Dissertation submitted as partial requirements for the degree of MSc Advancing Practice

Faculty of Health
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A Clinical Audit of compliance with NICE NG50: NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis in the Jersey Alcohol Pathway Team.

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Declaration

I hereby declare that this thesis is my own work and effort and that it has not been submitted elsewhere for any award. Where other sources of information have been used, they have been acknowledged.

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Acronyms and Abbreviations

ACP – Advanced clinical practitioner

A&D service – Alcohol & Drugs service

ALD – Alcoholic liver disease

ALN – Alcohol liaison nurse

APT – Alcohol pathway team

AUD – Alcohol use disorder

BMI - Body mass index

DNA - Did not attend

DPT – Drug pathway team

EASL – European association for the study of the liver

F0 – Fibrosis stage 0

F1 – Fibrosis stage 1

F2 – Fibrosis stage 2

F3 – Fibrosis stage 3

F4 – Fibrosis stage 4

GDPR - General Data Protection Regulation 2018

HCC – Hepatocellular carcinoma

HCJ – Health and Care Jersey

HCS – Health and Community Services

kPa – kilopascals

LSM – Liver stiffness measurement

M - Medium

MDT - Multidisciplinary team

NICE – National Institute for Health and Care Excellence

OECD - Organisation for Economic Co-operation and Development

RGU - Robert Gordon University

SLT - Senior leadership team

TE – Transient elastography

UKRI - UK Committee on Research Integrity

XL - Extra-large

Abstract

Background: Alcohol use, alongside viral hepatitis and obesity, are leading causes of liver disease. Progression of alcoholic liver disease (ALD) is associated with cirrhosis, hepatic failure, hepatocellular carcinoma, and increased mortality. In 2022, there were 5,776 premature deaths attributed to ALD in the UK. NICE guidance NG50 recommends the use of transient elastography (TE) to assess liver fibrosis and detect cirrhosis in individuals who consume alcohol at harmful levels for several months, enabling early detection. This is particularly relevant for the UK and Jersey populations where hazardous and harmful patterns of alcohol consumption are prevalent. The early identification of liver disease offers an opportunity for timely intervention and improved clinical outcomes.

Aims: This study aims to explore whether patients accessing the Jersey Alcohol Pathway Team (APT) within the Alcohol and Drugs Service (A&D) are appropriately referred for TE in line with NICE NG50 recommendations.

Project design: This study constitutes a clinical audit using a retrospective observational methodology. The study uses a total population sampling approach, looking at a sample of 50 patient records, of referrals received by the A&D service in the year of 2025.

Findings: The audit revealed that although most individuals presented AUDIT scores between 20-25 and reported prolonged alcohol consumption at harmful levels, there was a low level of documented diagnoses of ALD and a limited number of referrals for TE assessment.

Conclusion: The findings suggest suboptimal adherence to NICE Guidance NG50 within the Jersey APT. Furthermore, despite existing

evidence of ALD on abdominal ultrasound, documented diagnoses of ALD were limited. To address this gap, the implementation of an Advanced Clinical Practitioner (ACP) led service for the diagnosis and management of ALD and Alcohol use disorders (AUD) is proposed to improve guideline compliance and patient outcomes.

Chapter 1: Introduction and Background

1.1 Introduction

The aim of this dissertation is to explore whether patients accessing the Jersey APT within the A&D Service are appropriately referred for TE in line with National Institute for Health and Care Excellence Guidance NG50 for the assessment of liver fibrosis and cirrhosis (NICE, 2023a).

This chapter will introduce the background to the topic and area of interest, which leads to the development of the research question. It will analyse and compare alcohol consumption statistics from England and Jersey, discussing relevant NICE guidelines for the assessment and management of AUD and cirrhosis. The chapter will also explore aetiology and pathophysiology of ALD, and the use of TE as a diagnostic tool. Finally, the study question will be posed and the structure of the dissertation set.

1.2 Background

In the UK, liver disease is a significant cause of mortality accounting for more than 11,000 deaths a year (British Liver Trust, 2024b). In 2022, there were 5776 premature deaths resulting from ALD, a figure that increased by 61.3% in 2023 (Office for Health Improvement & Disparities, 2024). Liver disease related hospital admissions are reported in 2023 as 155.2 per 10000 population, with 27 of these attributed to ALD (Office for Health Improvement & Disparities, 2024).

Alcohol use, viral hepatitis and obesity are documented as the major causes of liver disease (British Liver Trust, 2024b), with cirrhosis often

developing silently following prolonged exposure to these risk factors (NICE, 2023a). Daily alcohol consumption, and binge drinking are associated with a higher risk of developing ALD related cirrhosis (Graciela *et al*., 2024). The threshold of alcohol consumption for exclusion of non-alcoholic liver disease is reported as 20g (2 units per day) in women and 30g (3 units per day) in men (Idalsoaga *et al.,* 2020), indicating a weekly consumption of 14 units a week for women and 21 units for men.

According to NICE (2017a) latest review of "Alcohol-use disorders: diagnosis and management of physical complications" guideline, hazardous drinking is described as a pattern of consumption that increases the risk of harm, usually more than 14 units a week, but less than 35 units a week for women and less than 50 for men. Harmful drinking is described as exceeding 35 units per week for women and 50 units for men (NICE, 2017a).

In the UK, the Health Survey for England (NHS, 2022) concluded that, 32% of men and 15% of women, over the age of 16, drank at hazardous or harmful levels. In 2022, alcohol consumption in Jersey was estimated at 12 litres of pure alcohol per person aged 15 or older (HCJ, 2025). This equates to 1200 units a year, or approximately 25 units per week. Furthermore, one in 5 adults reported drinking over 14 units a week (HCJ, 2025). Comparing Jersey's alcohol consumption data to UK statistics, and considering prevalence of hazardous and harmful drinking in Jersey, it is likely that Jersey faces a significant risk of increasing cases of ALD. In 2022, there were 20 hospital admissions attributed to ALD, 26.1 per 100,000 population (HCJ, 2025).

The liver is the primary organ responsible for ethanol metabolism and therefore is most susceptible to tissue injury by heavy alcohol use

(Natalia, Terrence and Kusum, 2017). Excessive and chronic alcohol consumption results in a wide spectrum of aliments including steatosis, hepatitis, fibrosis or cirrhosis (Natalia, Terrence and Kusum, 2017). Steatosis is characterised by deposition of fat in the hepatocytes, it is usually the first process to occur as result of heavy drinking (Natalia, Terrence and Kusum, 2017). This can progress to steatohepatitis, a severe inflammatory type of liver injury which can form fibrotic tissue changes caused by the accumulation of extracellular matrix proteins (fibrosis) (Natalia, Terrence and Kusum, 2017). Fibrosis presents as the first microscopic alteration in liver structure (Pavlov *et al*., 2016), it can lead to a significant amount of liver scarring, known as cirrhosis. During this process, collagen deposits alter the liver structure, leading to vascular alterations and development of portal hypertension. As cirrhosis progresses it may result in liver failure, hepatocellular carcinoma (HCC) and eventually death (Graupera *et al*., 2022).

Cirrhosis is a significant risk factor for the development of HCC (NICE, 2017a). HCC is an asymptomatic, fast growing and common form of liver cancer, accounting for 85% of liver cancers (NHS England, 2024). The British Liver Trust (2024a) states that liver disease is the highest risk factor for the development of liver cancer, affirming that 90% of liver disease is preventable and reversible with lifestyle changes such as weight loss, preventing viral hepatitis, and reducing alcohol consumption.

The diagnosis of ALD includes steatosis, alcoholic steatohepatitis, alcoholic hepatitis, alcohol induced cirrhosis and alcohol induced cirrhosis complicated by HCC (David *et al*., 2020). Irrespectively of which factors contribute to the development of cirrhosis, it occurs slowly over prolonged periods of time (two to three decades), constituting an asymptomatic process until complications occur, which is typically present at later stages

of the disease (Graupera *et al*., 2022). The probability of reversing disease or stopping progression depends on early diagnosis of liver fibrosis (Graupera *et al*., 2022), this allows timely treatment and increases the chances of it being successful (British Liver Trust, 2024b). Therefore, the main predictor of outcome in chronic liver disease is the early detection of liver fibrosis (Graupera *et al*., 2022).

NICE (2023b) on guideline HTG682 and NICE (2023a) on NG50 recommends TE for the assessment of liver fibrosis and cirrhosis, highlighting its benefits for early detection of cirrhosis in individuals who have been consuming alcohol at harmful levels over an extended period of time (NICE, 2010). It also recommends, that it should be offered to individuals with Hepatitis C infection, individuals diagnosed with ALD, men who drink more than 50 units a week, women who drink more than 35 units a week, and have done so for several months (NICE, 2023a).

TE is a non-invasive technique used to measure liver stiffness or liver scarring (Pavlov *et al*., 2016), which allows assessing for the level of fibrosis or existing cirrhosis (NICE, 2023a). The device of choice to perform TE is the Fibroscan, a one-dimensional ultrasound which measures the velocity of propagation of a low frequency (50 Hz) elastic shear wave through the liver and/or spleen parenchyma, converting it to quantitative parameters, defined as liver stiffness measurement (LSM) and expressed in kilopascals (kPa) (Vranic *et al*., 2022). The velocity into which the wave propagates through the tissue relates directly to the level of stiffness, where higher velocity relates to greatest stiffness (Vranic *et al*., 2022).

