

Nutritional Care of Adults Living with Liver Disease in Wales

Service Specification

April 2026

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Useful Abbreviations

BDA	British Dietetic Association
CLD	Chronic liver disease
DDAS	Dyfed Drug and Alcohol Service
HCP	Health care professional
HE	Hepatic encephalopathy
HGS	Handgrip strength
LDUST	Liver disease undernutrition screening tool
LFI	Liver frailty index
LOHS	Length of hospital stay
MDT	Multidisciplinary team
MECC	Making Every Contact Count
NG	Nasogastric
ONS	Oral nutrition support
QOL	Quality of life
TIPS	Transjugular Intrahepatic Portosystemic Shunt

Statement

This document has been developed to inform the provision of nutritional care in all healthcare settings in Wales for adults living with liver disease.

1. Introduction

1.1 Background

In 2015, the Welsh Government published the *Together for Health – Liver Disease Delivery Plan*, which recognised the importance of improving access to specialised dietetic services as a key component of enhancing care for individuals living with chronic liver disease (CLD) in Wales. Nutritional care is a fundamental aspect of the holistic management of CLD.

Evidence demonstrates that dietetic intervention can significantly reduce both the length of hospital stay and 90-day readmission rates, highlighting the potential for improved clinical outcomes and cost efficiencies through timely nutritional support ¹

Regardless of the underlying cause of an individual's CLD, malnutrition emerges as one of the most prevalent complications in advanced stages of the disease, significantly impacting patient outcomes². Malnutrition is associated with the progression of liver failure, and with a higher rate of complications including infections, hepatic encephalopathy and ascites³. Numerous studies underscore malnutrition as an independent predictor of survival⁴. Patients with liver cirrhosis have altered metabolism resulting in accelerated starvation. Hypermetabolism, insulin resistance, anorexia and inappropriate dietary restrictions contribute to muscle wasting⁵.

Nutritional counselling has been shown to improve nutritional status, increase survival, reduce Length of Hospital Stay (LOHS) and 90-day readmission rates, and improve QOL⁶. Specialist dietetic advice, often intense in frequency, is required to deliver a tailored regimen of oral nutritional supplements (ONS) as a minimum, with options to step up intervention through additional enteral nutrition via nasogastric (NG) tube where necessary.

Malnutrition, obesity and sarcopenic obesity worsen the prognosis of individuals living with liver cirrhosis and lower their survival – this cohort of individuals has an 8-fold mortality risk. Nutritional monitoring and intervention are therefore crucial in CLD management⁷.

¹ [Reuter et al., 2019](#)

² [Johnson et al. 2013](#); [Mouzaki et al. 2014](#); [Sinclair et al. 2016](#)

³ [Borhofen et al. 2016](#); [Johnson et al. 2013](#); [Palmer et al. 2019](#)

⁴ [Maharshi et al. 2015](#); [Borhofen et al. 2016](#)

⁵ [Alvares-da-Silva and Silveira 2005](#); [Johnson et al. 2013](#); [Palmer et al. 2019](#); [Sinclair et al. 2016](#)

⁶ [Maharshi et al, 2016](#); [Reuter et al. 2019](#)

⁷ [Angeli et al. 2018](#)

Identification of patients with malnutrition, sarcopenia, and sarcopenic obesity is essential as part of a quality service. It is recognised that early and aggressive nutritional intervention is associated with improved outcomes for people living with CLD⁸. Timely and effective systematic nutritional surveillance, advice and therapy for people living with cirrhosis has a significant effect in improving survival rates and liver function⁹. Experience shared by the NHS Performance and Improvement Liver Disease Implementation Network Nutrition Clinical Advisory Group suggests that, in Wales, patients are typically referred to dietetic services at a late stage, when nutritional issues have already become entrenched.

However, interpretation of this finding is limited by the availability and quality of routinely collected data, which vary across health boards and may not fully capture referral patterns or outcomes. This highlights the need for more standardised data collection to better inform service planning and evaluation.

The service specification advocates for a proactive approach to nutritional care, empowering individuals with CLD to engage in self-management through early and targeted intervention. Early nutritional support enables greater nutritional gains and improved clinical outcomes. From a value-based and prudent healthcare perspective, timely intervention reduces the likelihood of long-term complications and the need for more intensive treatment. At the same time, services must also be equipped to deliver intensive, specialist dietetic interventions for patients with more complex needs. This includes provision in both community and inpatient settings, ensuring equitable access to high-quality nutritional care across the care pathway.

1.2 Aim and objectives

Aim:

To define the standard of nutritional care for adults living with liver disease in Wales, ensuring equitable, evidence-based, and timely access to dietetic services across all care settings.

Objectives:

No	Objective	Corresponding Section
1	To establish a standardised approach to nutritional risk screening for adults with liver disease.	Section 2.3.3 Nutrition Risk Screening
2	To define clear and consistent referral pathways for accessing nutritional care.	Section 2.3.4 Intervention in Community / Outpatient Settings

⁸ [Plauth et al., 2019](#)

⁹ [Plauth et al., 2006](#); [EASL, 2019](#).

3	To standardise the assessment, monitoring, and evaluation of dietetic interventions.	Sections 2.3.5 Nutritional Assessment and 2.3.9 Monitoring
4	To outline appropriate models of care for nutrition and dietetic services across community and inpatient settings.	Sections 2.3.2 Secondary Prevention, 2.3.7 Community NG Feeding, and 2.3.8 Inpatient Settings
5	To identify the required workforce capacity and skill mix necessary to deliver high-quality nutritional care.	Section 3.1 Workforce Standards

1.3 Scope

This service specification applies across NHS Wales and covers secondary care services for adults living with liver disease, including both community-based and inpatient settings. It outlines the expected standards for nutritional care and dietetic service provision within these settings, ensuring consistency and equity of access across all Health Boards.

2. Service Delivery

Key Service Objectives

This service specification supports the NHS Wales 3Ps strategy [Promote, prevent and prepare for planned care](#) by embedding a proactive, person-centred, and preventative approach to nutritional care in liver disease. It ensures that individuals are supported to manage their condition effectively, complications are minimised through early intervention, and services are prepared to deliver consistent, high-quality care across all settings.

Strategy	Aligned Service Objectives	Explanation
Promote	<ul style="list-style-type: none"> Promote self-management and education to empower individuals and carers. Improve quality of life and functional status through tailored nutrition care. Provide a robust training programme for healthcare professionals. 	Focuses on empowering individuals and professionals through education, awareness, and personalised care. Promotes healthier behaviours and informed decision-making.

