatment, and outcomes across the population (8,9,10,11).

3. Inequalities in Access to GI Care in the UK

GI care in the UK is marked by substantial geographic, socioeconomic, and demographic inequalities, which affect every stage of the care continuum — from screening and diagnosis to specialist management and long-term outcomes. These disparities are shaped by intersecting factors such as ethnicity, deprivation, health literacy, local commissioning priorities, and uneven workforce distribution, ultimately contributing to poorer outcomes for certain populations.

3.1 Disparities in Uptake of National GI Cancer Screening Programs

Screening and Early Detection

Early detection of GI cancers, including CRC, is essential for improving survival rates; however, access to screening and early-stage diagnosis is neither uniform nor equitable across the UK. Significant geographic and demographic disparities exist in the uptake of the National Bowel Cancer Screening Programme, with particularly reduced participation among individuals in socioeconomically disadvantaged communities and ethnic minority populations. Common patient-level barriers include low health literacy, language obstacles, cultural beliefs about cancer, and practical constraints (e.g., time off work), all of which concentrate on deprived communities (12–14).

In CRC screening, participation rates are notably lower among ethnic minorities. Compared with White British individuals, all ethnic minority groups demonstrate significantly lower odds of participating in the Bowel Cancer Screening Program, with the exception of Asian Chinese individuals (age-adjusted OR = 1.113, $p = 0.06$) (12). Black individuals are significantly more likely to lack a screening record compared to White individuals (adjusted odds ratio [aOR] 1.36; 95% CI: 1.09–1.70), with a similar, though weaker, association observed in people of mixed ethnicity (aOR 1.08; 95% CI: 1.01–1.15). Socioeconomic deprivation further amplifies these disparities, as those from the most deprived areas are more likely to lack screening records (aOR 1.26; 95% CI: 1.14–1.40). Behavioral factors also contribute; for example, smokers and ex-smokers are nearly twice as likely to actively decline screening (aOR 1.89, 95% CI 1.42–2.52) (13,14).

In Wales, similar patterns were observed, with especially low screening uptake in the most deprived communities and some South Asian populations (14). Contributing patient-level factors include limited health literacy, a higher burden of comorbidities, and intergenerational cycles of non-participation in screening. Since CRC survival is closely tied to stage at diagnosis, these screening disparities likely drive a portion of the socioeconomic and ethnic inequalities in CRC mortality (10–14). Geographic variations are also pronounced in the detection of liver cancers. Only 11% of liver cancer cases in Wales are diagnosed at early stages (stages 1–2) compared to 19% in England, while Northern Ireland, benefiting from proactive early detection investment, achieves a markedly higher early stage diagnosis rate of 32% (15). Additionally, a Bayesian analysis showed that male gastric cancer patients in urban North West England are 3.2 times more likely to die from the disease compared to national averages, primarily due to barriers in accessing timely screening services (16).

Group	Screening Uptake (%)	Notes
White British	52.6%	Highest compliance among ethnic groups in West London.
Black (African/Caribbean)	44.0%–48.0%	Lower uptake compared to White British individuals.
South Asian	43.0%–46.0%	Significantly lower uptake; cultural and language barriers may contribute.
Chinese	52.0%–53.0%	Uptake similar to White British group; exception among minority groups.
Most Deprived Quintile (Q1)	~54.8%	Lower uptake observed in the most deprived areas in Wales.
Least Deprived Quintile (Q5)	~68.0%	Higher uptake observed in the least deprived areas in Wales.

Table 1. CRC Screening Uptake by Ethnicity and Socioeconomic Deprivation in the UK (10-16)

3.2 Regional Inequalities in GI Diagnostic Services and Chronic Care

Beyond screening participation, disparities extend to diagnostic services for symptomatic patients or those with positive screening test results. Access to timely GI diagnostics, including endoscopy, imaging, and specialist consultations, varies considerably across the UK. For example, in 2021, more than 80% of patients in Northern Ireland waited over six weeks for endoscopy, compared to less than 40% in England’s Midlands region (17). By late 2022, England faced more than 110,000 pending colonoscopy cases, with median waiting times doubling to approximately 4.2 weeks, and even longer in some areas. In Birmingham and Solihull, 70% of patients waited over 13 weeks for flexible sigmoidoscopy, which is significantly longer than the wait time in London (18). In England, approximately one in five CRCs is diagnosed following an emergency presentation, a pathway associated with markedly poorer survival; many such patients had prior “alarm” symptoms recorded in primary care (19).

These diagnostic delays disproportionately affect patients in deprived or rural areas, where limited resources amplify the systemic inequities. Consequently, emergency presentations have become more common, with empirical data showing that approximately 50% of liver cancer diagnoses in Wales and 48% in Scotland occur via emergency admissions, compared with approximately 42%

in England, a pattern that reflects the failure of early referral pathways and timely intervention (20). Emergency presentations of CRC are more common in under-served populations. In England, as many as one-fifth of colorectal cancers are diagnosed via an emergency route, a scenario linked to significantly poorer survival. Later presentation and delayed workup contributed to worse outcomes. For example, cancer audit data show that in the East Midlands' Mansfield area, even screen-detected CRC patients had significantly worse survival than those in neighboring regions, despite equivalent surgical quality – a disparity likely driven by higher comorbidity burdens, follow-up delays, or post-treatment support gaps (21).

Further compounding these disparities is the significant variation in primary care engagement and clinical pathways. A 2021 survey revealed that only 20% of UK clinical commissioning groups and health boards had a designated liver disease lead, and fewer than one-third had formal care pathways for managing abnormal liver blood test results. Access to essential diagnostic tools, such as FibroScan (transient elastography), remains uneven, with only 25% of areas offering this technology in primary care and just 16% routinely using advanced fibrosis blood tests, despite NICE recommendations. Notably, provision rates are higher in London and southern England, while Wales has reported stronger engagement with liver disease pathways compared to most English regions (22).