It is recommended that the healthcare practitioner adapts the size of probe to medium (M) or extra-large (XL) according to body mass index

(BMI) (Vranic *et al*., 2022). At least 10 measurements in the same body position should be taken to ensure reliability of the test (Chivinge *et al*., 2018). The measurements range from 1.5kPa to 75kPa with the median value calculated between the 10 measures to indicate the LSM (Mortimore, 2016). Values are usually higher in men and individuals with high BMI, values of 5kPa to 8kPa are considered to rule out advanced fibrosis in high-risk populations independently of the aetiology of liver disease (European Association for the Study of the Liver (EASL), 2015). A reading between 12kPa to 15kPa is recommended as cut-off to rule in advanced fibrosis for people with ALD (Vranic *et al*., 2022). However, the gold standard cut-off values have not been well established in ALD (Pavlov *et al*., 2015).

Different stages of fibrosis include: F0 (no scarring); F1 (minimal scarring); F2 (scarring has occurred and extends outside the liver area) this corresponds to significant fibrosis; F3 (fibrosis spreading and forming bridges with other fibrotic liver areas) corresponding to severe fibrosis and F4 (advanced scarring or cirrhosis) (Pavlov *et al*., 2016).

Liver biopsies can also be used to diagnose ALD (EASL, 2018) and is reported as the gold standard tool for diagnosis and staging of fibrosis (Park *et al*., 2021). It is also recommended by NICE guideline HTG682 (2023b) to individuals for whom TE is not suitable.

Hepatic biopsies consist of extracting a sample of liver tissue using a small needle (Pavlov *et al*., 2015). The invasiveness of the procedure carries health risks, meaning it cannot be performed frequently for monitoring disease progression (Day and Rosenberg, 2018). It is also not suitable to be performed in general practices as wards or clinics (Park *et al*., 2021) and requires expertise both for collecting and examining

sample which can be costly and constitute barriers for its applicability (Day and Rosenberg, 2018).

1.3 Context of Audit

This audit aims to justify the need for early screening of ALD using TE within a local setting, specifically the A&D service. It seeks to determine whether patients, aged 16 years or over, within the Jersey APT are appropriately referred for TE in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis (NICE, 2023a).

Jersey is one of the Channel Islands of the United Kingdom, it has a small population of 103000 (Policy Centre Jersey, 2024a), and operates an independent health care system (HCS, 2024a). The A&D Service is part of Health and Community Services working under the Mental Health Services division (HCS, 2024a). The service is structured under two pathways: the Drug Pathway Team (DPT) and an Alcohol Pathway Team (APT). The APT provides treatment for individuals with moderate to severe alcohol dependence (States of Jersey, 2025).

Given the prevalence of harmful alcohol use within Jersey's population, and its association with the development of ALD, early identification of liver fibrosis is essential. Therefore, it is important to explore whether in Jersey TE is used following the standard of NICE Guidance NG50 (NICE,2023a).

1.3.1 Project question

A PICO (Population, Intervention, Comparison, Outcome) framework was followed to develop the study question. PICO framework covers interventions, which is useful to apply on studies that aim to evaluate the effectiveness of interventions such as interventional studies (Heaslip and Lindsay, 2019). Besides this audit constituting a non-interventional study, as it aims to examine whether patients aged 16 years or over, within the Jersey APT are referred appropriately for TE in line with NICE Guidance NG50 (NICE, 2023a), rather than assessing the effectiveness of an intervention. Using this framework facilitated identifying TE as an intervention within the PICO framework, allowing to establish a comparison to the outcome of no intervention. This allowed to focus the study question and literature review on the applicability of TE as a diagnostic tool for this study population, whilst other frameworks as PEO would not have facilitated, as they do not focus on an intervention in the same structured way (Polit and Beck, 2021).

P	Male individuals or people who have been registered male at birth who drink over 50 units of alcohol a week for several months and women or people registered female at birth who drink over 35 units a week for several months.
I	Transient elastography
C	No early screening for liver fibrosis
O	Early detection of liver fibrosis

Figure 1: PICO framework (Heaslip and Lindsay, 2019)

By applying the PICO framework, it was possible to develop the proposed study question, "Are referrals for transient elastography in the

Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50 recommendations for assessing liver fibrosis and cirrhosis?".

1.4 Project Structure

A review of the literature was conducted in chapter two. This chapter aims to examine the available evidence regarding the benefit of using TE in the assessment and diagnosis of liver fibrosis and cirrhosis. Furthermore, it aims to improve the understanding of its benefits in facilitating early diagnosis of ALD in individuals who use alcohol at harmful levels. Chapter three will approach the philosophical underpinning of the study, methodological approach, methods of data collection and analysis, sample description and ethical issues. Chapter four will present the audit findings; Chapter five will critically discuss these findings and Chapter six will present the study's conclusions and recommendations for future practise.

Chapter 2: Literature review

This chapter critically analyses the existing literature on application of TE for the early detection of fibrosis and cirrhosis in individuals with ALD. The purpose of this review is to explore the current knowledge regarding clinical utility, accuracy and limitations of TE specifically to ALD. This chapter will explore TE as a non-invasive alternative for assessing fibrosis and cirrhosis. Discussing confounding factors that influence its application in clinical practice and considering the impact of TE results on motivating change in drinking behaviours among high-risk alcohol users. Furthermore, it argues the importance of abstinence in lessening fibrosis.

Whilst TE has emerged as a promising tool for early detection of fibrosis and cirrhosis, significant gaps remain in its application. These include concerns regarding reliability of results, influence of confounding factors, and challenges that this poses for effective integration into clinical practice (Pavlov *et al*., 2015).

For this literature review, the following databases were used: CINHAL Complete, Cochrane Library and Medline. These databases were identified as appropriate as they hold an extensive collection of healthcare literature and peer-reviewed research, with diverse methodological approaches. This maximises the number of relevant studies identified and enhances the validity and reliability of studies, allowing a comprehensive evaluation of the topic (Robert Gordon University, 2025).

The research question was structured using the PICO framework, which facilitated the identification of key terms for this literature review. To ensure comprehensive search, synonyms of these terms were utilised to broaden the search and target relevant studies.

The Boolean operator “OR” was used to broaden the search by combining related terms and synonyms. Such as “harmful drinkers”, “excessive alcohol consumption” or “high risk drinkers”, “transient elastography”, “Fibro scan” or “liver stiffness” and “early detection liver disease”, “detecting liver stiffness”, or “prevention liver disease”. Grouping these terms with operator “OR” ensured all variations were captured (Aveyard, Payne and Preston, 2021).

The Boolean operator “AND” was applied to combine key search terms identified within the PICO framework (Figure 2), helping narrow the search of relevant studies and ensuring that studies addressing all essential elements of the research question were targeted (Aveyard, Payne and Preston, 2021).

In total, twelve studies were retrieved, with an additional two identified through back chaining. Four studies were excluded as they were narrative reviews.