Prevent	<ul style="list-style-type: none"> • Reduce the incidence and severity of malnutrition in people with liver disease. • Support early identification and dietetic intervention for individuals at risk of nutritional decline. • Reduce hospital admissions and length of stay related to nutrition-related complications. 	<p>Aims to prevent deterioration in health by identifying risks early and intervening before complications arise. Prevents avoidable admissions and long-term harm.</p>
Prepare	<ul style="list-style-type: none"> • Improve clinical outcomes through early and ongoing dietetic intervention. • Increase referrals to dietetic services from hepatology, gastroenterology, and primary care. • Strengthen links with community services to support continuity of nutritional care post-discharge. • Support equity of access to specialist dietetic care across all Health Boards in Wales. 	<p>Ensures service users are better prepared for planned care and long-term management through integrated, equitable, and proactive service delivery. Builds system readiness and resilience.</p>

2.1 Levels of Care

Nutritional care for individuals with chronic liver disease (CLD) should be delivered across a continuum of care, from prevention through to end-of-life support. The following levels of care are included within the scope of this specification:

2.1.1. Primary and Secondary Prevention

Early identification and management of nutritional risk in individuals at risk of or newly diagnosed with CLD, including lifestyle and dietary advice to prevent disease progression.

2.2.2. Screening for Malnutrition

Routine and systematic nutritional screening using validated tools to identify malnutrition, sarcopenia, and sarcopenic obesity at all stages of the disease.

2.2.3. Nutritional Intervention

Evidence-based dietetic interventions tailored to individual needs, including oral nutritional support, enteral feeding, and behavioural strategies to support adherence.

a. Community-Based Care

Provision of dietetic services in community settings to support early intervention, continuity of care post-discharge, and long-term management of nutritional needs.

b. Inpatient Care

Specialist dietetic input during hospital admissions to optimise nutritional status, support recovery, and reduce complications and readmissions.

2.2.4. Optimisation for Specialist Treatments

Nutritional optimisation as part of prehabilitation for patients undergoing trans jugular intrahepatic portosystemic shunt (TIPS), liver surgery, or liver transplantation.

2.2.5. End-of-Life Care

Sensitive and appropriate nutritional support for individuals with advanced liver disease receiving palliative or end-of-life care, aligned with patient goals and quality of life considerations.

2.2 Admission Criteria

Where services are appropriately resourced in terms of workforce and training, dietetic care for individuals with CLD should be delivered in the community wherever safe and feasible. However, there are specific clinical scenarios where hospital admission is required to safely initiate or deliver artificial nutrition support.

Hospital admission may be necessary in the following circumstances:

- High risk of refeeding syndrome, requiring close monitoring and controlled nutritional reintroduction (See: [NICE Clinical Guideline 32 – Nutrition Support for Adults, NICE CG32](#))
- Significant substance use that, in the judgement of healthcare professionals, compromises the safety of delivering nutrition support in the home environment.
- Severe cognitive impairment or confusion, including hepatic encephalopathy, that affects the ability to safely manage nutrition support.
- Poor dexterity or physical limitations that prevent safe self-management of home enteral feeding equipment.
- Immobility or requirement for 24-hour care for non-nutritional needs, where community-based support is not feasible.
- Homelessness or no fixed abode, where safe delivery of nutrition support cannot be assured.

These criteria ensure that patients receive safe, appropriate, and effective nutritional care in the most suitable setting.

2.3 Service Model

The service model is designed with the principles of workforce redesign and early, evidence-based intervention at its core. It supports a proactive, tiered approach to nutritional care for individuals with liver disease across Wales.

2.3.1 Primary Prevention

Preventing the onset of liver disease requires a population-wide approach that addresses modifiable risk factors through education, early intervention, and public health initiatives.

Key Actions:

- **Community-based nutrition education** targeting high-risk groups (e.g. people with obesity, type 2 diabetes, hazardous alcohol use).
- **Public health campaigns** promoting balanced diets, reduced alcohol intake, physical activity, and healthy weight maintenance.
- **Contribution to local and national initiatives** such as obesity prevention programmes, alcohol awareness campaigns, and diabetes prevention pathways.
- **Training and support for non-specialist staff** to deliver consistent, evidence-based messages around liver health and nutrition.
- **Advocacy for addressing wider determinants of health**, including food insecurity, housing, and access to healthy lifestyle resources.

Workforce Development: Training Recommendations

To embed prevention into routine practice, staff should be supported with:

- **Making Every Contact Count (MECC)**

Enables brief, person-centred conversations about lifestyle behaviours.

- **Motivational Interviewing (MI)**

Builds readiness for change, especially around alcohol use and dietary habits.

- **Health Coaching**

Supports goal-setting and sustained behaviour change.

- **Brief Interventions**

Evidence-based techniques for addressing alcohol misuse and other risk factors.

- **Trauma-Informed and Culturally Competent Care**

Ensures sensitive, equitable engagement with diverse populations.

Strategic Alignment

This approach is underpinned by key national frameworks:

- **Investing in a Healthier Wales: Prioritising Prevention**

Highlights the economic and health benefits of prevention, with a return of £14 for every £1 invested. There is robust evidence for alcohol misuse interventions, advocating for multi-component strategies including education, community support, and policy reform.

- **Well-being of Future Generations (Wales) Act 2015 (WFGA)**

Embeds sustainable development through five ways of working:

- Long-term thinking
- Prevention
- Integration
- Collaboration
- Involvement

These principles support inclusive, future-focused liver disease prevention.

Signposting and Referral Pathways

Staff should be encouraged to signpost individuals to:

- [All Wales Weight Management Pathway \(2021\)](#)

Structured, tiered support for weight management across primary and specialist care.

- [Healthy Weight Healthy You](#)

A whole-systems strategy to reduce obesity and promote healthy living in Wales.

Embedding Making Every Contact Count (MECC) in Practice

All healthcare professionals, especially those in community and primary care should be empowered to deliver opportunistic health promotion using the MECC approach (MECC // Public Health Wales).

MECC supports brief, person-centred conversations about:

- Diet
- Alcohol use
- Physical activity

These are all key risk factors for liver disease. By embedding MECC and compassionate communication into routine interactions, professionals can help individuals make informed choices that reduce their risk and promote long-term health and wellbeing.

