Machine Translated by Google
RCMOS – Multidisciplinary Scientific Journal The Knowledge. ISSN: 2675-9128. São Paulo-SP.

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

Nursing care for adults with steatotic liver disease associated with metabolic dysfunction: a narrative review on self-care and prevention of progression.

of the disease

Nursing care for adults with metabolic dysfunction-associated steatotic liver disease (MASLD): narrative review on self-care and prevention of disease progression

Nursing care for the adult person with steatotic liver disease associated with metabolic dysfunction: narrative review on self-care and prevention of the progression of the disease

Lana Cecylia Neri Aguiar Fernandes – Bachelor's Degree in Nursing, Faculty Maurício de Nassau de Brasília — UNINASSAU

Weldson Martinho Martins Pereira – Bachelor's Degree in Nursing, Faculty Maurício de Nassau de Brasília — UNINASSAU

Lincoln Agudo Oliveira Benito (Advisor)

Summary:

Metabolic steatotic liver disease (MASLD) requires follow-up that integrates liver risk assessment, management of metabolic conditions, and support for behavioral changes. This study aims to analyze the contributions of nursing to self-care and the reduction of factors associated with disease progression in adults. This is a narrative review, with directed selection of publications and bibliographic verification in PubMed records, texts available in PubMed Central, journal pages, and documents from professional entities, with the review conducted in October 2026. Clinical studies, reviews, guidelines, and a professional resolution were examined, without the intention of exhaustive searching or applying a systematic selection procedure. The discussion was organized into risk assessment, lifestyle changes, health education, digital follow-up, and organization of nursing care. The publications examined support the benefits of interventions on lifestyle habits and identify possibilities for improvement.

of self-care and clinical indicators. However, differences between designs, Population size, follow-up duration, and outcomes limit the overall interpretation. Gains in knowledge, weight, or liver enzymes do not, in isolation, demonstrate prevention of cirrhosis. A follow-up protocol is proposed, with individual assessment, agreed-upon goals, recording of interventions, and reassessment, to be adapted to the service's protocols.
It is concluded that nursing can contribute to the continuity of care and the management of modifiable factors, but the studies discussed do not allow us to quantify an independent effect of nursing intervention on the incidence of cirrhosis.

Keywords: Fatty Liver Disease; Nursing Care; Health Education; Self-Care; Liver Cirrhosis.

Abstract:

Metabolic dysfunction-associated steatotic liver disease (MASLD) requires follow-up that integrates liver risk assessment, management of metabolic conditions, and support for behavioral change. This study aims to examine nursing contributions to self-management and to the reduction of factors associated with disease progression in adults. A narrative review was conducted through a targeted selection of publications and bibliographic verification using PubMed records, articles available through PubMed Central, journal websites, and professional organizations' documents, checked in October 2026. Clinical studies, reviews, guidelines, and a professional regulation were examined, without claiming an exhaustive search or systematic study selection. The discussion addressed risk assessment, lifestyle changes, health education, digital follow-up, and the organization of nursing care. The examined publications support benefits of lifestyle interventions and identify opportunities to improve self-management and clinical indicators. However, differences in study designs, populations, follow-up duration, and outcomes limit their combined interpretation. Improvements in knowledge, body weight, or liver enzymes alone do not establish the prevention of cirrhosis. A follow-up framework is proposed, including

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

individual assessment, agreed goals, intervention records, and reassessment, to be adapted to service protocols. Nursing may contribute to continuity of care and management of modifiable factors; however, the studies discussed do not allow quantification of an independent effect of nursing care on the incidence of cirrhosis.

Keywords: Fatty Liver; Nursing Care; Health Education; Self Care; Liver Cirrhosis.

Summary:

Steatotic liver disease associated with metabolic dysfunction (MASLD) requires monitoring that articulates assessment of hepatic risk, care of metabolic conditions and support for behavioral changes. The objective is to analyze the contributions of nursing to self-care and the reduction of factors associated with the progression of illness in adults. This is a narrative review, with directed selection of publications and bibliographic verification in PubMed records, texts

available on PubMed Central, magazine pages and documents from professional entities, verified in October 2026. Clinical studies, revisions, guides and professional resolutions are examined, without the intention of an exhaustive search or systematic selection. The discussion is organized around risk assessment, lifestyle changes, health education, digital monitoring and care organization. The publications support the benefits of interventions on habits and identify possibilities to improve self-care and clinical indicators. However, differences between designs, populations, duration of follow-up and results limit joint interpretation. Improvements in knowledge, weight or liver enzymes in demonstrating the prevention of cirrhosis. A script is proposed with individual assessment, agreed goals, record of interventions and reevaluation, adaptable to service protocols. It is concluded that nursing can contribute to continuity and modifiable factors, but studies do not allow us to quantify an independent effect on the incidence of cirrhosis.