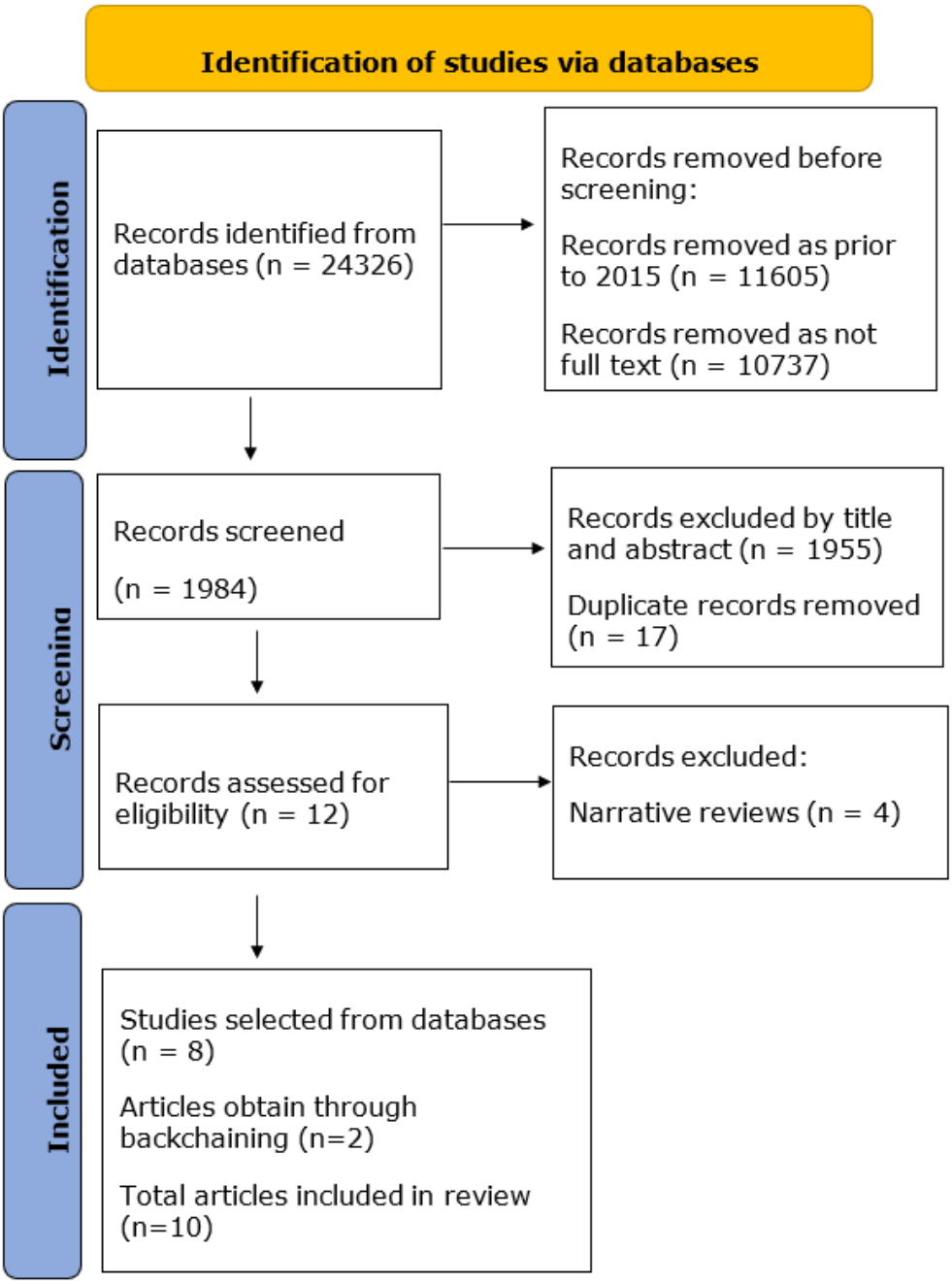

Figure 2: Prisma flow diagram, adapted from PRISMA (2020)

2.1 Literature Review

Only cohort studies, diagnostic test studies or systematic reviews published in English between the year of 2015 and 2025 were included in this literature review. Of the twelve studies assessed for eligibility two systematic reviews and six cohort studies were selected, a total of eight studies. An additional two studies were identified through back chaining, one cohort study and one diagnostic test study, resulting in a total of ten studies. Seven studies focused specifically on ALD, while the remaining three covered other liver disease aetiologies.

Critical appraisal checklists were used to evaluate the quality of selected studies. The Critical Appraisal Skills Programme (CASP) was selected as a provider for these checklists. CASP tools are tailored to target methodological features of each specific study research design, ensuring that criteria used for the study appraisal is appropriate (Heaslip and Lindsay,2019). Using these check lists allowed to examine validity and clinical relevance of the study's results (CASP, 2026).

The two systematic reviews achieved a CASP score of 10/ 10. The seven cohort studies and one diagnostic test study included in the review scored 12/12 (Appendix VIII). All studies addressed a clearly defined study question. However, they varied in their methodological approaches, with some studies presenting more relevant inclusion/exclusion criteria and discussion of bias than others.

CASP tools are useful as they support users evaluating studies methodologies in a systematic way and are a standardised framework for each type of study (CASP, 2026). However, the interpretation of methodology approaches, including sample characteristics and methods

applied, rely on the level of knowledge of the user in the specific matter the study discusses. Therefore, it can be argued that there is a risk of oversimplifying evaluation of studies when using CASP tools.

Key themes across this literature review include TE utility in early diagnosis of liver fibrosis and cirrhosis and the influence of confounding factors on timing and interpretation of TE. As well as the potential use of TE as a motivational tool to achieve abstinence and contribution to mitigate liver fibrosis.

While themes were consistent throughout the literature, the methodological approach and depth each was explored varied. Some studies employed robust inclusion criteria, used multiple diagnostic tools to strengthen their findings. In contrast, certain studies failed to account for confounding factors as recent alcohol consumption and liver inflammation. Hence, inconsistency of methodology quality in these studies suggest TE findings should be interpreted with caution in clinical practice and despite the high CASP scores for the studies included in this review, there are factors to be considered which could have introduced bias. Therefore, will proceed with the critical appraisal of the included studies.

Gianni *et al*. (2017) reported a duration of alcohol use from 7 to 10 years within their cohort and Madhusudhan *et al*. (2024) of 5 to 25 years. This is relevant as fibrosis develops over prolonged periods of time, often decades (Graupera *et al*., 2022). Therefore, consideration of the duration of alcohol consumption strengthens the association between alcohol consumption and findings of fibrosis. Unfortunately, the remaining studies did not specify any periods of alcohol consumption. This introduces bias to the findings, as it could be argued whether the length of alcohol

consumption is enough to cause fibrosis. Nonetheless, on all studies, the International Classification of Disease (ICD) (International Classification of Disease, 2019) and or Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria, or an Alcohol Use Disorder Identification Test (AUDIT tool) (World Health Organization, 2001) were followed to establish high risk drinkers and alcohol dependency diagnosis. The ICD (2019) diagnostic criteria include length of alcohol consumption for the diagnosis of dependency, stating a diagnosis requires repeated substance use, which is persistent despite harmful consequences (International Classification of Disease, 2019). The DSM-5 states dependency involves the use of larger amounts over longer periods (American College of Occupational and Environmental Medicine, 2025). High AUDIT scores are reflective of chronic severe alcohol use and dependency (World Health Organization, 2001). These factors indicate individuals diagnosed following these criteria are likely to be using high amounts of alcohol over long periods of time.

Madhusudhan *et al*. (2024) cohort study only included males. All other studies had male and female cohorts, still, mostly male individuals were represented in the samples. This discrepancy is supported by data from the Jersey Alcohol Profile for 2024 (HCJ,2025) which describes that 29% of men exceed the weekly limit in comparison to 12% of women. This pattern is also consistent with the findings of the UK Alcohol Profile (Public Health England, 2017), which states women are more likely to abstain in comparison to men. Therefore, the studies gender representation is likely to constitute an accurate report rather than bias.

Raised BMI has been associated with failure to measure or with unreliable TE measurements (Harris *et al*., 2018; Orgil *et al*., 2024), this can pose a challenge to obtain 10 valid measures, required for accurate

readings (Masuzaki *et al*., 2020). De Lédinghen *et al.* (2017) in a diagnostic test study, concluded that inaccuracy of results with XL probe was associated with higher waist circumference, raised triglycerides, increased albumin, raised ALT and alcohol consumption, determining these factors contribute to inaccurate readings. In a systematic review by Masuzaki *et al*. (2020) he affirms that raised BMI can have a negative impact on the identification of fibrosis, supporting the need for better quality measurements, as the use of XL probes which improve validity of readings. The cohort study by Harris *et al*. (2018), stated that 76% of the patients who had less than 10 valid readings with an M probe had 10 valid readings with the use of an XL probe. For this study the cohort of patients included patients with BMI≥28, concluding that the addition of the XL probe increased the number of reliable readings. NICE (2023b) advises that organisations should ensure different sizes of probes as small, medium or extra-large are available, explaining the extra-large probe is configured to allow the signal penetration through deeper tissues reducing failed readings in overweight patients.

A variation in reported cut off values for identification of different stages of fibrosis was observed throughout the literature review, reflecting lack of clearly established thresholds for ALD (Pavlov *et al*., 2015). Consequently, this may affect interpretation of results in clinical practice as there is uncertainty on which readings would lead to identification of fibrosis. The cohort study by Orgil *et al*. (2024) is the only study found that states the use of a cut off value of 5.5kPa, for identification of F0. In contrast Levi-Strauss *et al*. (2023) adopted a cut off value of <7.7kPa to exclude fibrosis in their cohort, which would correspond to F0. Similarly, only one study, a systematic review by Pavlov *et al*. (2015), reported data relating to F1, identifying a cut off value of

5.9kPa. Collectively these findings suggest values between 5.5kPa to 7.7kPa, may indicate F0 to F1 level of fibrosis.

The systematic reviews by Masuzaki *et al*. (2020) and Pavlov *et al*. (2015), identify cut offs for F2 as 7.65kPa. Whereas Orgil *et al*. (2024) mentions a broader interval from 7.1 to 9.5kPa, Harris *et al*. (2018) used a cut off value of 8.0kPa and Foncea *et al.* (2022) reports using a cut off value of ≥9kPa on their cohort. Overall, values for identification of F2 varied considerably between 7.1kPa to 9.5kPa.

For F3, Masuzaki *et al*. (2020) described a cut off value of 11.7kPa, whilst Pavlov *et al*. (2015) mentions a lower cut off as 9.5kPa to 10kPa. Orgil *et al*. (2024) suggested a cut off interval of 9.6 to 12.5kPa and Foncea *et al.* (2022) proposed a threshold of ≥ than 12.1kPa. Therefore, values for identification of F3 level appear to vary between 9.5kPa to 12.5kPa.

For F4 Masuzaki *et al*. (2020) outlined a cut off value of 13.01kPa, while both Pavlov *et al*. (2015) and Orgil *et al*. (2024) of 12.5kPa. Levi-Strauss *et al*. (2023) used 11.3kPa on their cohort and Foncea *et al.* (2022) of ≥ than 18.6kPa. Hence, the identification of level F4 appears to lay between 11.3kPa and 18.6kPa or above.