Third Sector Collaboration and Community Outreach

Partnership working with third sector organisations is essential for reaching vulnerable populations and addressing wider determinants of health. A successful example is the Nutrition Skills for Life programme delivered in collaboration with Dyfed Drug and Alcohol Service (DDAS). This initiative provides tailored nutrition education and behaviour change support to individuals affected by substance use, helping reduce liver disease risk through improved dietary choices and lifestyle awareness.

2.3.2 Secondary Prevention

Building on the principles of primary prevention, secondary prevention focuses on early identification and targeted nutritional support for individuals with established liver disease or those at high risk of progression.

Malnutrition:

A universal All-Wales offer, including a leaflet and educational video, should be made available to individuals with compensated cirrhosis. These should be accessible via:

- Health Pathways
- Outpatient clinics
- Health board websites

Resources include:

- Eating Well with Cirrhosis – [Leaflet](#)
- Eating Well with Cirrhosis – [YouTube Video](#)

Weight Management:

Individuals with fatty liver disease should be managed through the appropriate level (1-4) of the [All Wales Weight Management Pathway](#) that meets their needs.¹⁰

Individuals with more advanced liver disease (e.g. fibrosis or cirrhosis) should be managed in specialist settings.

- For patients with fibrosis or well-compensated cirrhosis, weight management medications may be considered within an MDT setting that includes a dietitian. Hepatology teams should be notified of any prescribing decisions.
- For individuals with decompensated disease or a history of hepatic encephalopathy, weight management medications should only be considered under specialist MDT guidance due to the need for close monitoring.

Diabetes Mellitus:

Individuals with liver disease are at significantly increased risk of developing diabetes mellitus, particularly type 2 diabetes mellitus, due to insulin resistance and metabolic dysfunction associated with liver pathology¹¹. Many of these patients will require pharmacological management, including insulin therapy, and are simultaneously at high risk of malnutrition.

To ensure safe and effective nutritional care, an MDT approach is essential.

Individuals with fibrosis or well-compensated cirrhosis may be managed by primary or secondary care diabetes teams, with support from specialist liver dietitians.

- Medication should be adjusted to maintain adequate nutritional intake.
- Hepatology teams should be informed of significant prescribing decisions.

Individuals with individuals with decompensated disease should be managed within a specialist MDT involving:

- Specialist liver dietetic services
- Hepatology teams
- Primary and secondary care diabetes teams
- Inpatient Diabetes Review Teams
- Alcohol Care Teams (where relevant)

¹⁰ [New clinical pathway for treating and managing obesity \(WHC/2025/043\) \[HTML\] | GOV.WALES](#)

¹¹ [Hickman & Macdonald, 2007](#)

- Medical and Nursing teams across inpatient and community settings

Nutrition should not be restricted for individuals who are malnourished or at risk of malnutrition. Oral Nutritional Support (ONS) should not be withheld due to elevated blood glucose levels. Instead, glucose management should be optimised through medication review and adjustment, rather than dietary restriction.

- Individualised glucose targets should be set in consultation with diabetes specialists, balancing glycaemic control with the need for adequate nutritional intake.
- Education and training should be provided to all healthcare professionals on managing diabetes in the context of liver disease and malnutrition, including:
 - Safe prescribing practices,
 - Nutritional prioritisation
 - Compassionate conversations and *Making Every Contact Count* (MECC) principles.

This approach ensures that service users receive holistic, person-centred care that supports both metabolic control and nutritional rehabilitation, ultimately improving clinical outcomes and quality of life.

2.3.3 Nutrition Risk Screening

Nutrition risk screening should be routinely undertaken in hepatology outpatient services, in line with NICE guidance¹².

- Screening should occur at the first clinic appointment and be repeated at each subsequent appointment unless completed within the previous 8 weeks.
- Given the high prevalence of malnutrition and the masking effect of fluid retention and higher BMIs, screening should be routine and repeated where clinically indicated.
- Screening tools should be validated for use in liver disease, such as:
 - **Liver Frailty Index (LFI)** – suitable for clinician-administered screening to identify sarcopenia¹³
 - **Liver Disease Undernutrition Screening Tool (LDUST)** – suitable for self-screening with minimal support ¹⁴[LDUST Screening Tool.xlsx](#) – suitable for self-screening with minimal support ¹⁵

The LFI, is more resource-intensive than the LDUST, but provides a robust assessment of frailty and is particularly useful in complex cases. While LDUST reduces demand on healthcare professionals, some individuals may still require support to complete the tool accurately.

¹² [NICE, 2006; updated 2017](#)

¹³ [Casas Deza et al., 2023](#)

¹⁴ [McFarlane et al., 2017](#)

¹⁵ [Booi et al., 2015; McFarlane et al., 2018](#)

2.3.4 Intervention in Community / Outpatient Settings

Referrals to Nutrition and Dietetic Services must be triaged to ensure timely allocation and effective use of specialist resources. A high-quality triage system should:

- Prioritise urgent and complex referrals (e.g. decompensation, rapid weight loss, high frailty scores).
- Ensure service users are seen by the right clinician at the right time according to clinical risk.
- Support effective signposting to appropriate services (e.g. weight management tiers, community support, alcohol services).
- Reduce delays in intervention through proactive risk assessment and streamlined referral processes.

Referrals should include essential clinical information (e.g. recent weight history, comorbidities, frailty indicators, relevant bloods, nutrition risk screening outcome and handgrip measures where available) to facilitate rapid and accurate triage.

Skill-Mix Model for Outpatient Hepatology Nutrition Care

Individuals identified as 'pre-frail' may be appropriately managed by dietetic assistant practitioners under the direct supervision of a registered dietitian.

Pre-frailty indicators include:

- LFI > 3.2, or
- Handgrip strength < 25th centile

Assistant practitioners should follow a structured care plan and escalate care promptly if deterioration is identified.

Initial assessment and care plan must be developed by a registered dietitian for individuals who meet any of the following criteria:

- Awaiting treatment (e.g. liver transplant, TIPS, HCC surgery)
- Co-morbidities where nutrition can improve outcomes (e.g. ascites, hepatic encephalopathy)
- BMI < 18.5 kg/m²
- Sarcopenic obesity
- Handgrip strength < 10th centile
- LFI > 4.4 ('frail')
- Requirement for enteral feeding

These individuals present with complex nutritional needs requiring advanced hepatology dietetic expertise. Monitoring may be delegated to trained support staff where appropriate.