Keywords: Graso Hígado Disease; Nursing Care; Health Education; Self-care; Liver Cirrhosis.

List of acronyms

AASLD — American Association for the Study of Liver Diseases

ALT — Alanine aminotransferase

AST — Aspartate aminotransferase

Cofen — Federal Nursing Council

EASD — European Association for the Study of Diabetes

EASL — European Association for the Study of the Liver

EASO — European Association for the Study of Obesity

FIB-4 — Fibrosis-4 Index — a non-invasive index for assessing fibrosis risk.

BMI — Body Mass Index

MAFLD — Metabolic-associated fatty liver disease — terminology used in part of the studies

MASH — Metabolic dysfunction-associated steatohepatitis

MASLD — Metabolic dysfunction-associated steatotic liver disease

NAFLD — Nonalcoholic fatty liver disease — previous nomenclature

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

NASH — Nonalcoholic steatohepatitis — previous nomenclature
SANRA — Scale for the Assessment of Narrative Review Articles
SUS — Unified Health System

1. Introduction

The finding of fat in the liver can be interpreted by the patient as a temporary change, especially when there are no symptoms. For nursing care, the challenge lies in transforming this finding into an opportunity for follow-up, without trivializing the problem and without presenting cirrhosis as an inevitable outcome. This requires explaining what is known about the disease, recognizing the limitations of the evidence, and constructing a plan that the patient can understand and implement.

The MASLD nomenclature was established by multi-society consensus to designate steatotic liver disease associated with metabolic dysfunction. Its definition involves steatosis and at least one cardiometabolic risk factor, within a classification that considers the role of alcohol and other etiologies. The term does not equate to all steatosis. The MASH category identifies the form with steatohepatitis, while other designations encompass combinations of metabolic factors and alcohol consumption or specific causes (Rinella et al., 2023b).

The importance of follow-up is related, among other aspects, to the extent of fibrosis. In a prospective study with 1,773 adults, followed for a median of four years, Sanyal et al. (2021) observed a higher risk of liver complications and death in advanced stages of fibrosis. This finding supports the need to differentiate between the presence of steatosis and the risk of advanced disease, rather than evaluating all patients solely based on the amount of fat identified in a single examination.

At the same time, follow-up depends on behaviors maintained outside the health unit. Zhou et al. (2024), in a cross-sectional survey of 380 adults in China, identified self-care difficulties and associations with characteristics such as education level, BMI, and sleep quality. Due to its design, the study does not establish causality. Even so, it shows that the discussion of care needs to consider the understanding of the disease and the conditions under which the guidelines will be practiced.

The rationale for this work lies in the need to align clinical recommendations with nursing activities, while preserving the distinction between research results and clinical practice proposals. Recommending healthy habits is one step; investigating barriers, negotiating objectives, documenting follow-up, and verifying what has changed are tasks that need to gain prominence in academic discussion. The relevance of this organization does not mean that all these actions have been tested as a whole or demonstrated a reduction in the incidence of cirrhosis.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

The guiding question is: what contributions of nursing to self-care and the management of factors associated with the progression of MASLD in adults are supported by the publications examined? The work focuses on outpatient follow-up and primary care. Hospital treatment of decompensated cirrhosis, prescription of specific medications, and pediatric care are not within its scope.

The presentation was organized into objectives, a narrative review process, a critical synthesis of publications, and a proposed organization of care. Throughout the text, the prevention of progression is understood as a care objective supported by risk management, and not as a proven effect of any isolated educational intervention.

2 Objectives

2.1 General objective

To analyze, through a narrative review, the contributions of nursing to self-care and the management of factors associated with the progression of steatotic liver disease associated with metabolic dysfunction in adults.