The absence of clearly established cut off values for the identification of the different levels of fibrosis in ALD, represents a confounding factor for interpretation of results. This could be attributed to the limited available research, with only ten studies found on literature review. Equally, it may also reflect the other confounding factors explored further along this chapter, which could contribute to variety of findings making it difficult to establish a cut off threshold. However, Newsome *et*

al. (2017) for The British Society of Gastroenterology, on an ALD identification algorithm, suggests that TE<8kPa does not exclude liver disease, and advises rescreening in three to five years. Which supports findings below this level may not be conclusive. Still, underdiagnosing at F0 to F1 stage is not clinically significant as at this stage presence of fibrosis does not influence prognosis (Pavlov *et al*., 2015). Newsome *et al*. (2017) also suggests that TE readings of 8kPa-16kPa may indicate advanced liver fibrosis and TE readings ≥16kPa are indicative of possible cirrhosis. These ranges intersect with the cut off values reported across the included studies, from F2 to F4, further highlighting that regardless of cut off values adopted, TE is useful on detecting fibrosis within these stages.

Another relevant confounding factor is inflammation levels in the liver at time the investigation is performed. In Levi-Strauss *et al*. (2023) cohort study, TE correlated positively with AST. The Enhanced Liver Fibrosis score (ELF score) correlated positively with transaminases as aminotransferase (AST) / alanine aminotransferase (ALT) ratio and negatively with albumin. The ELF score showed no significant change in the first months after alcohol withdrawal. In contrast, TE values significantly decreased during this period. Similarly, Orgil *et al*. (2024) also reports low albumin, high AST, ALT, alkaline phosphatase (ALP) and bilirubin are significantly associated with fibrosis. Equally, De Lédinghen *et al.* (2017) states high LSM was positively associated with high ALP. These studies indicate that inflammation in the liver is associated with deranged liver transaminases, with low albumin and high bilirubin, which also correlate with alcohol consumption. Decreased inflammation correlates with drop on AST/ ALT levels associated with decrease in level of fibrosis (De Lédinghen *et al.,* 2017). Hence, liver

inflammation and alcohol consumption can lead to overestimation of fibrosis.

Interestingly, in the cohort study of Gianni *et al*. (2017), in the 24 weeks follow up clinic, in abstinent patients, four of these patients presented LSM≥7kPa, despite having normal transaminases. This suggests that blood tests alone are not true reflection of liver fibrosis (NICE, 2023a). Therefore, blood tests should be used alongside TE to rule out cirrhosis and never in isolation (Newsome *et al*., 2017; NICE, 2023a).

These aspects are pivotal for practitioners to consider when performing TE. Foncea *et al.* (2022) states that delaying fibrosis measurements until AST declines by at least 100u/ml can improve diagnostic accuracy. Therefore, it may be worth considering repeating TE in abstinence, or when liver function tests, such as AST have decreased, to validate results.

Regarding validity of TE in identifying liver fibrosis and cirrhosis, in the cohort study by Park *et al*. (2021) a second method of diagnosis was used, establishing a comparison between the diagnostic methods of diffusion weighted imaging (DWI) and TE, demonstrating that TE has a positive correlation with detecting hepatic fibrosis. METAVIR was used for the classification of fibrosis, twelve patients were identified with fibrosis stage F0, seven patients F1, six patients F2, twenty-one patients F3 and thirty-two patients F4, demonstrating reliability on detecting liver fibrosis. TE was not as efficient on detecting F0 to F1 stages, indicating TE is less efficient on identifying early-stage fibrosis. However, it can be argued that this has less clinical significance as fibrosis at these stages would not influence prognosis (Pavlov *et al*., 2015).

The sample used in this study was not however exclusive to ALD, 64.1% of the sample were individuals diagnosed with hepatitis B. In addition, the study did not specify the BMI of participants, neither whether an XL probe was used for higher BMI participants, which can contribute to unreliable findings (De Lédinghen *et al.*, 2017). Furthermore, 20.5% of individuals within the sample had serum ALT levels more than two times higher than the normal upper limit, which could contribute to the over estimation of fibrosis (De Lédinghen *et al.,* 2017). Besides the risk of overestimation, the study did offer another imaging method for confirmation of fibrosis, with all patients included in the study undergoing liver MRI and TE, which confirmed pathologic results of fibrosis adding validity to the study. Also, 56 out of 76 patients were further diagnosed with HCC, highlighting that fibrosis is a risk factor for HCC (Masuzaki *et al*., 2020) and demonstrating that TE is a useful tool for diagnosis of fibrosis and prompting early detection of HCC.

Similarly, Orgil *et al*. (2024) detected LSM≥8kPa to 10kPa on 8% of their cohort and LSM≥10kPa on 13%, demonstrating TE is effective diagnosing fibrosis from F3 to F4. TE was performed one week post admission into a rehabilitation centre, in which it is assumed no alcohol would have been in use that could have contributed to overestimation of fibrosis (Sterling *et al*., 2025). Nonetheless, the cohort also had a 3 to 6 month follow up, to allow liver inflammation to settle, decreasing possibility of overestimation of fibrosis and potential bias of the study (De Lédinghen *et al.,* 2017). All these factors increase validity of findings.

Conversely, it remains unclear if individuals with high BMI were excluded from the sample. There was no mention to whether an XL probe was used in the study, therefore, the omission of this information could be associated with individuals with high BMI either not being

acknowledged or not part of the cohort. No other method of diagnosis of fibrosis was used for comparison of results. This raises questions regarding the validity of findings, as it is not possible to compare findings to other diagnostic methods. Nevertheless, all patients with LSM≥10kPa received continuous care by an hepatologist, in a final sample of eight individuals with LSM≥20kPa, four individuals were further diagnosed with cirrhosis by imaging, within six months of screening. This indicates that there is a likelihood that findings are accurate. Liver disease develops silently with no clinical manifestation until late stages (Graupera *et al*., 2022), therefore without screening with TE it would be likely that the confirmation of diagnosis of cirrhosis would have been missed in these individuals.

Madhusudhan *et al*. (2024) cohort study excluded individuals with BMI≥30kg/m^2, contributing to more accurate readings within the cohort (De Lédinghen *et al.,* 2017). However, participants had deranged transaminases at time of TE readings, and the study does not account to if individuals were actively drinking. Both factors can cause unreliable readings (Sterling *et al*., 2025; De Lédinghen *et al.,* 2017). Patients were re-screened on day 28 of admission which may decrease the impact of inflammation and recent alcohol use on overestimation of results. In 63.8% of cohort F0 to F1 stages of fibrosis were identified, 8.6% of the cohort was identified as F2, 12.1% as F3 and 15.5% as F4. No other alternative methods of diagnosis were used for comparison of findings, still, confounding factors were considered, which increases likelihood of accurate findings.

In Foncea *et al.* (2022) cohort study, 73.2% of the sample was diagnosed as F0 to F1, 70.9% F2, 12.5% F3 and 17.5% F4. In this study, BMI of participants on mean standard deviation was 28±5.4, M and XL

probes were used. The study also excluded participants with ALT greater than five times the normal value, demonstrating management of confounding factors as high BMI and liver inflammation (De Lédinghen *et al.,* 2017). Though, it did not clarify if participants were actively consuming alcohol, which could contribute to unreliable readings (Sterling *et al*., 2025). Within this sample, 17.5% were newly diagnosed with cirrhosis post TE. Still, no other imaging method was used to confirm this diagnosis. Liver biopsy is identified as gold standard; however, it is an invasive procedure which carries risks and is costly (Day and Rosenberg, 2018), this would likely make it unviable to be used in the study.

Pavlov *et al*. (2015) in a systematic review, found that TE has high sensitivity to rule out fibrosis. In their analysis, seven studies reported that 81% of participants had F2 stage, with the likelihood of 810 people out of 1000, having significant fibrosis and with 49 being missed even though they had significant fibrosis. Furthermore, eight studies, concluded that 61% of participants had F3, equating to 610 people out of 1000 having severe fibrosis and 49 cases being missed. Additionally, another seven studies demonstrated that 51% participants had F4, out of 1000 people, 510 would have cirrhosis, 26 would have been missed without TE. These findings reinforced what previous studies have showed that there is value in the use of TE on diagnosing fibrosis. TE performed by devices such as FibroScan can provide evaluation of liver fibrosis through LSM (Rinaldi *et al*., 2023), enabling stratification of liver disease (Harris *et al*., 2018), monitoring of treatment responses and preventing complications as well as need for biopsy (Rinaldi *et al*., 2023). Additionally, NICE (2023b) recommends TE for assessment of fibrosis outside specialist services as a non-invasive option, and liver biopsy to whom TE may not be suitable.

Pavlov *et al*. (2015) also concludes that the early staging of hepatic fibrosis in ALD can motivate patients and practitioners to engage in strategies for abstinence. Similarly, Orgil *et al*. (2024) cohort study, also reports that participants who were identified with elevated LSM were more likely to maintain abstinence. However, this study did not account for the impact of residential placement with counselling, group therapy, educational classes, 12 steps meetings, dialectical behavioural therapy and cognitive behavioural, which may introduce bias. Nevertheless, findings were supported by revaluating participants one year following discharge date.