These postcode-driven inequities reflect differing local commissioning priorities, leaving patients in underserved areas with reduced access to early fibrosis assessment, specialist referrals, and ancillary services, such as dietary support for MASLD or psychological care for IBD. In these settings, general practitioners often lack the necessary resources, training, and confidence to deliver proactive chronic GI care, resulting in delayed, reactive, or fragmented management (22). By contrast, regions that have prioritised dedicated clinical pathways, invested in primary care, and implemented community outreach are more successful in identifying and managing high-risk patients before they decompensate. These geographic inequalities highlight the urgent need for national-level coordination, standardisation, and equitable resourcing to ensure that all patients, regardless of location, can access high-quality GI care.

Drivers of CRC Disparities (Patient, Provider, System)

The inequalities observed in CRC care are driven by multiple factors. Patient-level factors include differences in health literacy, cultural beliefs, and healthcare-seeking behaviors. Lower awareness of screening benefits and alarm symptoms among some ethnic minorities and deprived groups leads to reduced participation and delays in seeking help. Higher rates of comorbid conditions (e.g., diabetes, obesity, smoking) in deprived populations not only elevate CRC risk but can also complicate referrals and treatment. Provider-level factors also play a role. Variations in primary care engagement and referral practices may influence outcomes; for instance, some studies suggest that stronger general practitioner (GP) involvement can increase screening uptake. In fact, a randomized trial found that adding a GP-endorsed reminder letter significantly increased screening

uptake among prior non-responders, underscoring how provider initiatives can improve patient engagement (23). However, historically, the national screening program did not heavily involve GPs, potentially missing opportunities to encourage uptake. Additionally, implicit biases or assumptions by healthcare providers could affect the investigation of aggressive symptoms in different patient groups, although data on CRC are limited. At the system level, resource allocation and programme design are critical determinants. The uneven distribution of endoscopy units and specialists leads to the regional waiting time differences noted above, essentially a “postcode lottery” for timely diagnosis. Workforce shortages (e.g., insufficient endoscopists and colorectal surgeons in high-need areas) further increase strain capacity. Screening programs, while universal, may not effectively reach certain communities without adaptation; for example, translated materials or community outreach in multiple languages has not always been systematically implemented, hampering uptake in non-English-speaking populations. Data infrastructure and monitoring also play a role. Until recently, screening data and outcomes were not routinely stratified by ethnicity or deprivation, which made it harder to identify and address gaps. Taken together, these patient, provider, and system factors interact to produce lower screening rates, later diagnoses, and variability in treatment quality for CRC in the disadvantaged groups.

Care Stage**Colorectal Cancer (CRC)****Hepatocellular Carcinoma (HCC)****Prevention & Risk**

Lifestyle risk factors (poor diet, obesity, smoking) more prevalent in deprived groups, slightly elevating CRC risk. Public awareness of CRC symptoms is lower in socioeconomically disadvantaged populations, hindering early self-recognition of disease.

Higher prevalence of viral hepatitis (HBV/HCV) in certain immigrant communities leads to greater underlying HCC risk. Alcohol and MASLD drive HCC disproportionately in deprived areas (due to higher rates of alcohol misuse and obesity), compounding baseline risk (24).

Screening/Surveillance

Lower uptake of screening (fecal tests and colonoscopy) among ethnic minorities and deprived communities. Barriers include limited health literacy, cultural mistrust, language obstacles, and logistical challenges (e.g., time off work) for screening appointments.

Inadequate surveillance of at-risk patients (cirrhosis) in disadvantaged groups. Barriers include inconsistent provider adherence to surveillance guidelines, patient non-attendance due to poor awareness or social difficulties, and limited specialist outreach (only ~20% of regions have a dedicated liver disease lead to coordinate surveillance).

Diagnosis (Timing & Route)

Delayed diagnostic work-up in many deprived areas due to resource constraints. Longer waits for colonoscopy and imaging in some regions (e.g., NI or parts of Midlands) cause later-stage diagnoses. Consequently, higher rates of emergency presentations (bowel obstruction, perforation) occur in these populations, which are associated with worse prognoses (21).

Many HCC cases are diagnosed at advanced stage, especially in underserved regions. Only ~11% of liver cancers in Wales are detected early vs 19% in England. Over 50% of HCC in Wales and ~48% in Scotland are first identified via emergency hospital admission, compared to ~42% in England, reflecting failures in early referral and surveillance. Limited access to rapid diagnostics (e.g., liver imaging, AFP testing) in primary care delays HCC detection in high-risk patients.

Treatment Access

Curative treatment (surgery or chemo-radiotherapy) uptake can be lower in deprived patients, partly due to more advanced disease at diagnosis and higher comorbidity. Even within screening programs, deprived regions (e.g., Mansfield) showed worse post-treatment

Marked geographic and socioeconomic variations in access to specialist therapies. Patients in regions without transplant or liver surgery centers may not be referred for curative treatments (resection, transplantation) in time. Those living far from transplant centers have higher waitlist mortality and lower transplant rates. Patients from the most deprived quintiles and some ethnic

Care Stage**Colorectal Cancer (CRC)**

survival, suggesting gaps in timely oncology referral or support services. Patients from ethnic minorities may face communication barriers or less trust in the healthcare system, potentially affecting treatment decisions and adherence.

Five-year survival is substantially lower in the most deprived CRC patients (~53% vs ~62% in least deprived). Higher postoperative complication rates and inadequate follow-up support (e.g., access to stoma nurses, rehabilitation) in under-resourced hospitals can adversely affect outcomes. Survivorship follow-up (e.g., colonoscopy surveillance after surgery) may be less consistent in patients with lower socioeconomic status or poor health literacy, leading to higher recurrence rates.

Hepatocellular Carcinoma (HCC)

minorities are significantly less likely to receive curative HCC treatments, such as resection or transplant, and also less likely to receive systemic therapy. Active alcohol use or late-stage presentation can render many deprived patients ineligible for curative options (24).

HCC survival is universally low, but worse in disadvantaged groups. National data indicate higher liver cancer mortality in deprived areas despite similar incidence, implying disparities in treatment outcomes (6). For example, one regional study found deprivation independently associated with lower 1-year HCC survival. Follow-up in survivors (e.g., for recurrence or managing liver disease) is less accessible for patients outside major centers. Loss to follow-up is common if patients have unstable social circumstances or limited support, contributing to poorer long-term outcomes (24).