2.2 Specific objectives

- To define the concept of MASLD and the relevance of fibrosis risk assessment.
- To examine the results and limitations of publications on lifestyle changes,
  Health education and digital monitoring.
- Distinguish behavioral and intermediate outcomes from clinical outcomes.
  liver progression.
- Relate the findings to the Nursing Process and the continuity of care.
- Propose a care plan and monitoring indicators, identifying its
  unvalidated character and the need for adaptation to the service.

3 Methodology

This is a narrative literature review, with a descriptive and analytical purpose.
This study was developed through a targeted selection of publications relevant to the guiding question. This method allows for the organization and discussion of different types of scientific production, but does not guarantee exhaustive coverage of available knowledge. As organizational guidelines, the aspects of clarity of objective, description of bibliographic research, rationale, and interpretation of outcomes discussed by Baethge, Goldbeck-Wood, and Mertens (2019) were considered. No SANRA score was assigned to the manuscript.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

The starting point was the set of references from the preliminary version of the work. The bibliographic review and supplementary consultation were carried out on October 6, 2026, through searches directed at the titles of the works, the authors, and the necessary themes.

To correct and expand the discussion, PubMed records, content available on PubMed Central, journal pages, and official documents from professional organizations were consulted. The electronic location of these sources was achieved using web search engines, followed by verification of the original records and accessible documents.

The topic-specific searches covered the nomenclature of steatotic liver disease, clinical assessment and management, fibrosis prognosis, lifestyle changes, self-care education, digital interventions, and the Nursing Process. English terms included metabolic dysfunction-associated steatotic liver disease, nonalcoholic fatty liver disease, lifestyle intervention, self-management education, and nursing care; in Portuguese, the regulations of the Nursing Process were consulted. A standardized systematic search strategy was not performed using the BVS, LILACS, or SciELO databases.

The choice of sources was intentional, considering their relevance to the care of Adults, verifiable bibliographic identification, and availability of sufficient information to describe the design and outcomes addressed. Articles published between 2019 and 2026 and a resolution from 2024 were used. This range describes the selected material; it does not correspond to a filter applied to an exhaustive search. Guidelines and professional standards were used for clinical justification and organization of care, without being addressed.
such as efficacy studies.

The fact-checking of the articles included their metadata and abstracts, consulting the full text sections available in the accessible sources. It is not claimed that all publications were read in their entirety. The results presented were limited to effectively verifiable content, paying attention to the population, type of study, intervention or exposure, outcome, and interpretation constraints. The same guideline published in more than one journal was considered a single source, and repeated references were eliminated.

The synthesis was organized by thematic axes and a framework of selected studies. No independent meta-analysis or peer review was performed.
Independent data, formal risk of bias assessment, or GRADE classification were not obtained. Retrospective figures for record identification, exclusion, and inclusion were also not produced.
Critical appraisal is descriptive and considers characteristics reported by studies, without replacing specific instruments of methodological evaluation.

This work does not involve interviews, access to medical records, or data collection from participants. The presented care protocol is based on a proposed synthesis and has not been applied in the field. The interpretation adopted three distinct plans: published results, professional recommendations, and suggestions for organizing care. This distinction guided the writing to avoid attributing effects to the research that were not measured.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

4. Synthesis and discussion

The publications examined have different designs and purposes. Clinical trials evaluate interventions in defined conditions; cross-sectional studies identify associations; reviews compile previous research; guidelines propose courses of action; and professional standards organize responsibilities. The discussion considers these differences before applying the findings to nursing care.

4.1 Clinical delimitation and risk assessment

Publications prior to the 2023 consensus predominantly use the terms NAFLD and NASH. There are also studies with the designation MAFLD. These names were preserved in the reference titles and in the description of the populations originally studied. The change in nomenclature requires attention to the criteria used in each study: results should not be automatically transferred to any person with steatosis (Rinella et al., 2023b).

In clinical evaluation, the AASLD guidelines emphasize investigating metabolic conditions, alcohol consumption, and other causes of liver disease. It also highlights that normal aminotransferases do not exclude clinically significant fibrosis. Non-invasive assessment may involve FIB-4 and complementary tests, depending on the context; discordant results or suspicion of advanced disease justify specialized evaluation (Rinella et al., 2023a).

In nursing practice, the practical consequence is to prevent a single laboratory result from dictating the entire care plan. It is proposed to verify if the patient understood the reason for the follow-up and if there is a documented decision regarding investigation, return visit, and referral. The nurse can identify gaps in the care pathway and coordinate their resolution with the team, observing the responsibilities and protocols of the service.