The benefit of abstinence in decreasing fibrosis is documented throughout some of the literature reviewed. Levi-Strauss *et al*. (2023) study reports the mean levels of transaminases for participants decreased for the whole cohort between day zero and day seven, increasing on day thirty for participants who resumed alcohol consumption, but not in abstainers. Mean LSM changed from 7.9kPa on day four to 8.1kPa on day thirty in participants who resumed alcohol consumption, and from 8.3kPa to 7.5kPa in participants who maintained abstinence. Similarly, Gianni *et al*. (2017) conveyed that in abstinent participants, in a four week follow up, 40% participants had a decrease on their LSM stages in comparison to active drinkers. At 24 weeks follow up, 18% of participants who remained abstinent had decreased LSM to F0. Moreover, Madhusudhan *et al*. (2024), reported that after 28 days of abstinence 81% of participants had LSM of F0 to F1. These findings suggest that performing TE at initial assessment and in abstinence may motivate individuals on achieving and maintaining abstinence, as well as support validating findings. NICE (2023b) also advocates for the use of TE as a motivational tool.

2.2 Conclusion

This literature review concludes that several confounding factors, including quality of the procedure, elevated BMI (BMI≥28kg/m2), raised transaminases, recent alcohol consumption and variation on cut off values for the diagnosis of fibrosis in ALD can potentially lead to overestimation of fibrosis. Despite these challenges, the benefit of TE lies in early identification, promoting motivation for change, abstinence, screening for HCC and management of cirrhosis at early stages.

Given the evidence supporting TE effectiveness on detecting fibrosis, it is pertinent to explore whether patients (over 16 years old) within the Jersey APT are appropriately referred for TE in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis. Therefore, to achieve this aim, the following chapter will outline this study design.

Chapter 3: Project Design

This chapter discusses the philosophical underpinning and methodological approach of the study. It also outlines the methods of data collection and analysis, the sample description, quality assurance and ethical considerations.

3.1 Philosophical underpinning

To achieve the aim of this study, it is essential to examine and analyse the current referral process to TE in comparison to the standard of care NICE Guidance NG50 (NICE, 2023a). This approach involves looking at the existent process of referrals in an objective and systematic way, identifying gaps in practice. Therefore, the study supports the assumption that referral patterns, adherence to inclusion criteria, and compliance levels are a measurable phenomenon. As a result, these can be objectively identified, measured and analysed, to produce reliable conclusions, aligning with a positivism paradigm (Park, Konge and Artino, 2020). This approach differs from interpretivism, where knowledge is gained through understanding different realities rather than measuring (Heaslip and Lindsay, 2019). Approaching the study question through an interpretivism perspective could involve exploring practitioner's views of the referral process. Whilst there is value in this approach, it would not answer the study question, as this study does not aim to explore the experience of practitioners, but measure the alignment of current practice with NICE Guidance NG50 (2023a) through quantifiable data.

3.2 Methodology

The aim of this study is to measure whether patients (over 16 years) within the Jersey APT are appropriately referred for TE in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis.

A clinical audit using a retrospective observational methodology was designed for this study. Clinical audit consists of a quality improvement methodology, which aims to assess whether a service meets defined quality standards, by defining measurable data according to a standard of choice (Health Care Quality Improvement Partnership, 2020). This data is then converted into valid measures of performance, which can be expressed numerically and analysed statistically (Health Care Quality Improvement Partnership, 2020). Therefore, clinical audit aligns with the positivist philosophical approach and quantitative methodology (Heaslip and Lindsay, 2019).

The study examines the preceding year of referrals to the APT within A&D service, exploring past phenomena, aligning with retrospective studies (Parahoo, 2014). It involves analysing the past year referral processes without intervening, which is consistent with retrospective observational studies (Pérez-Guerrero *et al*., 2024). It differs from cross sectional studies as it looks to identify and measure existing practice, rather than reflect the likelihood of a specific diagnosis at a specific point in time, which is often used to assess prevalence, or identify associations between exposures and outcomes (Pérez-Guerrero *et al*., 2024).

The study objectives include firstly, to identify the number of patients within the Jersey APT Service who meet the criteria for assessment of liver fibrosis or cirrhosis in line with NICE Guidance NG50.

Secondly, to identify how many eligible patients are referred for TE and how many did not consent to referral or did not attend (DNA) their TE appointment. Thirdly, to assess the consistency of documentation of referral decisions and patient consent, refusal or DNA.

Therefore, adopting this methodology is appropriate to answer the study question "Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?". For the design of the clinical audit, the Clinical Audit Cycle (Health Care Quality Improvement Partnership, 2020), was followed (Figure.1). Within the study timeline, it is anticipated that the project will achieve Stages 1 to 3 of the cycle.

Stage 1: Preparation and planning, involved defining NICE Guidance NG50 (NICE,2023a) as the audit standard, developing the study aims and objectives, identifying sample, and confirming the suitability of the methodology by Health and Care Jersey (HCJ) clinical audit team.

Stage 2: Measuring performance, involved measuring current practice by collecting and analysing data using the developed clinical audit tool. The findings are presented in Chapter 4 and discussed in Chapter 5.

Stage 3: Implementing change, focused on identifying recommendations for service improvement, which are discussed in Chapter 6.

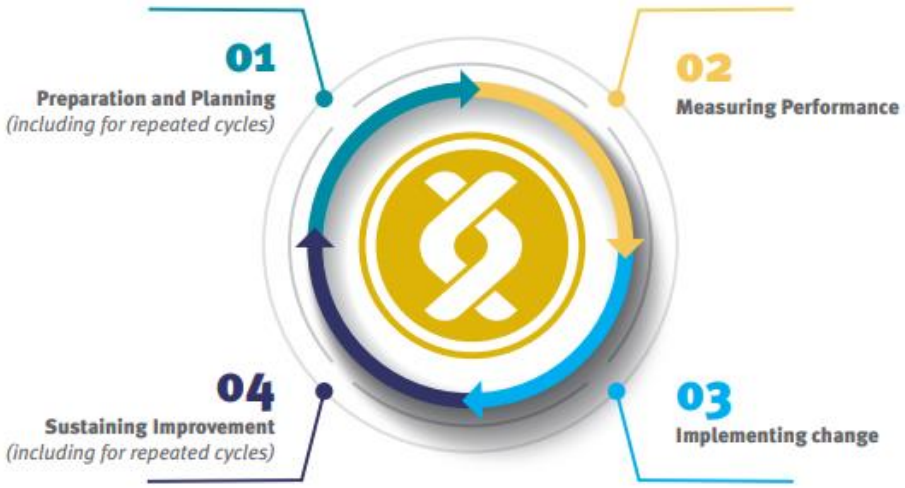

Figure 3: Clinical Audit Cycle (Health Care Quality Improvement Partnership, 2020)

3.3 Methods

3.3.1 Data collection Methods

This study uses secondary data, collected by auditing patient referrals from the preceding year. For that reason, the study adopts a retrospective observational approach to data collection (Pérez-Guerrero *et al*., 2024).

Adopting a retrospective observational methodology means the study examines existent data. This approach is cost effective and facilitates data collection within the study timeline (Pérez-Guerrero *et al*., 2024). Additionally, it supports minimising bias, as the awareness of an ongoing study cannot influence the findings, thereby enabling the study objectives to be met. However, it is important to consider that the data is pre-existent, extracted from initial assessment proformas, and clinical

notes available on the patient electronic record. As this data was not recorded to fulfil the purpose of the study, identifying relevant data can be difficult and time consuming. To facilitate data collection, it is important to clearly define data to be collected, avoiding processing data that does not lead to relevant findings (Dahlberg and McCaig, 2016). Consequently, a decision was made to focus on pre-defined data to extract according to NICE Guidance NG50 (NICE, 2023a) standard requirements.

The use of pre-existent data inevitably means that data may be incomplete or absent from the medical record (Sterrantino,2024). To mitigate this limitation, data collected will be cross-checked from multiple parts of the medical record to address gaps where data may be missing. Implementing this strategy requires familiarity with existent electronic record system. To overcome this, the project lead is trained in using existing electronic record system, enabling access and identification of relevant data to collect.

Variables for data collection were defined in alignment with NICE Guidance NG50 (NICE 2023a). It includes gender, age, reported daily or weekly alcohol intake in units at time of referral, existing or absence of diagnosis of Hepatitis C or ALD, offer or not of referral to TE. Factors that may impact access to TE were also considered, these included date of referral to APT, consent or refusal of referral, acceptance or decline of referral by undertaking department, attendance or DNA to TE appointment. These variables were used to develop the clinical audit tool (Appendix IX), with support of the HCJ clinical audit team, which is presented on an Excel sheet. The data is to be extracted numerically and populated on the clinical audit tool.

Developing the clinical audit tool supports minimising risk of observer bias, as the data collected was predetermined, not allowing for subjectivity at time of data collection (Booth, 2015). It also allows the researcher to focus only on relevant data to collect, minimising the risk of collecting irrelevant data that does not answer the study question (Marino *et al*., 2021).

3.3.2 Data analysis methods

Descriptive statistical analysis was employed to analyse the data. As a clinical audit, the primary purpose of the study is to measure compliance and performance against a recognised standard, NICE Guidance NG50 (Health Care Quality Improvement Partnership, 2020). Using descriptive statistics allows the identification of the relevant variables to measure, helping to describe characteristics of the study sample, and enabling gaining insight into existing service and possible gaps (Parahoo, 2014; Sterrantino, 2024). The data analysis was performed by using frequency tables and charts. These allow the researcher to understand the frequency of answers to the clinical audit tool questions (Dahlberg and McCaig, 2016).

This method was chosen over inferential statistics, as inferential statistics aims to examine associations between variables and compare relationships (Kotronoulas, 2023), or to generate broader generalisations from data (Sand, 2022), which is not the aim of this study. Therefore, descriptive statistical analysis was adequate to analyse data for this study and assess compliance with clinical standard.