Individuals undergoing frequent paracentesis should be routinely referred for dietetic assessment.

Face-to-face assessment should be provided as standard practice to ensure accurate anthropometric measurements and high-quality nutritional assessment. Virtual

consultations may be used for follow-up where clinically appropriate but should not replace initial in-person assessment.

2.3.5 Nutritional Assessment

- Individuals identified as at risk of malnutrition should undergo a comprehensive nutritional assessment by a registered dietitian, in line with EASL (2019) recommendations.
- Assessments should follow the [British Dietetic Association's Model and Process for Nutrition and Dietetic Practice \(2021\)](#)
- An All-Wales nutritional assessment dataset, developed by the Liver Nutrition Clinical Advisory Group, should be used for all individuals receiving dietetic care (see [Appendix 1](#)).

2.3.6 Artificial Feeding

Improving nutritional status can have a significant impact on outcomes. For some individuals, the severity of malnutrition or sarcopenia, the presence of comorbidities, or limited timeframes necessitate the initiation of enteral nutrition support. This is typically delivered via nasogastric (NG) feeding when first-line strategies—such as dietary modification and oral nutritional supplements (ONS)—have proven ineffective. Evidence suggests NG feeding should be continued for a minimum of eight weeks.¹⁶

In Wales, NG tube feeding should be available for individuals with liver disease following a multidisciplinary assessment. Given the inherent risks associated with NG feeding, it must be delivered in accordance with local health board policies and in alignment with national patient safety resources such as:

- [Patient Safety Alert Stage 2 - NG tube resource set.](#)
- [Resource set - Initial placement checks for NG tubes](#)

2.3.7 Community NG Feeding

Nasogastric feeding may be undertaken in a community setting following a period of patient training and competency assessment. There are clear advantages to patients and organisations in terms of delivering care closer to home and preventing admission. Patient selection is essential for a successful outcome and there may be patients for whom this approach would not be feasible or safe. Assessment concerning feasibility and safety should be undertaken by the hepatology MDT.

An MDT consisting of a hepatologist or gastroenterologist, specialist dietitian and specialist nurse should assess each case to determine whether home NG feeding is appropriate. Patients who meet the exclusion criteria outlined in Section 2.2 may not be suitable for this model of care.

¹⁶ [Vidot et al., 2017](#)

Health boards must ensure that clear pathways are in place for:

- NG tube placement and replacement
- Patient training and competency assessment
- Troubleshooting tube-related issues
- Monitoring feed tolerance and delivery
- Timely and appropriate dietetic review

The rationale and intended outcomes of NG feeding should be clearly defined from the outset to support appropriate discontinuation when clinically indicated. Where feasible, nutritional intervention should be complemented by reconditioning strategies to support functional recovery, improve muscle strength, and enhance overall quality of life.

It is important to note that existing evidence for community NG feeding is based on an outreach model from secondary care. If Health Boards choose to implement this as a standalone community-based model, appropriate governance structures must be explored to ensure clinical safety, accountability, and service sustainability.

2.3.8 Intervention in Inpatient Settings

Malnutrition affects an estimated 60–90% of individuals with advanced chronic liver disease (CLD).¹⁷ Given this high prevalence, blanket referral for comprehensive nutritional assessment is recommended for all in patients with advanced liver disease.¹⁸

Assessments should be conducted using the All-Wales Dietetic Assessment Dataset (see Appendix 1).

For inpatients with compensated CLD, nutrition risk screening should be completed in line with Health and Care Standard 2.5, which requires:

- Screening within 24 hours of hospital admission
- Weekly reassessment during the inpatient stay

[Supporting Guidance Standard 2.5 - NHS Wales Shared Services Partnership](#)

2.3.9 Monitoring

For patients with cirrhosis who are identified as being at high risk of malnutrition, regular monitoring is essential following initial assessment. Recommended review frequency is:

- Every 1–3 months in the outpatient setting, depending on the severity of nutritional concerns.
- Periodically throughout hospital admission, based on clinical condition and response to intervention.

¹⁷ [Bischoff et al., 2020](#); [Carvalho & Parise, 2006](#); [Johnson et al., 2013](#)

¹⁸ [Tandon et al., 2017](#)

These recommendations are supported by established international guidance and evidence¹⁹, ensuring timely adjustments to nutritional care plans and the optimisation of patient outcomes.

2.3.10 Care for People Pre- and Post-Transplant

People who are being assessed for or have received a liver transplant must have access to specialist care, including dietetic support, as part of their prehabilitation and long-term recovery.²⁰

Pre-Transplant Care

Nutritional optimisation is a critical component of pre-transplant care for individuals with advanced liver disease. Malnutrition, sarcopenia, and frailty are highly prevalent among liver transplant candidates and are associated with poorer clinical outcomes, including increased risk of complications, prolonged hospitalisation, and reduced post-transplant survival.²¹ Evidence supports early and targeted nutritional intervention to improve transplant eligibility, enhance recovery, and reduce morbidity.

All patients being considered for liver transplantation should undergo timely nutritional screening and comprehensive assessment using validated tools such as LDUST and LFI. Nutritional care plans should be developed by specialist liver dietitians and integrated with reconditioning strategies, including physiotherapy and exercise-based interventions, to support functional improvement and optimise surgical readiness.

Post-Transplant Care

Dietitians should:

- Provide individualised nutrition plans to support healing, immune function, and medication management.
- Monitor and manage metabolic complications such as:
 - Weight gain
 - Post-transplant diabetes
 - Bone health issues (e.g. osteoporosis) linked to immunosuppressive therapy
 - Cardiovascular health
- Offer education and support to help patients:
 - Maintain a healthy lifestyle
 - Reduce the risk of recurrence of liver disease
 - Improve long-term transplant outcomes

¹⁹ [EASL 2019](#), [Tandon et al. 2017](#)

²⁰ [Welsh Government, 2015](#); [EASL, 2019](#)

²¹ [Trovato FM, et al., 2023](#)

Services should be delivered in coordination with transplant centres and local health boards, ensuring continuity of care across settings and early identification of complications.

2.3.11 End of Life Care

Access to highly specialist dietetic provision for supportive, palliative and end-of-life care is currently limited across Wales. However, all clinicians working with individuals living with CLD should be equipped with the skills outlined in the All-Wales Palliative and End of Life Care Competency Framework [All Wales Competency Framework for Adult Palliative and End of Life Care - HEIW](#).