Cirrhosis should also not be presented as a mandatory sequence after a diagnosis of steatosis. The study by Sanyal et al. (2021) describes different prognoses according to the stage of fibrosis, but does not test an educational intervention. Therefore, its results help to justify risk stratification, without proving that a specific form of nursing guidance alters this prognosis.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google
RCMOS – Multidisciplinary Scientific Journal The Knowledge. ISSN: 2675-9128. São Paulo-SP.

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

4.2 Lifestyle changes: effects and limitations

European guidelines recommend, for adults with MASLD and excess weight, sustained weight loss of at least 5% to reduce liver fat, 7% to 10% to promote improvement in inflammation, and at least 10% to benefit fibrosis.
They also recommend a higher quality diet and physical activity adapted to individual capabilities. These are general clinical goals, the application of which requires evaluation, and not guarantees of a response for each patient (EASL; EASD; EASO, 2024).

Fernández et al. (2022) compiled 30 randomized trials and observed that the combination of diet and exercise showed more favorable results in liver enzymes and insulin resistance than isolated strategies. The analysis supports monitoring different habits, but its results do not equate to demonstrating a lower incidence of cirrhosis. Nor do they allow for the separation of an exclusive effect of the nurse when the interventions are composed of several elements.

Chai et al. (2023) analyzed 34 trials with 2,652 participants and identified benefits of dietary and exercise interventions on liver fat and metabolic indicators. The participants were obese individuals, which limits extrapolation to individuals without excess weight. In follow-up, this limitation prevents weight reduction from becoming a universal goal, regardless of nutritional assessment and...
clinic.

Hejazi and Hackett (2023) compiled 26 studies and found improvements in some enzymatic and insulin markers with exercise, but did not sustain a uniform benefit on glycemic control. Liu et al. (2023), in a review of 11 trials with 491 participants, observed favorable results of aerobic exercise on weight, metabolic indicators, and physical capacity. The differences between modalities, duration, and results reinforce the need to monitor concrete responses, without reducing care to a standardized guideline.

Chen et al.'s (2025) synthesis brings together recommendations on lifestyle interventions and emphasizes individual planning and collaboration among professionals. As discussed in this work, the nurse can record the chosen goal, the difficulty the patient considers a priority, and the necessary support. The aim is not to prescribe a universal menu or training program, but to make what has been agreed upon visible and to refer specific needs to the responsible professionals.

Alcohol consumption deserves its own investigation and should not be presumed from the patient's weight or appearance. European guidelines recommend documenting the quantity, pattern, and history of consumption; in advanced fibrosis or cirrhosis, they advise...
complete abstinence (EASL; EASD; EASO, 2024). The discussion of this behavior

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

It must occur without judgment, so that the record corresponds to reality and can guide the shared plan.

4.3 Health education and self-care

In the study by Mobasheri et al. (2022), an educational intervention based on the Theory of Planned Behavior showed favorable results in lifestyle-related behaviors and clinical parameters of people with NAFLD. The study allows for discussion of structured education as a component of follow-up. However, it does not allow us to attribute the prevention of cirrhosis to this program, as this is not demonstrated by the results examined.

Yang et al. (2026) synthesized evidence on self-care education and organized the topic into disease assessment, weight and diet management, physical activity, self-monitoring, and social support. As a synthesis of other publications, the work provides a basis for organizing guidelines, but does not represent a new clinical trial with patients undergoing a nursing program.

The survey by Zhou et al. (2024) complements this discussion by showing that self-care and personal characteristics are associated. The interpretation must avoid converting associations into individual explanations: one cannot conclude, for example, that lower education determines low adherence in a specific person. In the consultation, understanding should be verified directly, in accessible language, and not presumed from sociodemographic characteristics.

The proposal is to organize each meeting around a few priorities. One possibility is to ask the patient to describe what they understood about the diagnosis, what changes they consider feasible, and what might prevent their implementation. The response allows for adjusting the content before adding new information. This script is a clinical suggestion from this work; it has not been validated as an instrument nor tested as an intervention.
autonomous.

The agreement on goals also needs to allow for revision. If a guideline was not incorporated, the follow-up can investigate work schedules, access to food, fatigue, family support, and difficulty with transportation. The objective of this conversation is to produce an executable plan, with shared responsibility between the patient and the service. Simply recording that the patient received guidance does not indicate whether they understood the proposal or were able to follow it.