Outcomes & Follow-up

Table 2. Colorectal Cancer vs. Hepatocellular Carcinoma Care Cascade – Key Barriers at Each Stage

Disparities in Hepatocellular Carcinoma Care in the UK

HCC exhibits some of the most pronounced outcome inequalities in the UK. Early detection and surveillance: Because HCC often develops in patients with known risk factors (e.g., chronic viral hepatitis or advanced fibrosis), surveillance is critical. However, routine HCC surveillance in patients with cirrhosis has been inconsistently applied in practice. Disadvantaged groups are less likely to receive regular ultrasound surveillance every 6 months, despite clinical recommendations (26). As a result, these patients more frequently present with advanced inoperable disease and missing opportunities for curative intervention. National data highlight large regional gaps in early detection: only 11% of liver cancer cases in Wales are diagnosed at an early stage (Stage 1–2) compared to 19% in England. Northern Ireland, which invested in proactive early detection, achieved approximately 32% early stage diagnosis (15). In line with these patterns, approximately 50% of HCC diagnoses in Wales and 48% in Scotland occur via emergency hospital admissions, versus 42% in England. This indicates that in more deprived areas, many HCC patients are not identified through routine clinics or surveillance, but rather when they decompensate and are urgently hospitalized. These late presentations greatly limit treatment options.

3.3 Variations in Specialist GI Care and Outcomes

Treatment and specialist care

Even after diagnosis, patients' access to specialist GI care and treatment outcomes vary widely across the UK, reflecting additional layers of inequality. NHS ostensibly offers universal access to specialist liver centers (including transplant units and regional oncology centers). In practice, geography and socioeconomic status shape referrals and uptake. For instance, being listed for liver transplantation often requires referral from a local hospital; patients in remote or under-resourced areas may or may not be referred later. Travel distance is a significant barrier – increasing travel time to transplant centers is associated with a higher risk of death while on the transplant list and a lower likelihood of receiving a transplant or curative therapy. London, which has multiple tertiary liver centers, stands out as an outlier, with better access to curative treatments and improved HCC survival rates. In contrast, patients in parts of Northern England or rural regions face difficulties in accessing specialized HCC care. Socioeconomic factors also intersect with treatment. A recent analysis in West Scotland found that higher deprivation was associated with reduced odds of receiving any active HCC treatment and with poorer survival, even after controlling for clinical factors.

Similarly, national cancer data show that patients from the Black Caribbean and South Asian ethnic groups have significantly lower rates of curative treatment and worse HCC survival outcomes. This may reflect a combination of later stage at diagnosis (due to the surveillance gaps noted), differences in underlying etiology (e.g., more viral hepatitis, which, if untreated, may progress to multifocal disease), and potential systemic biases or communication barriers affecting treatment proposals and consent. Another vulnerable subgroup is patients with alcohol-related liver disease

(ARLD); ongoing alcohol use and social instability often preclude them from transplant lists or clinical trials, and studies indicate ARLD-related HCC patients are less likely to receive any HCC-directed therapy, contributing to poorer outcomes for this group (24,25).

Drivers of HCC Disparities (Patient, Provider, System)

As with CRC, a multilevel framework helps to explain HCC inequalities. Patient-level factors: There are intrinsic differences in disease prevalence and risk of exposure between populations. Migrants from regions with high endemic HBV (East Asia, sub-Saharan Africa) or HCV (South Asia, Eastern Europe) have a higher baseline risk for HCC, which can manifest as a higher incidence in those ethnic communities (25). These differences in etiology can appear as ethnic disparities, but are largely confounded by disease exposure (e.g., the higher HCC rates in Asian communities are often driven by perinatally acquired HBV). Another patient-level factor is health-seeking behavior; patients facing social deprivation may delay care for symptoms such as weight loss or abdominal pain due to economic barriers or mistrust, leading to more advanced disease at presentation. Provider-level factors: Variability in clinical practice contributes significantly. As noted, many eligible patients are not enrolled in surveillance programs; providers may fail to identify or recall all cirrhotic patients for ultrasound every six months, perhaps doubting the effectiveness of surveillance or overwhelming by workload. This was exacerbated in areas without liver specialists. Even when surveillance tests are ordered, follow-up can falter (e.g., the lack of a robust system to remind patients of due scans).

Communication barriers between providers and patients (language and health literacy) can also hinder compliance with surveillance and therapy. Moreover, some evidence suggests subtle differences in how aggressively patients are managed; for instance, a UK study implied that disadvantaged patients are less likely to be offered liver transplantation evaluation, even when clinically indicated, perhaps because of perceived psychosocial contraindications or referral biases. System-level factors: These loops are particularly large for HCC. The highly specialized nature of HCC care (e.g., transplantation and interventional radiology) means that inequities in the healthcare infrastructure strongly impact outcomes. In the UK, only a limited number of transplant centers exist, mostly in larger cities, and regions without one must refer to them. There is also uneven distribution of hepatologists and liver multidisciplinary teams (MDTs) – areas with dedicated HCC MDTs can triage patients to appropriate treatments more efficiently, whereas areas without them may see patients managed less optimally. Another issue is the availability of early detection resources: only 25% of areas offer FibroScan (transient elastography) in primary care for fibrosis assessment, and only 16% routinely use advanced fibrosis blood tests despite NICE recommendations. This means that many high-risk patients (e.g., those with viral hepatitis or MASLD) in the community are not identified as having advanced fibrosis and do not enter HCC surveillance programs.

Data completeness is also a challenge – staging information for liver cancers is often missing in registries, which impedes the monitoring of improvements in early detection efforts. Finally, socioeconomic deprivation ties into wider determinants (alcohol outlet density, obesity, hepatitis screening uptake) that lie outside the healthcare system but crucially affect who becomes diseased and how early it is caught. In summary, patients from deprived or minority backgrounds face a nexus of higher risk, less proactive surveillance, and more limited access to specialized treatment, resulting in markedly worse HCC outcomes (16,23,24,25).

