Quality standards for the management of non-alcoholic fatty liver disease (NAFLD): consensus recommendations from the British Association for the Study of the Liver and British Society of Gastroenterology NAFLD Special Interest Group

The BSG/BASL NAFLD special interest group has developed a series of evidence-based quality standard recommendations, with the aim of improving the care of people with NAFLD. It is known that NAFLD is common, affecting 25% of the UK population and management of the condition is variable. Individuals with NAFLD have an increased risk of overall mortality compared with the general population, and common causes of death include cardiovascular disease, malignancy and liver-related complications. A holistic approach is therefore needed to address liver disease, as well as cardio-metabolic risk factors. The recommendations were developed using a modified Delphi process by a multidisciplinary group of 29 individuals from all disciplines involved in the management of people with NAFLD, and cover: 1. Management of people with, or at risk of, NAFLD before the gastroenterology or liver clinic; 2. Assessment and investigations in secondary care; 3. Management in secondary care. We have also developed 11 auditable key performance indicators (KPIs) to enable service to review the care of their patients and benchmark their practice. The full manuscript can be found here https://www.sciencedirect.com/science/article/pii/S2468125322000619?dgcid=author. A summary of the recommendations and KPIs are shown below.

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Summary of the NAFLD quality standard recommendations

Management of people with, or at risk of, NAFLD before the gastroenterology or liver clinic

1. Services should have an agreed local clinical pathway for the investigation of suspected liver disease that includes an assessment for liver fibrosis using available non-invasive liver fibrosis tests

2. Consider the possibility of liver fibrosis due to NAFLD in people with type 2 diabetes or metabolic syndrome

3. Do not rely on abnormal liver blood tests to prompt consideration of liver disease. However, persistently unexplained abnormal liver blood tests should always be investigated

4. The finding of liver steatosis on ultrasound, or unexplained abnormal liver blood tests, should prompt risk assessment for liver fibrosis

5. Use validated widely available non-invasive tests (e.g., FIB-4 score or NAFLD fibrosis score) with high negative predictive value to risk assess for clinically significant liver fibrosis in the community

6. Refer patients stratified as high risk for advanced fibrosis or cirrhosis to a hepatologist. For patients stratified as indeterminate risk, offer further discriminatory tests (e.g., transient elastography or Enhanced Liver Fibrosis test) or refer for further evaluation

7. Manage people at low risk of significant fibrosis in the community, with focus on lifestyle advice and cardiovascular risk reduction. Reassess fibrosis using non-invasive tests every 3 years

8. Secondary care liver services and community services should collaborate on audits, research, and education to share knowledge, strengthen links, and encourage service and quality improvement, and involve patients as part of this as appropriate

Assessment and investigations in secondary care

9. Patients with NAFLD should be assessed for additional causes of steatosis (e.g., drugs and alcohol) and undergo investigations for other causes of liver disease (i.e., completion of blood aetiology screen) if these were not already done in primary care

10. Patients with NAFLD should have a detailed alcohol (e.g., AUDIT-C), illicit drug, and smoking history documented

11. Practitioners should document a treatment history and medicines use review. The rationalisation of medicines that may accelerate disease progression should be considered

12. An assessment of dietary habits and physical activity levels should be obtained

13. Patients with NAFLD should undergo sequential use of a simple non-invasive test (e.g., FIB-4) and specialist non-invasive tests (e.g., ELF, transient elastography, or acoustic radiation force impulse elastography) to assess the severity of fibrosis

14. Patients with NAFLD should be considered for a liver biopsy in the following situations: (A) if there is diagnostic uncertainty (other aetiologies or overlap conditions); (B) to evaluate the severity of NASH and be considered for potential drug therapies (including clinical trials); or (C) to determine the stage of liver fibrosis where non-invasive tests are inconclusive to aid with future management (e.g., F4 for hepatocellular carcinoma surveillance)

15. Liver biopsies should be processed, stained, and examined according to the UK Royal College of Pathologists guidelines and reported by pathologists who participate in the liver External Quality Assurance scheme using a validated score such as the NASH Clinical Research Network criteria (NAS) or steatosis activity fibrosis (SAF) score

16. Patients with NAFLD cirrhosis should be offered surveillance for complications of cirrhosis, including hepatocellular carcinoma and varices, in accordance with national or international recommendations. The Baveno VI exclusion criteria should be considered as a non-invasive tool to rule out the presence of varices requiring treatment