From this perspective, education does not end with the delivery of materials. The proposed contribution to nursing consists of relating information, the choice of an action, and subsequent verification. Improved knowledge is a relevant outcome for the process.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

It is educational, but it should not be presented as a synonym for behavioral change or a reduction in liver complications.

4.4 Digital monitoring and interpretation of results

Kwon, Choi, and Jang (2023) discuss digital interventions for habit change in people with NAFLD. The review found favorable results for BMI and liver enzymes, with heterogeneity among the studies; the weight loss estimate did not reach statistical significance according to the interpretation presented by the authors.
Thus, technology can be discussed as a support, without presupposing consistent benefit in all indicators.

In the study by Kwon et al. (2024), 102 participants were followed for six months. There were improvements in several indicators within the intervention group, but the interaction between intervention and time was significant only for self-care and fatigue.
This distinction is important: a change observed over time in a group does not, in itself, prove the superiority of the intervention in all outcomes. The study did not demonstrate a reduction in the incidence of cirrhosis.

As a proposed application, digital contact methods can be agreed upon to clarify doubts, remind patients of appointments, and record difficulties, when the institutional structure allows for this. Before choosing a channel, it is necessary to verify accessibility, ease of use, privacy, and patient preference. A resource that some users cannot use should not become the only means of follow-up.

It is also proposed to define the purpose, frequency, and person responsible for responding to messages. Remote contact does not replace in-person assessment when indicated, and urgent situations should follow the service's workflow. The use of technology in this work is an organizational alternative to be evaluated, and not a requirement for nursing care to be considered adequate.

4.5 Publications overview and critical reading

Table 1 summarizes the publications most directly related to clinical outcomes and self-care. It is a descriptive synthesis of the selected studies, without formal assignment of evidence level. The trial and participant numbers belong to the original publications; they do not represent the sample of this thesis.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

Table 1 — Selected studies: results and limitations of interpretation

Publication / drawing	Result or contribution	Limit for this work
Sanyal et al. (2021) Prospective cohort; 1,773 adults	Risk of complications and death associated with advanced fibrosis.	Prognostic study; does not test nursing intervention.
Fernández et al. (2022) Review and meta-analysis; 30 trials	Favorable results from combining diet and exercise.	Intermediate indicators; does not isolate professional effect.
Chai et al. (2023) Review and meta-analysis; 34 trials, 2,652 participants	Improvement in liver fat and metabolic indicators.	Participants with obesity; limited extrapolation.
Hejazi and Hackett (2023) Review and meta-analysis; 26 studies	Benefits of exercise on some markers, with varying results.	Heterogeneity; non-uniform response among outcomes.
Liu et al. (2023) Review and meta-analysis; 11 trials, 491 participants	Benefits of aerobic exercise on metabolic indicators and physical capacity.	Variation in duration and modalities; does not measure cirrhosis prevention.
Mobasheri et al. (2022) Randomized clinical trial	Structured education with favorable behavioral and clinical outcomes.	It does not demonstrate a reduction in cirrhosis nor does it validate the protocol proposed here.
Kwon, Choi and Jang (2023) Systematic review and meta-analysis	Digital interventions with favorable results in BMI and liver enzymes.	Heterogeneity; effect on weight not significant in the published analysis.
Kwon et al. (2024) Randomized trial; 102 participants	Interaction between intervention and time is significant for self-care and fatigue.	Six months; improvement within the group does not equate to superiority in all indicators.
Zhou et al. (2024) Cross-sectional study; 380 adults	Self-care difficulties and their association with participant characteristics.	Association does not establish causality.
Chen et al. (2025) Synthesis of evidence	Organizing recommendations for lifestyle changes.	It gathers secondary sources and recommendations; it is not a new essay.
Yang et al. (2026) Synthesis of evidence	Domains for education and self-care management.	It does not test a single program nor does it estimate cirrhosis prevention.

Source: synthesis prepared for this review based on the publications indicated. Guidelines, consensus, professional standards, and methodological references are discussed separately.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

4.6 From evidence to the organization of nursing care

Resolution Cofen No. 736/2024 organizes the Nursing Process into assessment, diagnosis, planning, implementation, and evaluation. The consultation must be structured and recorded according to these stages. Nursing diagnosis and prescription are the exclusive responsibility of the nurse, while the participation of other team members observes their competencies and the foreseen supervision. The standard grounds the professional organization of care and does not prove the effectiveness of an intervention for MASLD (Federal Nursing Council, 2024).