In CLD, identifying the prognostic stage of end-of-life can be particularly challenging. Patients may experience a prolonged period of gradual decline interspersed with multiple episodes of decompensation and recompensation. This unpredictable trajectory means that a final acute event or irreversible decompensation may only occur after several cycles of clinical deterioration and partial recovery, complicating timely recognition of the end-of-life phase.

As with all aspects of nutritional care, goals should be aligned with the broader medical treatment plan, staging, and prognosis, in collaboration with the MDT. Nutritional care plans must be adapted accordingly- considering the appropriateness and intensity of interventions as patients near the end of life.

Nutritional deterioration can become a major source of distress for both patients and their carers or relatives during the later stages of liver disease. Sensitive, honest communication and empathic, holistic care are essential. Involving local palliative care teams can support a more comprehensive, person-centred approach.

Dietitians often develop long term, strong relationships when working with individuals with liver disease and their families. As patients approach the end of life, it is important that staff are offered opportunities for reflection, supervision, and emotional support.

2.3.12 Women and Child Health

Services should be equally accessible to all on an individual basis. Where required dietetic services should support those with liver disease in pregnancy.

3. Care Delivery

Hepatology dietitians should form part of the core hepatology MDT to ensure timely access to nutritional care, reduce delays, and prioritise patients with the most urgent needs, supporting efficient care and optimal outcomes.

Across Wales, models of acute gastroenterology care vary. Where there is a centralised admission point, specialist dietitians should be based on-site to fully integrate with the hepatology team. Where there are multiple admission sites, services should be structured with an overarching lead hepatology dietitian responsible for:

- Setting quality standards
- Delivering training
- Providing expert advice and outreach care
- Supporting local delivery by non-specialist dietitians

3.1 Workforce Standards

The [British Dietetic Association \(2024\)](#) (BDA) recommends the following safe staffing levels for liver disease services ²²

- **Inpatient setting:**
1.0 WTE (Whole Time Equivalent) dietetic workforce per 10 patients. Adjustments should be made for patient complexity, co-location, and ward type (e.g. HDU).
- **Outpatient setting:**
0.5 WTE dietetic workforce per 100,000 population.
- **Administrative support** should be considered where clinic processes are not centrally managed.
- **Community nasogastric (NG) feeding services** should include:
 - Hepatology or nutrition nurse specialist
 - Specialist hepatology dietitian
 - Physiotherapist
 - Therapies assistant practitioner
- **Skill mix models** may include unregistered staff supervised by registered dietitians. A supervision ratio of 3:1 (Support Worker: Registered Dietitian)²³ is recommended to ensure governance, training, and escalation of care when needed. Consideration should also be given to appropriate leadership capacity to support the development, integration, and sustainability of the support worker workforce.

Implementation of the service specification may require additional short-term resource during the initial set-up phase, particularly in areas where hepatology dietetic capacity is currently limited. The extent of this requirement will vary between Health Boards according to existing staffing levels, local service configuration, and the scale of pathway development needed.

3.2 Essential Equipment and/or Facilities

²² [Safe Staffing and Safe Workload Guidance May 2024](#) – British Dietetic Association

²³*These standards are supported by data from Cardiff and Vale UHB, which highlight the need for registered dietetic input even when support workers are involved in outpatient hepatology care.

- Mobile phones and computers/laptops are required for each member of the team.
- Hand dynamometer
- Measuring tapes
- Clinic space for face-to-face consultations
- Medical Grade Weighing Scale

3.3 Digital Tools

Digital platforms are increasingly utilised to support nutritional care for patients with liver disease. These include electronic screening tools integrated into clinical systems, remote monitoring applications for tracking nutritional status, and educational resources accessible via patient portals. These tools enhance engagement, streamline data collection, and support timely interventions.

3.4 Interdependent Service Components and Links with Other NHS Services

Interdependent Service	Relevant Service Specification/Standards	Proximity to Service
Hepatology MDT (Medical and Nursing)	Quality Statement for Liver Disease , Annex A – outlines MDT pathways, collaborative frameworks across hepatology, primary care, alcohol/substance use & transplant services.	National
Nutrition Nurse Service	All Wales Health & Care Standards, Standard 2.5 – outlines multidisciplinary nutrition care, including screening, referrals, therapeutic feeding, hydration, and mealtime support. Nutrition nurse specialists may contribute to delivery depending on local service models.	National
Home Enteral Feeding Contract Providers	All Wales Health & Care Standards – Standard 2.5: Nutrition & Hydration - outlines nutrition screening, referrals (e.g. to dietitians), therapeutic feeding (e.g. home feeding/prescribing), mealtime support, hydration, and equipment provision. Local service-level agreements; Sell2Wales procurement framework ; BAPEN best practice	Local
Phlebotomy	The Wales Pathology Statement of Intent was published in 2019.	National
Alcohol Care Teams	Included under effective working in Quality Statement for Liver Disease with an aim to develop 7-day Alcohol Care Teams in each Health Board and for collaboration for Hepatology and alcohol and substance use services.	System-wide

Community Drug and Alcohol Services	Investing in a Healthier Wales, Healthy Weight Healthy Wales Strategy Healthy weight strategy (Healthy Weight Healthy Wales) GOV.WALES	Local/Regional
Palliative Care/Supportive Care Teams	Quality Statement for Liver Disease links palliative/end-of-life collaborative pathways; Welsh Palliative Care standards cover community integration.	National
Primary Care Teams	Abnormal Liver Blood Test Pathway for early detection of liver disease in primary care are described in the Liver Quality Statement .	National
Public Health Wales	Healthy Weight: Healthy Wales, Healthy weight strategy (Healthy Weight Healthy Wales) GOV.WALES Investing in a Healthier Wales, MECC, Nutrition Skills for Life.	National
Transplant/Tertiary Care Centres	Referral pathways via Annex A of Quality Statement .	Regional/National
Prehabilitation Services	Supported via PHW and NHS frameworks (e.g. pre-op exercise pathways).	National
AHPs/Pharmacy	Covered via Standard 2.5 and through the Clinical Community Pharmacy Service specification.	All Wales
Community Resource Teams	Recognised in Liver Quality Statement as part of community and third sector collaboration.	Local/regional
Mental Health Services	The Royal College of Psychiatrists published the Mental health and Wellbeing Strategy for Wales 2025-2035 .	System-wide
Weight Management Services	Healthy Weight: Healthy Wales, Healthy weight strategy (Healthy Weight Healthy Wales) GOV.WALES Weight Management Medication Pathway Weight Management Medication Pathway: Addendum for the All Wales Weight Management Pathway .	National

3.5 Patient and Carer Involvement

Patient and carer feedback is integral to the design and continuous improvement of nutritional care services. Structured feedback mechanisms such as surveys, focus groups, and patient panels are used to gather insights on service accessibility, communication,

and effectiveness. This feedback informs service redesign, prioritisation of resources, and the development of patient-centred care pathways.