3.3.3 Sample

The study uses a total population sampling approach rather than probability-based sample. Total population sampling is advantageous as it ensures all individuals with the specific relevant characteristics are included in the study, this is cost-effective and less time consuming than probability sampling (Stratton,2021). This was particularly important given the short timeframe of this study. Conversely, unlike probability sampling, not all members of the wider target population have an equal chance of being selected, introducing the potential for sampling bias (Ahmed, 2024).

Probability sampling is reported in literature as more accurate and with less bias (Ahmed, 2024). However, it involves a rigorous process of listing population details, usually requiring larger population samples (Wiśniowski *et al*., 2019), which would not be possible to achieve within this project time frame. Nevertheless, implementing well-defined inclusion criteria, can support reducing bias, as it ensures records selected are representative of the study's population and meet the appropriate criteria to allow answering the study's question (Patino and Ferreira, 2018). To improve the validity of the study findings, the inclusion criteria was incorporated in the audit tool, which ensured records of individuals who did not meet criteria were identified on data collection and excluded from the sample.

Another limitation of total population sampling is its restricted capacity to support generalisation of findings to a broader target population (Stratton,2021). Nevertheless, the results remain valid for the population represented in this study allowing to develop hypotheses and objectives to use in more rigorous studies (Stratton,2021).

There was a concern that small samples could not yield significant findings, not being descriptive of study population (Stratton,2021). Therefore, a sample of 50 patient records, that met inclusion criteria, from referrals received by the APT within the A&D service in 2025 was selected.

3.3.4 Inclusion and exclusion criteria

Table 1: Inclusion and exclusion criteria

Inclusion Criteria
Patient records of individuals aged over 16 years, who had been referred to the APT, who had a Hepatitis C virus infection
Patient records of individuals aged over 16 years, who had been referred to the APT, who had a had a diagnosis of ALD
Patient records of male individuals aged over 16 years, who had been referred to the APT, and/or reported drinking over 50 units of alcohol a week if male or 35 units if female
Exclusion Criteria
Patient records from individuals aged under 16 years
Patient records from individuals aged over 16 years, who had been diagnosed with cirrhosis of the liver or had TE before initial assessment.

3.4 Quality Assurance and Ethical issues

As a clinical audit, this study fits within quality improvement process rather than research (HSE Science and Research, 2021). However, as good practice, it is pivotal that it is aligned with the principles of research ethics to ensure the rigour and validity of the study. Hence, the ethical implications for this study are considered in relation to Beauchamp and Childress (2013) principles of beneficence, non-

maleficence, autonomy and justice. A risk assessment has been completed to aid addressing ethical issues (Appendix VII).

Data was kept following the recommendation of the UKRI Medical Research Council (2022), that data should be retained for at least 10 years post completion of study. This aligns with the *UK General Data Protection Regulation 2018*, RGU Data Management Policy (Robert Gordon University, 2024) and complies with the *Data Protection Jersey Law 2018*, which states that data should be retained for as long as it is required. Should I exit employment with the A&D service prior to the 10-year term, this data will be deleted.

The project lead acted as the data custodian responsible for data management within this study. Anonymised data was collected and populated on an Excel spreadsheet, by attributing codes to replace patient URN numbers ensuring anonymity and confidentiality. The data was then securely stored in a locked one drive folder on a password protected computer. Access to data was restricted to the project lead, academic supervisor and the HCJ clinical audit team.

The aim of this study is to inform service changes, which could enhance the experience of service users, reflecting the principle of beneficence. Working with the support of the HCJ Clinical Audit Team ensured the audit tool measured the defined standard. This enabled recommendations to promote the development of new policies, procedures or service provisions aligning with principles four and seven of the *Declaration of Helsinki 1964*.

The principle of non-maleficence was also considered, despite this study being non-interventional it was important to apply this principle, to ensure no harm would come to the individuals involved. This mainly

involved safeguarding access and storage of data and patient confidentiality. According to Robert Gordon University (2016) data is assumed to be under the control of the person or organisation to whom it relates. Permission to access records as the project lead was obtained from the organisation, by request to the Head of A&D Service (Appendix V). Consideration was given to both *The Data Protection Act 2018* and *Data Protection (Jersey) Law 2018*, ensuring that all processes related to data collection and storage complied with data protection guidance for processing personal data. Anonymity was ensured by attributing a code to each participant's URN number. Safe management of data also aligns with the principle of autonomy and principles 9, 24 and 25 of the *Declaration of Helsinki 1964*. A data management plan was developed to support this (Appendix II).

Ethical issues related to the principle of justice were also considered. Findings from this study will provide an understanding of whether local individuals receive the expected standard of care outlined in NICE Guidance NG50 (NICE, 2023a), as those nationwide. In line with this principle, it is important to consider risks that could rise from collecting data and findings. Furthermore, according to principle 17 of the *Declaration of Helsinki 1964* and the UK Committee on Research Integrity (UKRI, 2025) assessing risks and burdens for participants is crucial, particularly in vulnerable populations such as stigmatised and marginalised groups. As a non-interventional study, the study will not add risks to participants, however there is the risk of not capturing these vulnerable groups. Hence, the study evaluated all referrals within the timeframe, up to a total of 50 records that met inclusion criteria. This provided an equal opportunity to all patients who accessed the service within the timeframe to be captured in the study. Findings of this study

may benefit the service patient group, as it could lead to increased awareness of the need to refer to TE. Consideration was also given to how the study findings may impact practitioners. Therefore, findings will be shared at the weekly service multidisciplinary team (MDT), adopting a non-blame approach.

To ensure compliance the proposal for this study (Appendix I) was submitted to the School of Health Ethics Review Panel at Robert Gordon University (RGU) for scientific review. The study was also registered with HCJ Quality and Audit Team (Appendix IV).

3.5 Conclusion

Having outlined the design of the study as a clinical audit using a retrospective observational methodology, the findings will be presented in detail in the next chapter.

Chapter 4: Findings Chapter

This chapter presents the findings from the analysis of 50 patient records of individuals who met the audit inclusion criteria: records of individuals over the age of 16 who have been referred to APT, who have a Hepatitis C virus infection, have a diagnosis of ALD, and /or drink over 50 units of alcohol a week if male or 35 units if female. Records excluded compromised those of individuals under the age of 16, individuals who had been diagnosed with cirrhosis of the liver or that had undergone TE prior to initial assessment.

The chapter will initially describe characteristics of the sample, progressing to analysis of results relating to alcohol consumption, AUDIT scores, diagnosis of ALD, and TE referrals.

4.1 Demographics

The sample was predominantly male. Of the 50 individuals, 76% (n=38) were male and 24% (n=12) were female. This may reflect a higher prevalence of alcohol consumption among men in this clinical population.

The sample captured 50 patient records, from referrals received by the A&D service in 2025, that met the inclusion criteria during the audit period. However, the selected sample does not reflect a full year of referrals, limiting representativeness of findings. Although, capturing a full year of data could enhance validity, this was not feasible within the time frame of this study. Despite this, according to data from the Jersey Alcohol Profile (HCJ, 2025) the audit findings are likely to be a reasonable reflection of the clinical population accessing APT within the local A&D

service. The Jersey Alcohol Profile (HCJ, 2025) reports that 29% of men exceeded the weekly limit of 14 units in comparison to 12% of women, which is consistent with higher prevalence of increased levels of alcohol consumption within men when compared to women.

Females are traditionally reported as consuming less alcohol than males. This is often linked to psychosocial and cultural factors, as the perceived role of women as the caregiver, assuming a predominant role on caring responsibilities for their families (Almila and Karpyak, 2015). However, research suggests that the gender gap on alcohol consumption is narrowing (White, 2020), which could indicate a rise on alcohol consumption within the female population. In Jersey, this trend could lead to an increased number of referrals to the A&D service. It is also important to recognise that women are documented as more susceptible to suffer harm from alcohol, especially caused by ALD (Almila and Karpyak, 2015), which highlights the importance of further developing services focusing on early detection of ALD.

Table 2: Frequency table of gender distribution of study subjects

Gender	Frequency (n=50)	Percentage
Male	38	76%
Female	12	24%

In this audit, the age of individuals ranged from 16-82 years old. Most individuals ages were between 36-45 years old, representing 30% (n=15) of sample, individuals aged 55-64 years old accounted for 20%

(n=10) of sample, followed by 26-35 years old (n=8) and 46-55 years old (n=8), both with a percentage of 16%. Less represented were individuals between ages of 65-73 years old accounting for 6% (n=3) and 74-82 years old with a percentage of 2% (n=1) of total sample. These age groups representations are coherent with the existent data from the Jersey Alcohol Profile (HCJ, 2025) which reports higher prevalence of alcohol consumption in middle aged individuals.

Nonetheless, whilst this trend appears to be consistent with local epidemiological trends, the audit does not allow us to capture the diversity of age-related experiences of alcohol misuse within the population. As such, the findings cannot be generalised, and the small sample size may also affect the veracity of findings (Stratton,2021).