Table 2 uses this structure to organize follow-up. The items were written as possibilities to be adapted, without automatically indicating standardized diagnoses or classification codes. Choosing a nursing diagnosis requires clinical judgment supported by individual assessment, not just the presence of steatosis on imaging.

In the initial contact, it is suggested to record the reason for the referral, what has already been investigated, and what the patient understands about the disease. Following this, needs related to comprehension, plan implementation, and service access can be identified. This sequence helps differentiate between lack of information, material difficulties, and absence of a defined care plan—situations that require distinct responses.

The plan may contain an initial priority, an observable expected outcome, and the responsibility of each participant. If the goal is to improve understanding, the evaluation should verify comprehension; if the goal is to facilitate follow-up, it should verify that the consultation took place; if there is a clinical goal, its follow-up depends on the team and the parameters defined during the consultation. Mixing these plans can create the impression of success without demonstrating the intended result.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

Table 2 — Proposal for organizing nursing care

Step	Proposed application	Expected registration
Assessment	To understand the care pathway, the comprehension of the disease, and the reported barriers.	Available data, questions, needs, and outstanding issues identified.
Diagnosis	To formulate a clinical judgment regarding nursing needs, following an individual assessment.	Diagnosis based on findings, according to the reference framework adopted by the service.
Planning	To agree on priorities, observable results, and responsibilities.	Goal, necessary support, and monitoring method.
Implementation	To implement education, support, and coordination of referrals outlined in the plan.	Actions taken, patient response, and pending measures.
Evolution	Compare results with goals and revise the plan.	Progress, persistent obstacles, and defined adjustments.

Source: proposal for this work, organized according to the steps outlined in Cofen Resolution No. 736/2024. Illustrative, non-validated content.

4.7 Applicability, gaps and limitations of the review

The analysis allows us to distinguish three sets of results. The first concerns the care process, such as attendance and continuity of follow-up. The second encompasses knowledge, self-care, and behaviors. The third involves clinical measures and, on a different timescale, hepatic complications. These results may be related, but they are not interchangeable. Formulating a conclusion must identify which one was actually observed.

The selected publications show convergence regarding the relevance of continued care, but do not offer a single estimate of the effect of nursing on cirrhosis. Part of the literature examines multidisciplinary interventions; part measures intermediate indicators; and part describes associations. The conclusion of this review is, therefore, that the actions discussed are plausible and useful in healthcare, with specific evidence for some outcomes, but without quantifying cirrhosis prevention attributable to nurses.

The use of this approach within the Brazilian Unified Health System (SUS) requires evaluating conditions not tested in this study: available consultation time, access to exams and specialists, continuity between teams, and availability of communication resources. An intervention performed in a specialized hospital or with technological support should not be transferred to another context without adaptation. This adaptation should be explicitly stated as a decision of the service, not as a finding of the original article.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

Another limitation is the possibility of overlap between primary studies included in different reviews. Adding the number of trials or participants from these publications would produce a potentially duplicated count. Therefore, the table keeps the results separate and does not calculate a total population. The coexistence of the NAFLD, MAFLD, and MASLD nomenclatures also requires caution when comparing the criteria of
inclusion.

Narrative selection is subject to choice bias and does not guarantee that all relevant studies have been identified. The partial consultation of some texts, the absence of a formal risk of bias assessment, and the diversity of designs limit the depth of the analysis. Brazilian implementations of the proposed protocol, costs, acceptability, or impact on long-term outcomes were not evaluated.

As a research agenda, it would be pertinent to test nursing interventions with clearly described components, comparable groups, defined indicators, and sufficient follow-up. Implementation studies could also examine feasibility and continuity in primary care. These investigations would help separate the organizational value of a program from its clinical effect and identify what resources are needed to maintain it.

5. Monitoring proposal and indicators

Based on the discussion, a guide to support care planning is presented. It does not constitute a validated protocol, risk scale, standardized prescription, or substitute for clinical assessment. Its purpose is to show how the contributions
Discussions can be converted into verifiable records, subject to approval and adaptation. institutional.