3.6 Equity and Inclusion

Nutritional services are designed to address health inequalities by ensuring equitable access across diverse populations. Strategies include outreach to rural communities through telehealth, provision of materials in multiple languages, and collaboration with community organisations to support underserved groups. Services should be tailored to meet cultural, linguistic, and geographic needs to promote inclusive care.

4. Catchment Population and Population Need

4.1 Catchment Population- Baseline Population at Risk

This section reflects the portion of Wales's population that is overweight/obese or exposed to nutritional risk and hence at elevated risk of liver disease. Being overweight or obese significantly raises the risk of numerous chronic conditions, including type 2 diabetes, high blood pressure, cardiovascular disease (such as stroke), certain cancers, kidney disease, obstructive sleep apnoea, gout, osteoarthritis, and liver disease.

- Current population of Wales: ~ 3.1 million (estimated from [ONS mid2023 data](#)).²⁴
- Between 2003 to 2015 there was a 4% increase in levels of obesity among adults, and a 3.6% decrease in those of a healthy weight).²⁵
- Around **62% of adults (16+) are overweight or obese** – with a quarter of those classified as obese. This means approximately **~1.9 million adults are overweight or obese**, with around **775,000 adults obese** (25% of 3.1 million)²⁶
- The prevalence of adults living with obesity in Wales has increased by 44% in the last 20 years. (National Survey for Wales (2016/17 - 2022/23), Welsh Government). Unhealthy behaviours including poor diet, alcohol consumption and physical inactivity are not improving.²⁷
- Obesity and overweight-related ill health currently cost the Welsh NHS an estimated **£73–86 million per year**, with projections suggesting this could rise to **£465 million** by 2050. The wider societal cost is expected to reach **£2.4 billion**, reflecting the significant and growing burden of obesity on public services and the economy²⁸

4.2 Population Need- Estimated Liver Disease Burden regarding Obesity and Malnutrition

²⁴ [Population estimates for the UK, England, Wales, Scotland and Northern Ireland - Office for National Statistics](#)

²⁵ [Overweight and Obesity - Public Health Wales](#)

²⁶ [Adult lifestyles by local authority and health board, 2020-21 onwards](#)

²⁷ [A summary of trends in risk factors for non-communicable diseases - Public Health Wales](#)

²⁸ [Summary of trends in risk factors for non-communicable diseases - Public Health Wales Feb 2025](#)

Population Need estimates how many people have liver disease and potentially require care for liver disease regarding obesity and nutritional inadequacy.

a) Obesity related liver disease (MASLD / NAFLD/ NASH)

- [PHW data](#) confirm obesity is a major driver of liver disease in Wales, with most obese individuals likely to have fatty liver disease, and many progressing to have scarring and more severe prolonged inflammation that will lead to cirrhosis.
- The incidence of liver disease in Wales increased **3.6-fold between 1999–2019**, largely due to a **10-fold rise in NAFLD**.²⁹

Estimated Burden of Obesity-Linked Liver Disease in Wales (Adults)

Obesity-Linked Liver Disease	Definition	Prevalence	Estimated numbers
MASLD (Metabolic Dysfunction-Associated Steatotic Liver Disease)/NAFLD (Fatty Liver)	<i>Excess liver fat linked to metabolic dysfunction or obesity</i>	65–75% of obese adults	503,750 to 581,250
NAFL (Simple Steatosis)	<i>Liver fat without inflammation or significant liver damage.</i>	40–45% of obese adults	310,000 to 348,750
NASH / MASH (Metabolic Dysfunction-Associated Steatohepatitis) (Steatohepatitis)	<i>Fatty liver plus inflammation, with or without fibrosis; higher risk of progression to cirrhosis.</i>	25–35% of obese adults	193,750 to 271,250
Caveats:	<ul style="list-style-type: none"> • Base Population: 775,000 adults in Wales are obese (BMI ≥30) • These are epidemiological estimates, not exact patient counts. • Overlap exists between categories (NAFL and NASH are subsets of MASLD). • Diagnostic method and local factors influence actual prevalence. 		
References	<ul style="list-style-type: none"> • Global meta-analyses on NAFLD/MASLD and NASH prevalence in obese populations (2016–2023) • Base population 		

Obesity in Wales drives a substantial hidden burden of fatty liver disease, with up to 581,000 adults potentially affected-and as many as 271,000 at advanced stages requiring medical intervention.

²⁹ [Rising incidence, progression and changing patterns of liver disease in Wales 1999-2019 - PMC](#)

b) Malnutrition and its contribution to liver disease

- While specific malnutrition linked liver disease data is limited, national figures for England & Wales show **390-436 malnutrition- linked deaths/year (2019-22)** listed **malnutrition as a contributing factor**. This indicates a substantial population vulnerability where malnutrition worsens the progression and severity of liver disease outcomes. These figures suggest malnutrition plays a role in exacerbating chronic liver disease and should inform clinical caseload projections and nutritional support planning.
- Low birth weight rates remain at **56% in Wales**, with slight increases post 2014, indicating early-life nutritional stress that can predispose to metabolic and liver conditions later in life.³⁰
- Among pregnant women in 2022, about **31% had BMI ≥ 30** at initial assessment, further reflecting nutritional deficits or excess that affect both mother and offspring health.³¹

In summary, the catchment population is ~1.9 million Welsh adults overweight/obese, this represents the risk pool exposed to obesity-related liver disease. 390-436 deaths per year are linked to malnutrition, exacerbating liver disease burden and indicating need for nutritional care pathways. This matters, because there's a substantial care gap: only a fraction of those with MASLD or MASH are diagnosed, monitored, or treated ([due to lack of awareness that they have it](#), [asymptomatic nature of MASLD & MASH](#) and [limited access to care- medication & lifestyle changes](#)). The estimates underscore the magnitude of undetected liver disease in Wales-mainly driven by obesity and nutritional factors. This requires effective screening, education and nutritional interventions- ensuring aligning resources to this population need, not just the clinical caseload.