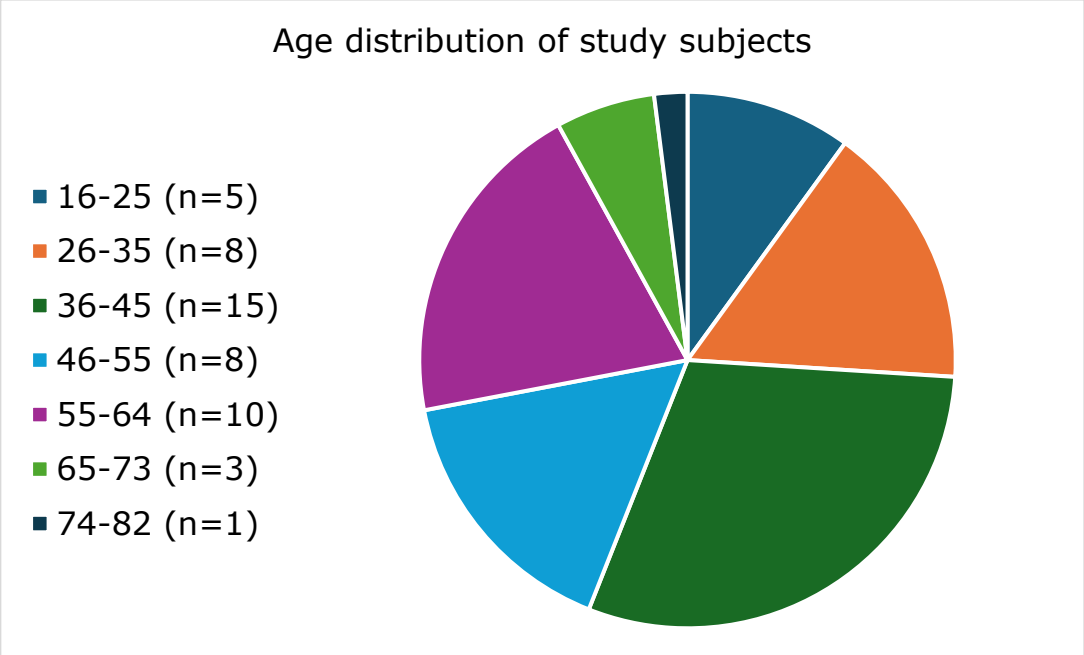

Figure 4: Age distribution of study subjects

4.2 Alcohol consumption

Individual's daily alcohol consumption varied between 8 to 40+ units. Majority of individuals consumed alcohol at a moderate dependency level, with 36% (n=18) of the sample consuming between 16 to 25 units (HCS, 2024b). Severe dependency was identified in 34% (n=17) of the sample, reporting consumption between 26-40+ units per day (HCS, 2024b). The accuracy of these findings was limited by an absence of clarity on reported daily alcohol intake on the initial assessment documentation, with 10% (n=5) of records missing sufficient detail to determine precise consumption levels. The documentation on the level of consumption varied from drinks description, as units-based description or strength of alcohol, which reflected an inconsistency in how practitioners document alcohol consumption. This variety of documentation could be linked to different understanding of drinks and units, and free text documentation (Chen and Garcia-Webb, 2014).

Ambiguity of documentation also reflected inconsistent self-reporting. This can be linked to stigma (Chen and Garcia-Webb, 2014), anxiety experienced by patients at time of initial assessment (National Institute on Alcohol Abuse and Alcoholism, 2025), as well as reductions in alcohol intake between the time of referral and initial assessment. Furthermore, the fact some individuals were previously known to the service may have affected the assessment process. Practitioners who were already familiar with the patient's history and diagnosis of alcohol use disorder (AUD) and level of dependency may have potentially relied on this knowledge rather than documenting consumption patterns in detail introducing bias.

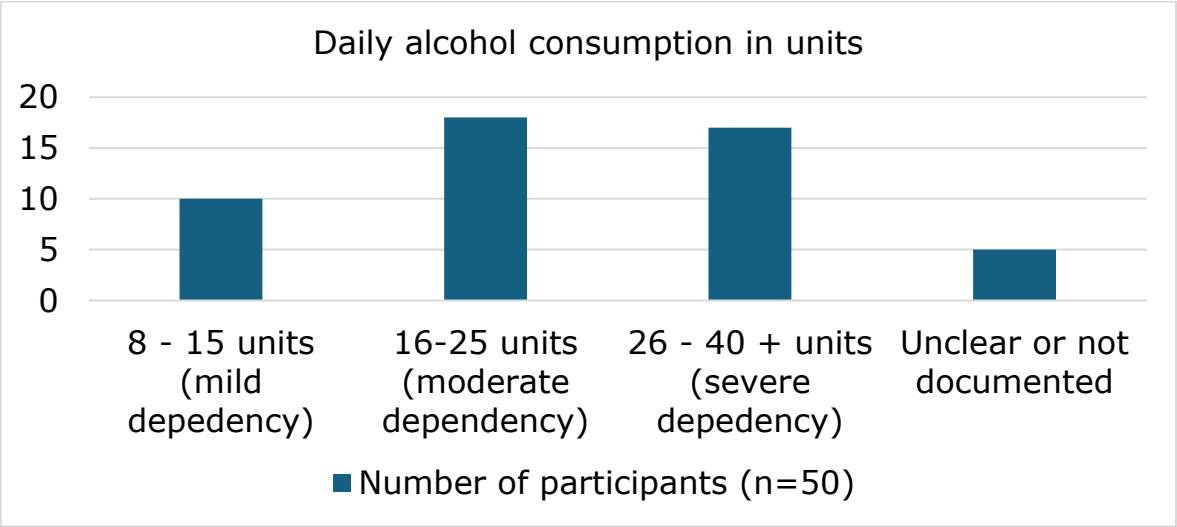

Figure 5: Daily alcohol consumption in units

Weekly alcohol consumption ranged from 15 to 500 units a week. Most individuals consumed between 100 to 500 units of alcohol per week, representing 70% (n=35) of the total sample, followed by individuals who consume between 60 to 100 units constituting 18% (n=9) of the sample. Only 4% (n=2) of individuals reported consuming between 35 to 50 units a week.

It was found that weekly alcohol consumption is not captured on the initial assessment proforma. The proforma allows practitioners to select patient level of dependency, however it does not prompt the practitioner to clearly document how many units the individual is consuming a week, neither the level of risk, as "hazardous" or "harmful" pattern of alcohol consumption. Therefore, the accuracy of figures reported is affected by a variety of documentation, with 8% (n=4) of records lacking sufficient detail to determine weekly consumption. Nevertheless, the findings mirror daily patterns of consumption, with all

participants consuming alcohol above the Department of Health and Social Care recommendations of 14 units a week and mainly at a harmful level (Department of Health & Social Care, 2025).

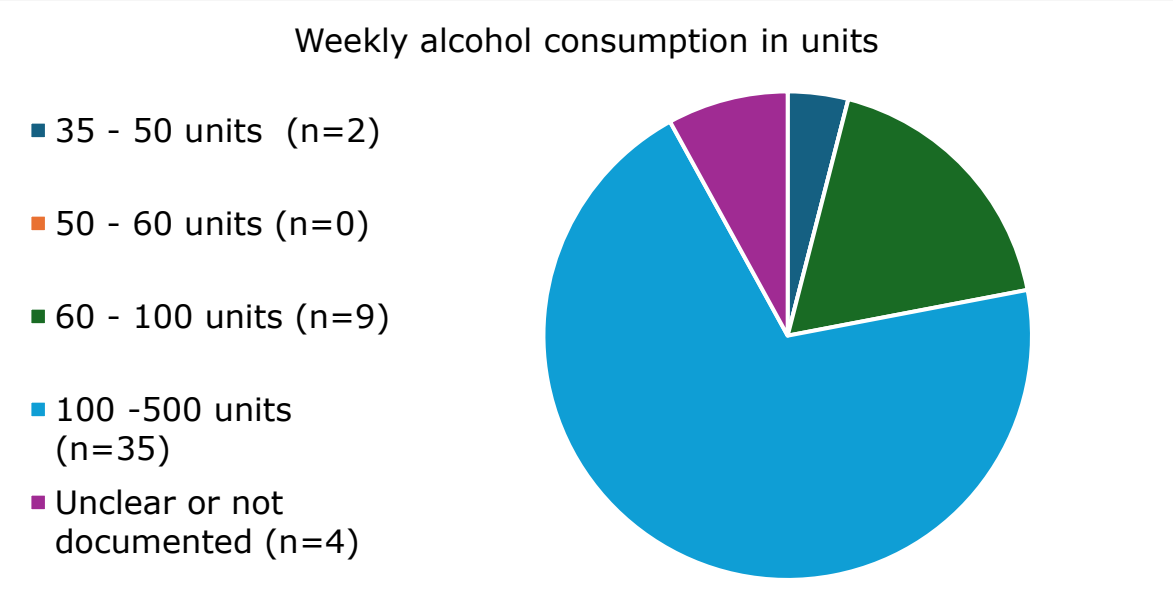

Figure 6: Weekly alcohol consumption in units

The duration of alcohol consumption varied within the sample. The longest period of consumption reported was from 1-5 years, with 14% (n=7) individuals reporting consuming alcohol for this length of time. A further 12% (n=6) reported consumption between 10-20 years, while another 12% (n=6) reported consuming alcohol between 2 months to 1 year and 8% (n=4) between 5 to 10 years.