In the initial assessment, the aim is to clarify the care pathway: who is accompanying the patient, what results are available, and what follow-up action has been defined. In the educational phase, it is recommended to choose a priority question and a feasible action. In the shared planning phase, the responsibilities of the patient and the team are recorded. In the follow-up, what was agreed upon is compared with what occurred, and a decision is made on what to maintain. modify or forward.

The frequency of visits should be determined according to clinical need and local protocol. This study does not establish a universal interval for examinations or follow-up appointments. It also does not propose the isolated use of scores by patients, automatic interpretation of results, or adjustment of medications outside of professional responsibilities.

Table 3 presents possible indicators. They were proposed to monitor the execution of care and should be defined before any application. An improvement in

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

The process indicator should be reported as such, without being converted into evidence of histological improvement or prevention of cirrhosis.

Table 3 — Suggested indicators for monitoring care

Dimension	What to watch out for	How to interpret
Understanding	The patient explains, in their own words, the priority being discussed.	It indicates understanding in that encounter; it does not prove a change of habit.
Agreed target	Action defined, barrier recorded, and combined support.	Evaluate the planning; execution should be verified upon return.
Continuity	Return completed and access issues identified.	Process indicator, without Automatic equivalence with clinical benefit.
Behavior	A report or record of the observed habit, including its difficulties.	Consider the limitations of self-reporting and the context in which it was performed.
Clinical indicators	Parameters chosen by the team, observed in the clinical context.	Avoid making a diagnosis or inferring a prognosis based on a single measurement.
Plan review	Recorded decision regarding maintenance, adjustment, or referral.	Check if the follow-up has produced a response to the identified need.

Source: proposed elaboration of this work. Indicators without validation or application results; institutional adaptation necessary.

In an academic presentation, the script can be explained using a hypothetical situation, without creating patient data: a person understands the dietary guidelines but lacks the means to implement them. In this case, repeating the information tends to leave the obstacle unresolved. The proposal is to record the barrier, discuss alternatives with the team, and verify upon follow-up whether the solution was feasible. This example illustrates clinical reasoning; it does not constitute a case report or research results.

The usefulness of the script will depend on its integration into the team's actual work. A lengthy form, without time for discussion or the possibility of follow-up, may record needs without producing continuity. For this reason, it is suggested to start with a few indicators, review their usefulness, and evaluate the experience of patients and professionals before expanding the instrument.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

6. Final Considerations

This review discussed nursing contributions to the care of adults with MASLD, focusing on self-care and the management of factors associated with disease progression. The main care contribution identified lies in the articulation between individual assessment, health education, shared planning, and continuity of follow-up.

The selected publications present favorable results from interventions on lifestyle habits and possibilities for improving self-care and health indicators. However, interpretation depends on the design, population, and outcome of each study.
Improvements in knowledge, weight, or liver enzymes do not, in isolation, justify the conclusion that a nursing intervention will prevent cirrhosis.

The organization of actions through the Nursing Process offers a framework for clarifying needs, interventions, and expected outcomes. The script proposed in this work translates this discussion into possibilities for recording and monitoring, but it remains an unvalidated proposal. Its use requires adaptation to professional responsibilities, clinical assessment, and service protocols.

In conclusion, nursing can contribute to addressing self-care difficulties and reducing care discontinuities. The magnitude of any potential independent effect on the progression to cirrhosis remains a question that requires specific studies. Acknowledging this limitation makes the conclusion more consistent and guides future research on nursing interventions in liver health care.

References

BAETHGE, Christopher; GOLDBECK-WOOD, Sandra; MERTENS, Stephan. SANRA—a scale for the quality assessment of narrative review articles. Research Integrity and Peer Review, vol. 4, art. 5, 2019. DOI: https://doi.org/10.1186/s41073-019-0064-8.

CHAI, Xiao-Ni et al. Effects of lifestyle intervention on adults with metabolic associated fatty liver disease: a systematic review and meta-analysis. Frontiers in Endocrinology, vol. 14, art. 1081096, 2023. DOI: https://doi.org/10.3389/fendo.2023.1081096.

CHEN, Mei-Jing et al. Evidence summary of lifestyle interventions in adults with metabolic dysfunction-associated steatotic liver disease. Frontiers in Nutrition, vol. 11, art. 1421386, 2025. DOI: https://doi.org/10.3389/fnut.2024.1421386.