³⁰ [Wellbeing of Wales, 2023: a healthier Wales \[HTML\] | GOV.WALES](#)

³¹ [Wellbeing of Wales, 2023: a healthier Wales \[HTML\] | GOV.WALES](#)).

5. Quality and Patient Safety

The provider must work to written quality standards [Health and Care Quality Standards - NHS Wales Executive](#)

Care should be delivered in line with local and national safety guidance and with reference to Health Board training and competency schedules including:

- NG Safety alert – NPSA
- Local / HB NG insertion, care and monitoring guidance
- Local training and competency standards
- Local SOPs concerning home enteral feeding
- Local risk assessments
- E-DATIX system
- Audit / data collection

5.1 Quality Indicators (Standards)

The provider will be expected to monitor and report against the following performance and activity indicators. Indicators are subject to further development and change.

- The provider will have a recognised system to demonstrate service quality and standards.
- The service will have detailed clinical protocols setting out nationally (and local where appropriate) recognised good practice for each treatment site.
- The quality system and its treatment protocols will be subject to regular clinical and management audit.
- The provider is required to undertake regular patient surveys and develop and implement an action plan based on findings.

5.1.1 Access

No.	Title	Measure
1.	Reduced LoS (Length of Stay)	Local HB data
2.	Reduced admissions	Care delivery in community
3.	Referral to Treatment (RTT)	<14 weeks

5.1.2 Quality and Safety

No.	Title	Measure
1.	Adverse incidents	E-DATIX systems
2.	Complications related to NG feeding	Local HB data

5.1.3 Workforce

No.	Title	Measure
1.	1.0wte per 10 inpatient caseload	Workforce audit
2.	0.5wte/100,000 population for Outpatient service	Workforce audit
3.	0.1wte A&C for uni-professional dietetic clinics	Workforce audit
4.	Community NG feeding	Workforce audit

5.1.4 Patient Outcomes and Experience

No.	Title	Measure
1.	Clinical improvement in nutritional status	HGS
2.	Patient experience	NHS Wales PES People's Experience Survey (PES)
3.	Nutrition risk	Nutrition risk score / LFI / LDUST
4.	Outcomes	Clinical record

5.1.5 Data and Benchmarking

No.	Title	Measure
1.	Screening Compliance	% of liver patients screened using an appropriate tool
2.	Referral Numbers	Number of referrals to liver dietetic services per month/quarter
3.	Benchmarking Participation	Participation in national or regional benchmarking initiatives

6. Key Service Objectives

Our aim is to provide a sustainable, person-centred nutritional care model that supports the prevention, early identification, and management of malnutrition and nutrition-related complications in people with liver disease.

- Reduce the incidence and severity of malnutrition in adults with CLD.
- Reduce hospital admissions and length of stay related to disease related complications (e.g. hepatic encephalopathy, sarcopenia).
- Improve clinical outcomes through early and ongoing dietetic intervention.
- Support early identification and intervention for individuals at risk of nutritional decline.
- Improve quality of life and functional status through tailored nutritional care.
- Increase timely referrals to dietetic services from hepatology, gastroenterology, and primary care.
- Provide a robust training programme for healthcare professionals to improve awareness and management of nutrition in CLD.
- Promote self-management and patient education to empower individuals and carers.
- Support equity of access to specialist dietetic care across all Health Boards in Wales.

7. Service Defined Outcomes/Output

There are currently no quality outcomes for this service. However, a range of quality metrics are provided with regular data collections which support an enhanced understanding of the quality of the service delivered.

8. Performance Monitoring and Information Requirement

8.1 Performance Monitoring

Health Boards will be responsible for commissioning services in accordance with this policy. This includes establishing robust mechanisms for monitoring the quality, safety, and effectiveness of nutritional care services for people with liver disease.

To ensure accountability and continuous improvement, the following approach will be adopted:

- **Service Providers Must Demonstrate Quality and Performance Controls**
Providers will be required to implement and maintain internal systems that monitor

service delivery, patient outcomes, and adherence to agreed care pathways. This includes regular audits, patient feedback mechanisms, and participation in benchmarking initiatives.

- **Service Providers Must Demonstrate Compliance with Standards of Care**
Providers must evidence alignment with national clinical guidelines, professional standards (e.g. BDA, NICE), and local protocols. This includes timely nutritional screening, care planning, and multidisciplinary collaboration.
- **Health Boards Will Agree Monitoring Frameworks**
Each Health Board will define and agree with providers the specific data sets, reporting frequencies, and performance indicators to be used. These will be aligned with national priorities and support transparent evaluation of service impact.
- **Escalation and Improvement**
Where performance concerns are identified, Health Boards will work with providers to implement improvement plans, with clear timelines and accountability.

8.2 Key Performance Indicators

To demonstrate alignment with the Duty of Quality Statutory Guidance (2023) [Duty of Quality](#), we have identified a set of high-level Key Performance Indicators (KPIs) that reflect the core principles of quality, safety, workforce sufficiency, and patient-centred care. These KPIs are designed to support consistent service evaluation across Wales and promote ongoing quality improvement.

Each KPI is presented with a RAG (Red-Amber-Green) rating, enabling easy identification of areas of strength and those requiring further development. This approach ensures transparency, supports effective governance, and provides assurance to stakeholders that the service is meeting statutory quality requirements.

The following table summarises the KPIs and their associated RAG thresholds:

#	KPI	Metric	Green	Amber	Red
1	Inpatient Staffing Ratio	WTE specialist hepatology dietetic workforce* per 10 liver inpatients	≥ 1.0 WTE	0.5–0.99 WTE	< 0.5 WTE
2	Outpatient Staffing Ratio	WTE specialist hepatology dietetic workforce* per 100,000 population	≥ 0.5 WTE	0.25–0.49 WTE	< 0.25 WTE
3	Admin Support	WTE admin per uni-professional dietetic clinic	≥ 0.1 WTE	0.05–0.09 WTE	< 0.05 WTE