Strategies and Interventions to Reduce Disparities

Recognizing these gaps, the UK has begun implementing targeted strategies and evidence from research points to further interventions that could mitigate CRC and HCC inequalities. For CRC, one major policy change is the lowering of the bowel cancer screening starting age from 60 to 50 years in England (phased by 2025), which is expected to improve early detection, especially in communities with historically lower screening uptake (provided culturally tailored outreach accompanies age extension). There is also an increasing use of community outreach and navigation programs; for example, deploying screening nurses to community centers in deprived neighborhoods to enroll people for FIT kits or colonoscopy has been proposed to mirror successful initiatives like Scotland’s pilot targeting hepatitis B screening. In primary care, interventions such as GP-endorsed reminder letters, text message prompts, and education about red-flag symptoms have all shown promise in improving the timely diagnosis of CRC (25,26).

For HCC, the ongoing HCV elimination programme (supported by a £1 billion investment) is a flagship initiative: by using innovative “find and treat” models (mobile clinics, peer outreach to people who inject drugs and other vulnerable groups), the NHS has reduced HCV-related deaths by 35% since 2015, which will likely reduce future HCC incidence in those populations. Similar efforts to increase HBV vaccination and screening in high-risk communities (e.g., offering HBV testing and vaccination at community pharmacies or places of worship in immigrant-dense areas) could help prevent HCC in groups disproportionately affected by viral hepatitis. To improve surveillance, some studies suggest employing patient navigators and automatic recall systems; for example, focused patient education and mailed reminders, or nurse-led surveillance programs, have shown potential to boost HCC surveillance adherence (25).

Technological innovations, such as an abbreviated MRI protocol for HCC screening in patients with obesity (to overcome ultrasound limitations), are being explored and could, if made widely available, improve early detection for a broader patient group. Structural public health measures also play a critical role in liver cancer control – a standout example is Scotland’s minimum unit pricing (MUP) for alcohol, implemented in 2018, which has been linked to an 11–13% reduction in deaths from alcoholic liver disease (with the greatest benefit in the most deprived communities). Expanding alcohol harm reduction policies across the UK would likely narrow the inequality in alcohol-related HCC. Table 3 summarizes the selected interventions and studies aimed at reducing

CRC and HCC disparities, illustrating the multifaceted approach needed (from community-level interventions to national policy changes).

Intervention/Study	Target Disease	Description and Impact
Bowel screening age reduction (50–74 years)	CRC	England is lowering the screening start age from 60 to 50, aligning with Scotland. This policy is expected to catch more cancers in younger adults and reduce disparity, as many deprived and ethnic minority individuals had especially low uptake in the older age group. Early evidence shows increased screening participation when the age range is expanded.
GP-endorsed screening reminders (PEARL trial)	CRC	A randomized trial (Wessex, England) sent a second FOBT/FIT invitation letter signed by the patient’s own GP. Result: 8% relative increase in screening uptake, particularly among prior non-responders (adjusted RR 1.08, p<0.001). Demonstrates that primary care engagement can significantly improve uptake in “hard-to-reach” groups.
Community outreach and navigation programs	CRC	Pilot programs place screening coordinators in community settings (churches, mosques, community centers) in deprived areas to educate and assist individuals in completing stool tests or arranging colonoscopies. Early pilots in London’s diverse boroughs have reported increases in screening return rates by 10–15%. Interventions include multilingual education sessions and patient navigators to follow up on abnormal results.
HCV “Find & Treat” and antiviral therapy rollout	HCC (prevention)	Nationwide initiative to eliminate hepatitis C, focused on high-risk populations (e.g., offering testing and direct-acting antivirals through mobile clinics, prisons, needle exchanges). Impact: England has seen a 35% fall in HCV-related liver deaths since 2015 and is on track to be the first country to achieve WHO elimination targets. This will dramatically reduce future HCC cases in historically marginalized groups (e.g., former injecting drug users).

Intervention/Study	Target Disease	Description and Impact
HBV screening and vaccination in immigrants	HCC (prevention)	<p>Local public health campaigns (e.g., in Birmingham and Bradford) have provided HBV screening at community events and primary care registration, with linkage to care for positive cases. Combined with the UK’s universal newborn HBV vaccination (since 2017), these efforts aim to close the gap in undiagnosed HBV. While data are still emerging, pilot projects have yielded high acceptance and identified numerous previously unknown chronic HBV cases now in monitoring/treatment. Over time, this will prevent HCC in these communities.</p>
HCC surveillance navigators & recall systems	HCC (early detection)	<p>A Liverpool pilot program employed dedicated liver nurse navigators to track patients with cirrhosis. They scheduled ultrasounds and phoned reminders for appointments. Additionally, a semi-automated electronic recall system alerted clinicians when patients were due for surveillance. Outcome: Surveillance adherence improved from ~50% to ~80% within one year in the pilot cohort, and more early-stage HCCs were detected (results presented at BSG conference 2023). This approach addresses provider/system-level gaps by actively managing and engaging patients.</p>
Minimum Unit Pricing (MUP) for alcohol	HCC (risk factor)	<p>Scotland’s MUP policy sets a price floor per unit of alcohol, reducing alcohol consumption especially in heavy drinkers. Impact: 11–13% reduction in alcohol-related liver deaths (and a similar drop in hospitalizations) since implementation, with the greatest benefit observed in the most deprived communities. By lowering population alcohol intake, this policy is expected to decrease incidence of alcoholic cirrhosis and HCC over the longer term. Advocacy is underway to implement MUP in other UK nations to promote health equity.</p>

Intervention/Study	Target Disease	Description and Impact
Community Diagnostic Centres (CDCs)	CRC/HCC (diagnosis)	The NHS is rolling out CDCs – dedicated diagnostic hubs in community locations – to improve access to tests like colonoscopy, liver ultrasound, and bloodwork in underserved areas. As of 2023, ~170 CDC sites have been approved across England. By bringing diagnostic services closer to patients (reducing travel and wait times), CDCs aim to shorten the diagnostic interval for cancers. Early metrics show CDCs performing thousands of additional endoscopies and scans, with higher uptake in previously under-served populations. This should translate to fewer emergency diagnoses and improved early-stage detection in deprived regions.

Table 3. Examples of Interventions to Reduce Disparities in CRC and HCC.

4. Workforce and Staffing Imbalances

The distribution and adequacy of the GI and hepatology workforce in the UK are critical determinants of care quality and equity. Shortages of trained specialists combined with unequal staffing patterns have created stark regional disparities, leaving some areas significantly better served than others.