Brazilian Federal Nursing Council. Resolution Cofen No. 736, of January 17, 2024. Provides for the implementation of the Nursing Process in all socio-environmental contexts where nursing care occurs. Brasília, DF: Cofen, 2024.
Available at:
https://www.cofen.gov.br/resolucao-cofen-no-736-de-17-de-janeiro-de-2024/. Accessed on: October 6, 2026.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Machine Translated by Google

Year VII, v.1 2026 | Submission: 11/13/2026 | Accepted: 11/20/2026 | Publication: 11/25/2026

EUROPEAN ASSOCIATION FOR THE STUDY OF THE LIVER (EASL); EUROPEAN ASSOCIATION FOR THE STUDY OF DIABETES (EASD); EUROPEAN ASSOCIATION FOR THE STUDY OF OBESITY (EASO). EASL-EASD-EASO Clinical Practice Guidelines on the Management of Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD). Obesity Facts, vol. 17, no. 4, p. 374–444, 2024. DOI: https://doi.org/10.1159/000539371.

FERNÁNDEZ, Tiziana et al. Lifestyle changes in patients with non-alcoholic fatty liver disease: a systematic review and meta-analysis. PLoS ONE, v. 17, no. 2, e0263931, 2022. DOI: https://doi.org/10.1371/journal.pone.0263931.

HEJAZI, Keyvan; HACKETT, Daniel. Effect of Exercise on Liver Function and Insulin Resistance Markers in Patients with Non-Alcoholic Fatty Liver Disease: a systematic review and meta-analysis of randomized controlled trials. Journal of Clinical Medicine, vol. 12, no. 8, art. 3011, 2023. DOI: https://doi.org/10.3390/jcm12083011.

KWON, Oh Young; CHOI, Jin-young; JANG, Yeonsoo. The Effectiveness of eHealth Interventions on Lifestyle Modification in Patients With Nonalcoholic Fatty Liver Disease: systematic review and meta-analysis. Journal of Medical Internet Research, vol. 25, e37487, 2023. DOI: https://doi.org/10.2196/37487.

KWON, Oh Young et al. Mobile App–Based Lifestyle Coaching Intervention for Patients With Nonalcoholic Fatty Liver Disease: randomized controlled trial. Journal of Medical Internet Research, vol. 26, e49839, 2024. DOI: https://doi.org/10.2196/49839.

LIU, Yangjun et al. Effects of aerobic exercise on metabolic indicators and physical performance in adult NAFLD patients: a systematic review and network meta-analysis. Medicine, vol. 102, no. 14, e33147, 2023. DOI: https://doi.org/10.1097/MD.0000000000033147.

MOBASHERI, Narges et al. Lifestyle Intervention for Patients with Nonalcoholic Fatty Liver Disease: a randomized clinical trial based on the Theory of Planned Behavior. BioMed Research International, vol. 2022, art. 3465980, 2022. DOI: https://doi.org/10.1155/2022/3465980.

RINELLA, Mary E. et al. AASLD Practice Guidance on the clinical assessment and management of nonalcoholic fatty liver disease. Hepatology, vol. 77, no. 5, p. 1797–1835, 2023a. DOI: https://doi.org/10.1097/HEP.0000000000000323.

RINELLA, Mary E. et al. A multisociety Delphi consensus statement on new fatty liver disease nomenclature. Hepatology, vol. 78, no. 6, p. 1966–1986, 2023b. DOI: https://doi.org/10.1097/HEP.0000000000000520.

SANYAL, Arun J. et al. Prospective Study of Outcomes in Adults with Nonalcoholic Fatty Liver Disease. The New England Journal of Medicine, vol. 385, no. 17, p. 1559–1569, 2021. DOI: https://doi.org/10.1056/NEJMoa2029349.

YANG, Yuying et al. Evidence Summary for Self-Management Education in Patients with Non-Alcoholic Fatty Liver Disease. Patient Preference and Adherence, vol. 20, art. 590068, 2026. DOI: https://doi.org/10.2147/PPA.S590068.

ZHOU, Run et al. Self-management behaviors in adults with non-alcoholic fatty liver disease: a cross-sectional survey from China. BMJ Open, vol. 14, no. 2, e078333, 2024. DOI: https://doi.org/10.1136/bmjopen-2023-078333.

This article is published in open access under the Creative Commons Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.