4	Training Compliance	% of staff involved in the care of adults with liver disease that are trained in MECC, behaviour change techniques and liver-specific nutrition care	≥ 90%	60–89%	< 60%
5	Service Co-location	Co-located dietetic & hepatology clinic	All hepatology clinics include dietitian as part of MDT	Some clinics have access to specialist liver dietitian	No dedicated dietetic input in hepatology clinics
6	Nutrition Screening	Use of validated nutrition screening tool for adults with liver disease	All inpatients and outpatients screened using a validated tool within the recommended timeframe	Inpatients only screened using a validated tool within the recommended timeframe	Neither group routinely screened or screening not timely or not using validated tools
7	Dietetic Assessment	Use of the <i>Liver Disease All Wales Dietetic Assessment</i> tool	Tool used routinely for nutritional assessment of all eligible liver patients	Tool used inconsistently or for selected patient groups	Tool not used or no evidence of use
8	Quality Reporting	Routine reporting of quality metrics to Board/Stakeholders	Quarterly	Annually	Not routinely reported
9	Patient Involvement	Evidence of patient involvement in service design & improvement	Documented and regular	Occasional/ad hoc	No evidence

***Dietetic workforce encompasses specialist dietitians, dietetic assistant practitioners and dietetic support workers. Skill mix to be determined by individual Health Boards.**

At present, there is no standardised mechanism in place for the routine collection and reporting of all quality indicators aligned with the Duty of Quality. Providers are therefore expected to:

- Identify which indicators can be reported using existing systems (e.g. referral numbers, length of stay, MUST scores).
- Work with Health Boards and Digital Health and Care Wales (DCHW) to develop local data collection processes where gaps exist.
- Contribute to the development of a national framework for hepatology dietetic data reporting, in line with the evolving requirements of the Duty of Quality and Value-Based Healthcare principles.

This approach ensures transparency and continuous improvement while recognising current limitations in data infrastructure.

8.3 Date of Review

This section of the service specification will be reviewed annually or sooner if significant changes in clinical guidance or service delivery models occur.

9. Useful Resources

9.1 Relationship with other documents

This document should be read in conjunction with the following documents:

- [ESPEN guideline on clinical nutrition in liver disease](#)
- [ESPEN practical guideline: Clinical nutrition in liver disease](#)
- [EASL Clinical Practice Guidelines on nutrition in chronic liver disease](#)
- [GLIM Criteria for the Diagnosis of Malnutrition: A Consensus Report From the Global Clinical Nutrition Community - Jensen - 2019 - Journal of Parenteral and Enteral Nutrition - Wiley Online Library](#)
- [When is enteral nutrition indicated? - Bechtold - 2022 - Journal of Parenteral and Enteral Nutrition - Wiley Online Library](#)
- [British Society of Gastroenterology Best Practice Guidance: outpatient management of cirrhosis – part 1: compensated cirrhosis | Frontline Gastroenterology \(bmj.com\)](#)

- [British Society of Gastroenterology Best Practice Guidance: outpatient management of cirrhosis – part 2: decompensated cirrhosis | Frontline Gastroenterology \(bmj.com\)](#)
- [Guidelines on the management of ascites in cirrhosis \(bsg.org.uk\)](#)
- [Royal College of Physicians - Supporting People with Eating and Drinking Difficulties.](#)

Welsh Government strategic documents:

- [A Healthier Wales: long-term plan for health and care in Wales.](#)
- [Healthy weight strategy \(Healthy Weight Healthy Wales\) | GOV.WALES](#)
- Investing in a Healthier Wales: Prioritising Prevention [phwwhocc.co.uk/wp-content/uploads/2025/01/Investing-in-a-Healthier-Wales-prioritising-prevention.pdf](#)
- [National Clinical Framework: A learning health and care system \(gov.wales\)](#)
- [Quality and Safety Framework](#)
- Promote, prevent and prepare for planned care, Empowering people waiting for treatment to optimise their health and well-being. August 2023, NHS Wales
- [Promote, prevent and prepare for planned care \[HTML\] | GOV.WALES](#)
- Six Goals for Urgent and Emergency Care Policy Handbook 2021- 2026, NHS Wales [Six goals for urgent and emergency care: policy handbook for 2021 to 2026 | GOV.WALES](#)
- 'Together for Health – Liver Disease Delivery Plan' WG 2015 [liver-disease-delivery-plan-2015-to-2020.pdf \(gov.wales\)](#)

Liver disease Quality Statement:

- <https://www.gov.wales/sites/default/files/pdf-versions/2023/3/1/1679326108/quality-statement-liver-disease.pdf>

National Institute for Clinical Excellence:

- [NICE: Nutrition for Adults: Oral, Enteral Tube Feeding and Parenteral Nutrition](#)
- [NICE: Alcohol Use Disorders](#)

Appendix 1

This dataset supports standardised nutritional assessment for adults with liver disease across Wales and should be used in all dietetic consultations.

Liver Disease All Wales Dietetic Assessment

Date Of Assessment		Time	
Location	Inpatient/ Outpatient Virtual / Outpatient Face to Face		
People Present			
LDUST assessment LDUST Screening Tool.xlsx	How has the patient been eating lately? Has the patient lost weight in the last year? Has the patient noticed body fat loss or thinning of arms/legs? Has the patient noticed muscle loss? Has the patient got swelling/ fluid in their abdomen or legs? Is the patient able to carry out normal daily activities?		A/B/C A/B/C A/B/C A/B/C A/B/C A/B/C
<u>Anthropometry</u>			
Current Weight		Est Dry Weight	
Weight History		% Weight loss	
HGS		<10 th Centile/ <25 th Centile/ <50 th Centile/ >50 th Centile	
MUAC/ Other assessments			
<u>Biochemistry</u>			
<u>Clinical</u>			
Liver Disease Aetiology			
Child Pugh Classification	A / B / C / Unsure		
HE	Yes	No	Unsure
Ascites present	Yes	No	Unsure

If Yes:	Mild 2-5kg	Moderate 6-10kg	Severe 10Kg+	Unsure	
Est. volume					
<u>Other Clinical:</u>					
<u>Diet</u>					
Prescribed ONS: yes/no If so:					
Alcohol intake	Abstinent	<14 units	14-24 units	>24 units	Unknown
Nutritional Requirements: Energy protein Fluid					
Environmental					

Nutritional Diagnosis			
Dietetic Aim			
Dietetic Goals (Select up to 2 priorities)			
<p>Increase Grip Strength</p> <p>Increase Nutritional Intake</p> <p>Increase Weight</p> <p>Symptom Improvement (e.g ascites/HE/bowels)</p> <p>Maintain grip strength</p> <p>Maintain nutritional intake</p> <p>Maintain Weight</p> <p>Other</p>			
Plan			
Follow Up			
Nutritional assessment database completed	Yes/No		