On average, a UK consultant gastroenterologist or hepatologist serves approximately 42,000 people, which is slightly above the RCP's recommended ratio of 1 per 41,667. However, this national average masks wide regional variation. Certain areas — including parts of Yorkshire and the Humber, Wessex, South London, North and West Scotland, and North Wales — have much higher population-per-specialist ratios, far exceeding the national benchmark (27). In these under-served regions, patients often experience longer wait times or must travel considerable distances to access specialist care. By contrast, some metropolitan areas, such as parts of Northwest England and the Midlands that host large teaching hospitals, benefit from more favorable specialist-to-population ratios (28,29,30).

This imbalance, often referred to as a “postcode lottery” for specialist access, is further exacerbated by the challenges of rurality. Areas such as the Scottish Highlands and Mid-Wales face persistent difficulties in attracting and retaining specialists, further intensifying access barriers. Regional disparities are particularly stark: while major urban centers like London teaching hospitals report specialist ratios as favorable as 1 per 32,000, rural regions in North East England and North Wales report ratios exceeding 1 per 60,000. These disparities directly contribute to variability in service provision and patient outcomes. For example, an IBD patient in London might have rapid access to a multidisciplinary team, including IBD nurses and dietitians, whereas a patient in a sparsely populated or under-resourced area may struggle to see an IBD nurse or dietitian regularly (27,28). This unequal workforce distribution delays diagnosis and treatment and entrenches systemic inequities in GI and hepatology care delivery across the UK.

The gastroenterology and hepatology specialty in the UK has been grappling with significant workforce shortages nationwide, posing serious challenges to service capacity and patient care. As of late 2020, 48% of advertised consultant gastroenterology posts were going unfilled, with half of these vacancies receiving no applicants at all — a clear indication of a critical pipeline problem. According to the 2020 workforce census, over 50% of NHS Trusts reported at least one unfilled gastroenterologist position. District General Hospitals have been disproportionately affected, showing a 14% higher vacancy rate compared to teaching hospitals and reporting that over a quarter of hospitals had attempted but failed to appoint a GI consultant in the preceding year (27,31).

These persistent vacancies often force hospitals to rely on temporary locum consultants or stretch the workloads of existing staff, ultimately reducing the number of clinics and procedures available

in affected areas. Smaller hospitals without a full complement of GI consultants frequently lack the capacity to offer specialised services, such as endoscopic retrograde cholangiopancreatography or advanced hepatology clinics, thereby forcing patients to travel to larger regional centres. For many, especially those facing transport or financial barriers, this added burden can significantly delay or deter timely care. Alarming, a 2023 national workforce survey reported that 74% of gastroenterology units across the UK had at least one unfilled consultant post, with 50% of these vacancies again receiving no applicants — reinforcing the urgency of addressing the specialty's ongoing recruitment and retention crisis (27-31).

The ongoing workforce shortages in gastroenterology and hepatology have created significant strain on doctors, nurses, and allied health professionals who are working under mounting service demands. Gastroenterology has been identified as one of the top three UK medical specialties at highest risk of burnout, according to recent Royal College of Physicians (RCP) and British Society of Gastroenterology (BSG) surveys. A RCP survey conducted in 2019–2020 found that 59% of gastroenterology consultants were consistently working beyond their contracted hours, and over half reported that their job was negatively affecting their family life. The BSG's 2021 workforce report highlighted worsening morale among consultants, with many describing year-on-year deterioration and 18% of respondents reporting experiences of workplace bullying or harassment, often tied to the stress of excessive service pressures and insufficient staffing support. These difficult working conditions pose a direct threat to staff retention, particularly in under-resourced regions where a single gastroenterology consultant may carry a disproportionately high on-call burden. This not only increases individual burnout risk but also leads to higher turnover in the very areas that can least afford to lose staff. Ultimately, these stressors compromise both workforce stability and the quality of patient care in overstretched units, reinforcing the urgent need for national action to address service pressures and improve working conditions (27,31).

The ageing gastroenterology and hepatology workforce poses a major challenge for the future sustainability of UK services. Approximately 51% of current consultant gastroenterologists and hepatologists are expected to reach retirement age within the next ten years, equating to an estimated 600–900 consultants potentially retiring by 2030. Replacing this wave of retirees — while also expanding the workforce to meet rising patient demand — represents a significant challenge. Currently, training output is insufficient to keep pace. Historically, the consultant workforce has grown by only about 4.5–5% per year, whereas expert estimates suggest that a sustained annual expansion of 7–9% is needed to fill existing gaps and meet future service demands. Without proactive workforce planning, some regions could face the loss of their only liver specialist or sole colorectal surgeon through retirement, with no successor in place, leaving critical service gaps (23,27,31).

The geographic distribution of trainees further compounds these challenges. Surveys show that over half of gastroenterology trainees prefer to settle and work in the region where they completed their training (29). This creates a reinforcing cycle where areas without GI training centres — often

already under-served — struggle to recruit new consultants, perpetuating long-standing regional workforce imbalances. Addressing both the ageing workforce and the training pipeline is therefore essential to safeguarding equitable access to specialist GI and hepatology care across the UK.

The composition and skill-mix of GI and hepatology teams vary significantly across the UK, contributing to unequal levels of care and patient support. Larger centres, particularly major teaching hospitals, often benefit from hepatology-dedicated consultants, IBD specialists, GI radiologists, and nurse endoscopists, allowing for more specialised and comprehensive service delivery. By contrast, smaller hospitals tend to rely more heavily on generalist gastroenterologists, who must balance hepatology care alongside their broader clinical duties. There is a well-recognised need to expand the number of hepatology-trained consultants nationwide to address the escalating burden of liver disease (bsg.org.uk). Currently, many regions either lack a full-time hepatologist entirely or have only one, leaving general gastroenterologists to manage increasingly complex liver patients alongside their other commitments (29,30,31).

Variations in allied health staffing further exacerbate these disparities. Some areas have well-established teams of GI specialist nurses — covering liver disease, IBD, and nutrition support — while others lack these critical roles altogether, limiting the breadth and quality of patient support. Recognising these gaps, the BSG and other professional bodies have called for strengthened investment in roles such as hepatology clinical nurse specialists (CNSs), specialist dietitians, and psychological support services within GI teams nationwide (28,29). Addressing these skill-mix inequalities is essential to ensure that patients, regardless of location, have equitable access to comprehensive and multidisciplinary GI and hepatology care.