17. People with NAFLD should undergo systematic assessment of cardiovascular risk factors including use of an objective risk score (e.g., QRISK-3)

18. Patients with NAFLD should be screened annually for type 2 diabetes (using HbA1c), hypertension, and dyslipidaemia

Management in secondary care

19. People with NAFLD should be asked about smoking and, if they smoke, should be advised to stop and offered referral to smoking cessation services

20. People with NAFLD should be advised on the benefits of regular exercise; a baseline assessment of physical activity should be made and individualised advice given to increase physical activity

21. Patients with NAFLD should have a regular reassessment of their alcohol consumption

22. Abstinence from alcohol should be strongly recommended to patients with NAFLD and cirrhosis. Patients with pre-cirrhotic NAFLD should be advised that alcohol consumption may accelerate disease progression and so should minimise or abstain from alcohol to reduce the risk of disease progression

23. Tailored dietary advice should be given with the aim of 5–10% bodyweight loss through a calorie deficit including, but not limited to, reduction of refined carbohydrates and processed foods, and increased consumption of vegetables, lean protein sources, and fish. Referral to weight management services should be considered, especially if weight loss goals have not been achieved

24. Referral for consideration of bariatric surgery should be considered in patients with NAFLD with obesity who meet the eligibility criteria for bariatric surgery according to national recommendations

25. People with NAFLD who are at significantly increased risk of disease progression and potential risk of liver-related complications should continue to be managed in the secondary care setting. Such patients include those with cirrhosis or clinically significant or advanced fibrosis whose liver disease is not outweighed by comorbidities or performance status

26. Patients with decompensated liver disease caused by NAFLD should be considered for transplant assessment

27. Patients with hypertension should be managed in accordance with NICE guidelines

28. Patients who are at increased cardiovascular risk (type 2 diabetes, QRISK-3 >10%, or both) should be offered HMG-CoA reductase inhibitor (statin) treatment in accordance with NICE guidelines

29. Statins should not be withheld from patients with NAFLD, including those with compensated cirrhosis, because hepatotoxicity is very rare and the benefits are likely to significantly outweigh the risks

30. In people with NAFLD and type 2 diabetes, treatment with glucose-lowering agents that promote weight loss and reduce cardiovascular risk should be considered

31. Patients with NAFLD should be considered for research studies and offered the opportunity to participate in clinical trials where available

32. Management of patients with advanced NAFLD in secondary care should be by multidisciplinary teams with expertise in clinical hepatology, management of diabetes and cardiovascular risk factors, lifestyle intervention, and health promotion (diet, exercise, and physical activity)

33. In patients discharged to primary care, recommendations should be made about triggers for re-referral back to secondary care liver services

34. Patients should be provided with written information about NAFLD and weight management in a format appropriate to their needs and signposted to other credible sources of information such as the National Health Service and the British Liver Trust

Auditable key performance indicators for the management of patients with suspected NAFLD

Quality indicator	Minimum standard	Aspirational standard
Management of people with, or at risk of, NAFLD before the gastroenterology or liver clinic		
1. Services should have an agreed local clinical pathway for the investigation of suspected liver disease that includes an assessment for liver fibrosis using available non-invasive liver fibrosis tests	100%	Not applicable
2. Individuals referred to secondary care with suspected NAFLD should have their non-invasive fibrosis staging (e.g., FIB-4 score or NAFLD fibrosis score) documented in the referral letter	90%	100%
Investigations and management in secondary care		
3. People with NAFLD should have their weight and body-mass index documented	90%	100%
4. People with NAFLD should have an alcohol history documented and advice given, when appropriate	90%	100%
5. People with NAFLD should have a smoking history documented and advice given, when appropriate	90%	100%
6. People with NAFLD should undergo liver fibrosis staging using available non-invasive tests or liver biopsy	90%	100%
7. People with NAFLD should be screened for type 2 diabetes	90%	100%
8. People with NAFLD should be screened for hypertension	90%	100%
9. Patients with NAFLD should have weight loss advice documented, including objective goals for weight change and physical activity	90%	100%
10. Patients who are at increased cardiovascular risk (type 2 diabetes, QRISK-3 >10%, or both) should be offered statin treatment in accordance with UK National Institute for Health and Care Excellence guidelines.	90%	100%
11. Patients should be provided with written information about NAFLD and weight management, or signposted to credible information sources	90%	100%