Another important dimension of staffing inequality in UK gastroenterology is workforce representation. The specialty has historically been male-dominated and continues to lack both gender and ethnic diversity at senior levels. Currently, only about 22–28% of UK consultant gastroenterologists are women, an improvement from 15% in 2010, but women remain notably underrepresented in leadership and academic roles, occupying only around 10–15% of these positions (32,33). Ethnic diversity within the specialty presents a mixed picture. Approximately 37% of UK gastroenterologists identify as being from minority ethnic backgrounds, a proportion higher than in many other medical specialties. However, despite this numeric representation, issues such as differential attainment, lack of mentorship, barriers to career progression, and poor work-life balance persist, limiting inclusion and advancement opportunities for many minority ethnic clinicians (30-34).

These representation gaps do not merely affect workforce morale; they also impact patient trust, cultural competence, and the overall equity of care delivery. A diverse and well-distributed workforce is essential for ensuring that GI and hepatology services are responsive to the needs of all patient populations and for attracting a broad range of talent across the country. Recognising

these challenges, the BSG launched its Equality, Diversity & Inclusion Strategy in 2023, aiming to promote mentorship, inclusive hiring practices, and leadership training specifically for underrepresented groups within the specialty (32,34). While these initiatives mark important progress, advancing equity within the workforce remains a gradual and ongoing effort.

5. Systemic Barriers to Achieving Equity in GI Care

Tackling GI and liver health inequalities in the UK is complex, with several entrenched challenges to overcome. These challenges span the socioeconomic determinants of health, the healthcare system's capacity, and political and public health priorities.

Lifestyle Factors and Prevention Gaps

Major risk factors for GI and liver diseases — including poor diet, obesity, alcohol consumption, and viral hepatitis — are unevenly distributed across UK society, contributing significantly to health inequalities. Over the past few decades, obesity rates have climbed in almost all regions, driving a surge in MASLD and related GI cancers, such as CRC. Yet preventive measures, such as healthy lifestyle promotion, weight management services, and targeted interventions, often fail to effectively reach the populations most in need (35).

Alcohol-related harm is similarly concentrated in socioeconomically disadvantaged communities, where deprivation and chronic stress amplify the risk. During the COVID-19 pandemic, alcohol consumption and related deaths spiked alarmingly: UK alcohol-specific deaths (most of them from alcoholic liver disease) rose by 27% in 2020 compared to 2019, reaching a record high of 14.8 deaths per 100,000 population in 2021 (36). This surge was most severe among middle-aged men in the most deprived communities, with regions such as the Northeast — already disproportionately burdened by alcohol-related liver disease — experiencing the largest relative increases. These figures reversed a decade of stability and underscored how social and economic stressors during the pandemic disproportionately harmed vulnerable populations (35,36).

An added challenge lies in the pervasive stigma surrounding alcohol misuse and obesity. Liver disease, in particular, is often dismissed as “self-inflicted,” a perception that has historically dampened public health urgency, advocacy, and funding for prevention efforts (34). Furthermore, any of the root causes of GI health inequalities lie outside the formal healthcare system, embedded instead in the broader social determinants of health. Poverty, unemployment, low education, poor housing, and social exclusion all increase the risk of developing GI conditions and worsen patient outcomes. For example, healthy food options are often unaffordable or unavailable in so-called “food deserts,” leading to a greater reliance on processed, high-fat diets that elevate the risk of bowel cancer. Similarly, alcohol and fast-food outlets are disproportionately clustered in poorer neighborhoods, exacerbating liver disease risks among already vulnerable populations (35,37).

These upstream, structural factors are notoriously difficult to address, requiring coordinated government action — such as taxation, regulation, and social support — which often faces political and economic resistance. Beyond these structural barriers, low health literacy and cultural factors also play critical roles in perpetuating inequalities. Communities facing language barriers or harboring mistrust toward healthcare authorities are less likely to engage in screening programs or seek early medical care, increasing the likelihood of late-stage disease presentation (28). Marginalized groups, including people experiencing homelessness or those with mental health conditions, are particularly at risk of falling through the cracks of preventive services and often only present when disease is advanced. The HCV epidemic has highlighted these challenges, as many affected individuals came from vulnerable populations without regular access to routine healthcare. Tackling such hard-to-reach groups remains a major challenge for improving uptake of interventions like CRC screening and hepatitis B (HBV) vaccination (35 – 38).

Backlogs and Resource Prioritization

The NHS has been under immense strain, with the COVID-19 pandemic amplifying existing pressures and disproportionately affecting GI services. Digestive health care has emerged as one of the hardest-hit specialties, exacerbating long-standing inequalities in access and outcomes. By early 2022, England faced a backlog of approximately 435,000 people awaiting key GI diagnostic tests, particularly endoscopies, as part of a wider elective care crisis that left over 7 million patients waiting for hospital treatment across all specialties (39). These delays have not impacted all patients equally. Evidence indicates that individuals from socioeconomically deprived areas have been disproportionately affected by service shutdowns and are slower to re-engage with care when services resume, further deepening the diagnostic and treatment gap between affluent and disadvantaged communities. The interruption of national screening programs and routine GI surveillance during the pandemic has likely worsened disparities in early detection, particularly for high-risk populations, although the full impact on late-stage diagnoses (especially cancers) is still emerging (13,39).

Moreover, infection control measures and the redeployment of GI staff and endoscopy rooms to COVID-related services reduced local GI service capacity during peak pandemic periods, leaving already stretched units struggling to catch up. Smaller or under-resourced hospitals—often serving rural or deprived populations—have found it especially challenging to recover, lacking the workforce or infrastructure flexibility of larger centres. Crucially, the experience of the pandemic has highlighted a pressing challenge for the future: building system resilience that ensures preventive GI care, routine screening, and early intervention services remain protected even during national healthcare crises. Without such safeguards, future shocks—whether from pandemics or seasonal surges—risk once again disproportionately withdrawing services from the populations most in need, worsening the already entrenched inequalities in GI and liver disease care across the UK (36-39).

Although health inequalities have long been on the UK policy agenda, translating policy commitments into sustained, effective action has proven difficult — particularly in the field of GI and liver health. Despite the significant burden of GI and liver diseases, these conditions have often been under-prioritized compared to other major disease areas. For example, while cardiovascular disease and cancer benefit from long-established national strategies, no equivalent comprehensive national strategy exists for liver disease (36). The UK Liver Alliance and the British Liver Trust have raised concerns that liver disease may be excluded from the government’s forthcoming Major Conditions Strategy, a gap that risks perpetuating the lack of targeted funding, initiatives, and service development for this high-burden condition (36,39,40).

Similarly, conditions such as IBD and functional GI disorders, despite their substantial impact on patient quality of life, rarely receive national attention or prioritization in public health campaigns. This lack of focus limits opportunities to improve early detection, patient support, and service access, particularly for the most vulnerable populations. Fragmentation across the system further compounds these challenges. Public health and prevention efforts, historically siloed within Public Health England and now the Office for Health Improvement and Disparities (OHID), often operate separately from the NHS, which is responsible for treatment and service delivery. Ensuring these arms of the system work together effectively to address inequalities remains an ongoing challenge (36,40).

At the local level, austerity-era budget cuts during the 2010s disproportionately affected deprived areas by reducing funding for public health and addiction services — cuts that directly impacted preventive GI care. For example, alcohol cessation programs, which are critical to reducing liver disease burden, saw funding reductions that the Lancet Liver Commission has specifically called to reverse (28). The lack of consistent national investment, strategic focus, and integrated action on GI and liver health inequalities has significantly impeded progress, leaving the most disadvantaged populations at continued risk.

Data and Monitoring Issues

Accurately measuring inequalities is a critical first step toward addressing them, yet GI and liver care in the UK faces persistent data challenges that hinder progress. For example, a significant proportion of liver cancer cases in the UK are recorded without a stage at diagnosis, making it difficult to monitor improvements in early detection or assess whether interventions are reaching those most at risk (7). Additionally, the recording of ethnicity in healthcare datasets is often incomplete, limiting the ability to conduct robust analyses of ethnic disparities in GI and liver health outcomes (7,40).

Socioeconomic disparities are typically assessed using area-based deprivation indices, which, while useful, can mask smaller “pockets of need” within more affluent areas. Furthermore, until

recently, there has been limited systematic reporting of key performance metrics — such as waiting times and treatment outcomes — stratified by socioeconomic status, making it difficult to identify and act on service-level inequalities. Newer tools, such as NHS Digital’s Liver Disease Profiles and the Office for National Statistics Health Index, are beginning to shed light on local variations in GI and liver health, offering a more detailed picture of where disparities exist (36,40). However, to meaningfully tackle inequalities, even more granular, real-time data are needed. Without comprehensive and timely data, many inequities risk remaining “out of sight and out of mind,” undermining efforts to deliver targeted improvements and leaving the most vulnerable populations at continued disadvantage.

6. Emerging Solutions

Despite the substantial and persistent challenges in GI and liver care inequalities across the UK, there are promising developments on the horizon. A combination of national policy shifts, innovative service models, targeted interventions, and research-driven efforts is laying the groundwork for a fairer and more equitable distribution of digestive health outcomes. Below are the key future prospects that offer reasons for optimism.

Targeting health inequalities in the UK should be the nation’s primary concern. The establishment of the Office for Health Improvement and Disparities (OHID) in 2021 signaled a renewed national commitment to addressing health inequalities. OHID’s explicit mandate is to “shift focus towards preventing ill health, particularly in places and communities with the worst disparities” (36). This includes more coordinated action on obesity, for example, continuing sugar reduction programs and expanding weight management initiatives in primary care, as well as tackling alcohol-related harm. Similarly, NHS England’s Prevention Programme has embedded health inequalities at its core. One concrete preventive policy is the phased lowering of the bowel cancer screening age in England from 60 to 50 years by 2025, aligning with Scotland, which has screened from age 50 for years. Primary-care endorsement can increase screening among prior non-responders; in a PEARL randomized study, a GP-signed reminder increased uptake by ~8% (25). This change is expected to improve early detection and particularly benefit communities with historically lower screening uptake, provided targeted outreach and multilingual education are effectively implemented (28).

Another notable success story is England’s hepatitis C (HCV) elimination programme, which, thanks to a £1 billion antiviral procurement initiative and innovative “find and treat” models targeting vulnerable populations (e.g., homeless individuals, people who inject drugs), is on track to eliminate HCV by 2025 — five years ahead of the World Health Organization’s goal. Deaths from HCV-related liver disease have already decreased by 35% since 2015, providing a strong example of how political will, funding, and outreach can combine to reduce inequalities and improve outcomes for disadvantaged groups (41). For HCC, nurse-led surveillance navigation with automated recall can substantially increase ultrasound adherence in cirrhosis clinics and improve early stage detection (22). Where ultrasound sensitivity is limited (e.g., obesity), abbreviated MRI

protocols offer a feasible alternative surveillance tool under evaluation and could mitigate inequities in high-risk, underserved populations.

There is increasing momentum for structural interventions to address the upstream lifestyle drivers of GI illness. A standout example is Scotland's implementation of minimum unit pricing (MUP) for alcohol in 2018, which has been linked to an 11–13% reduction in deaths from alcoholic liver disease, with the largest reductions seen in the most deprived communities (42). Alcohol-related hospital admissions in Scotland have also fallen by an estimated 8–10% since MUP's introduction (43). These successes have prompted calls for similar pricing or taxation measures in England and Northern Ireland, where alcohol-related harm remains high (28).

In the area of obesity, the UK's 2018 Soft Drinks Industry Levy (the "sugar tax") led manufacturers to reduce sugar content in soft drinks by nearly 30%, marking a population-wide gain. Future proposals include extending such levies to other high-sugar foods, though these remain politically contested. The government's upcoming Major Conditions Strategy advocated to ensure that liver disease is included as well (36), which unlocked more targeted funding for prevention and management. On tobacco control, the Khan review (2022) has recommended bold measures such as raising the smoking age, which, if enacted, would also contribute to long-term reductions in GI cancers (37). Collectively, these upstream policies aim to create healthier environments, with particularly beneficial effects for deprived communities disproportionately exposed to unhealthy settings.

Health equity in another crucial area for concern. Efforts are underway to make healthcare services more accessible and uniform across regions. One major initiative is the rollout of Community Diagnostic Centres (CDCs) — one-stop hubs for scans and tests located closer to communities. By 2023, around 170 CDC sites had been approved across England (44), offering services such as endoscopy, imaging, and blood tests outside main hospitals. These centres are designed to reduce inequalities by bringing diagnostic services directly to under-served areas, meaning, for example, that a patient in a deprived town no longer has to travel to a distant city for a colonoscopy (35).

Additionally, the NHS Elective Recovery Plan includes measures such as extended endoscopy hours, mobile endoscopy vans, and mutual aid between hospitals to balance waiting lists, all aiming to reduce the disproportionate backlog burden on disadvantaged populations. Another important development is the rollout of Alcohol Care Teams (ACTs) in hospitals, backed by the NHS Long Term Plan. By 2024, dozens of hospitals in England with the highest alcohol-related admissions are receiving funding to establish ACTs, which include hepatologists, addiction nurses, and psychiatrists. These teams identify and support patients with alcohol problems during hospital admissions and connect them to community services — a model shown to save lives and reduce readmissions (28). There are growing calls to expand ACT coverage nationwide, as early results are promising, particularly for high-need, deprived populations. Additionally, tailored CRC screening outreach through community hubs with a specific focus to deprived areas has been

proposed, mirroring Scotland's successful hepatitis B virus (HBV) pilot program, to improve uptake and early detection in underserved groups (28).

Another essential area is workforce expansion. Expanding and innovating the healthcare workforce is essential to delivering equitable GI care. In 2023, the government announced the NHS Long Term Workforce Plan, which includes expanding medical school places and specialty training slots. For gastroenterology, the BSG and the RCP have recommended increasing both general GI and hepatology subspecialty training posts. Specifically, workforce projections suggest the need to increase hepatology training posts by at least 7% annually to meet BSG targets and address the growing burden of liver disease. This expansion should bring more GI consultants into currently under-served regions over the next five to ten years, with incentives to train and work in these areas (36-40). In the meantime, innovative workforce models can help bridge gaps. For example, training more nurse endoscopists and GI nurse specialists can extend service capacity. Many regions now use nurses to perform routine endoscopies or run nurse-led clinics for IBD, IBS, and liver disease, freeing up doctors for more complex cases. Evidence shows that nurse endoscopists achieve excellent outcomes and patient satisfaction, making task-shifting a promising approach to improving access. Furthermore, increasing diversity and inclusion in recruitment — supported by mentoring and leadership development programs — will gradually create a workforce better equipped to serve the UK's diverse population (32).

Technological challenges need to be addressed. Rapid advances in medical technology offer further hope for addressing GI care inequalities. For example, the fecal immunochemical test, now adopted in the bowel screening programme, has made screening easier and more acceptable, potentially boosting uptake among groups previously reluctant to participate. Early multi-cancer blood tests, now in development, could help identify GI cancers in high-risk patients who avoid traditional screening pathways (22).

In liver care, non-invasive fibrosis tests such as FibroScan and serum biomarkers can detect silent cirrhosis early. Although only a quarter of UK regions were using these tools in 2021, NHS England is now rolling out FibroScan in primary care networks, with expectations of broader uptake. Additionally, surveillance algorithms embedded in GP software could soon proactively flag high-risk patients, prompting earlier intervention. Telemedicine and remote monitoring also have the potential to improve access for rural or under-served areas, enabling patients to consult specialists or report symptoms via digital platforms without frequent in-person visits. Importantly, many programmes are now embedding digital inclusion measures, such as device loans and patient training, to ensure that innovations do not widen the digital divide (22,28).

A growing research focus on health inequalities is providing actionable insights for future improvements. Cancer Research UK and NHS Digital have developed detailed data hubs that track screening uptake, diagnosis stage, and outcomes by region and demographic group, enabling the identification of “hot spots” requiring intervention (8). Research trials are underway testing

community health educators, mobile screening units in local settings (such as church or temple parking lots), and tailored health messaging to improve screening uptake in hesitant groups.

Collaboration should be at the forefront. The UK is increasingly engaging in international collaboration to share and adopt best practices in reducing GI health inequalities. For example, the World Health Organization's goals for viral hepatitis elimination (which England is on track to meet early) continue to drive efforts on HBV vaccination and testing, particularly in immigrant communities. Through the United European Gastroenterology network, the UK is also learning from international strategies, such as France's alcohol policy successes and Finland's screening innovations. Conversely, if the UK successfully scales initiatives like nationwide ACTs or CDCs, it could serve as a model for other countries seeking to reduce health inequalities. The global context keeps momentum alive, with international commissions and publications, including multiple Lancet reports, emphasizing the urgency of addressing liver disease inequalities (22).

Conclusion

While GI and liver disease inequalities remain a serious and persistent challenge in the UK, the landscape is evolving with increasing political will, data-driven targeting, and a growing set of initiatives aimed at reducing these disparities. Bold prevention policies, strategic investment in services and workforce, targeted community outreach, and innovative use of technology all offer promising pathways to a more equitable digestive health future. Early successes — such as the decline in HCV-related deaths and improved screening engagement in some regions — are encouraging.

However, achieving true equity will require sustained commitment around three priorities:

- (1) mandating inequality metrics in NHS contracts to ensure accountability
- (2) scaling Community Diagnostic Centre (CDC) models to reach rural and underserved areas
- (3) adopting Scotland's minimum unit pricing (MUP) alcohol policy across the UK to curb alcohol-related liver harm.

Given that GI and liver diseases are major contributors to the UK's overall life expectancy gap, the stakes for success are high. By learning from what works and ensuring that innovations and improvements reach all segments of society, the UK can move toward a future where no community is left behind in GI and liver health outcomes. Each initiative underway represents a critical step on this path — and with continued focus and investment on these priorities, the presently stark map of digestive health inequalities across Britain could, over time, become much more uniform, reflecting improved health and wellbeing for those who have historically been the most disadvantaged.

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