The reliability of the findings is limited as it was not possible to obtain data from all records. With 46% of the records (n=23) not including length of consumption on documentation, and on 8% (n=4), the length of consumption was documented as "years" which did not offer clarity on this aspect. Poor recording of length of consumption limits

practitioners understanding of the length of exposure to alcohol induced harm. Therefore, it could be argued that it may influence how practitioners assess risk and make decisions to refer to TE. Furthermore, it may also affect future research as this constitutes relevant data when considering alcohol induced harm.

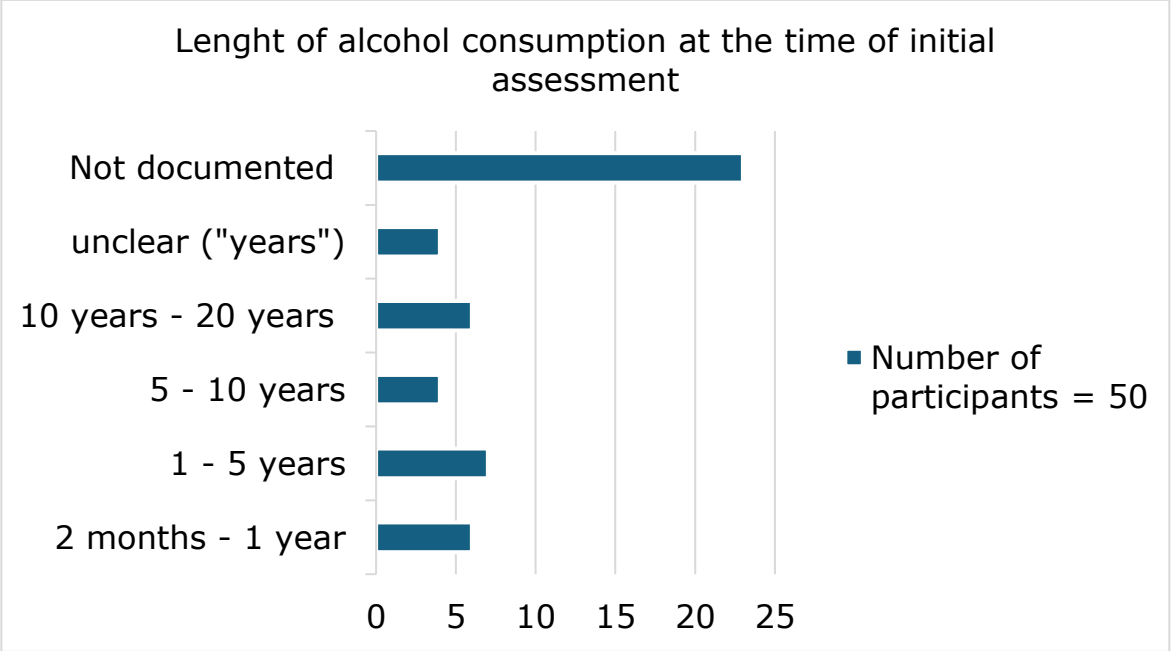

Figure 7: Length of alcohol consumption at the time of initial assessment

4.3 Alcohol harm screening

Among the sample, Alcohol Use Disorders Identification Test (AUDIT) scores ranged from 20 to 40. Out of the 50 individuals 36% (n=18) had an AUDIT score between 20-25, and 28% (n=14) an AUDIT score between 26-30, 14% individuals (n=7) had scores between 31-35, and 8% (n=4) between 36-40. Interpretation of findings was affected by gaps in documentation, with 14% (n=7) of records not having an AUDIT score documented. This could be linked with the fact that these patients

are known to the service, with an established diagnosis regarding level of dependency and risk, which affects practitioners' consideration of the importance of AUDIT score within initial assessment. Although AUDIT scores are included on initial assessment proforma, its implementation only began in January 2025, which could signify that practitioners were starting to familiarise themselves with proforma at the time the assessments were conducted, this may have influenced the recording practice.

The high scores observed across the sample indicate a high likelihood of alcohol dependency and exposure to alcohol induced harm, as AUDIT scores above 20 are indicative of greater severity of alcohol problems including dependency (World Health Organization, 2001).

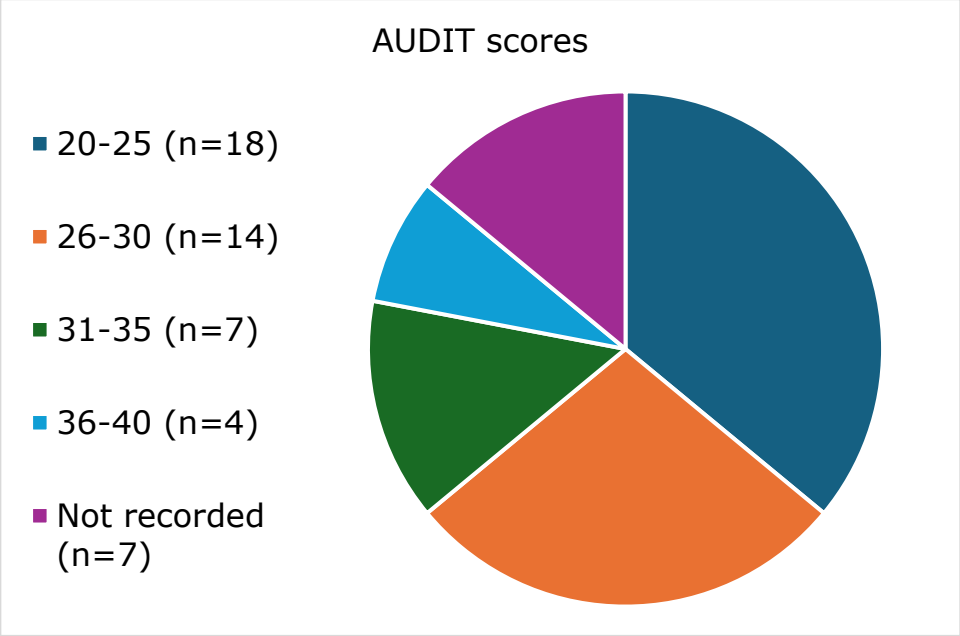

Figure 8: AUDIT scores of study subjects

4.4 Diagnosis of Alcoholic Liver Disease:

The diagnosis of ALD was limited to pre-existent clinical notes, past medical history and abdominal ultrasounds available at time of initial assessment, as no records were found of existent TE results.

Within the sample, 24% (n=12) of individuals had a diagnosis of fatty liver disease at time of initial assessment, in contrast 76% (n=38) had no existent diagnosis of ALD. No individuals had a diagnosis of fibrosis of the liver, and no data was found for Jersey or UK relating to diagnosis of ALD. However, the Jersey Alcohol Profile (HCJ, 2025) reported over 20 hospital admissions associated to ALD in 2022, a rate of 26.1 per 100,000 population.

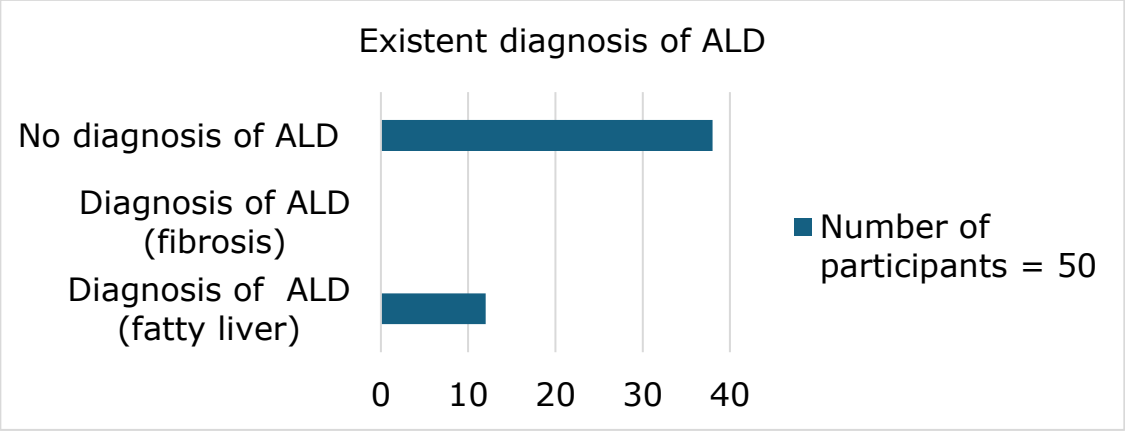

Figure 9: Existent diagnosis of ALD of study subjects

Methods through which ALD was documented varied widely within the sample. To minimise bias, all existent records of abdominal ultrasounds, key worker initial assessment, referral letter, hospital

discharge letters, and GP letters were screened for information regarding any existent diagnosis.

Out of the 12 individuals with documented ALD only 8.3% (n=1) had it documented on a GP referral letter as past medical history, for 91.6% (n=11) the diagnosis was only existent on previous ultrasounds. A lack of former diagnosis of ALD is significant, as a known diagnosis of ALD can affect clinical management decisions, as well as individuals' motivation to change behaviour (NICE, 2023b). Additionally, A&D services include practitioners with clinical and non-clinical roles, it is not a requirement that these practitioners have the knowledge and skills to identify findings in diagnostic tests that may indicate a probable ALD diagnosis (NHS England, 2025). Hence, a lack of former diagnosis of ALD could suggest this would not be acknowledged on history taking, therefore affecting decisions to refer to TE.

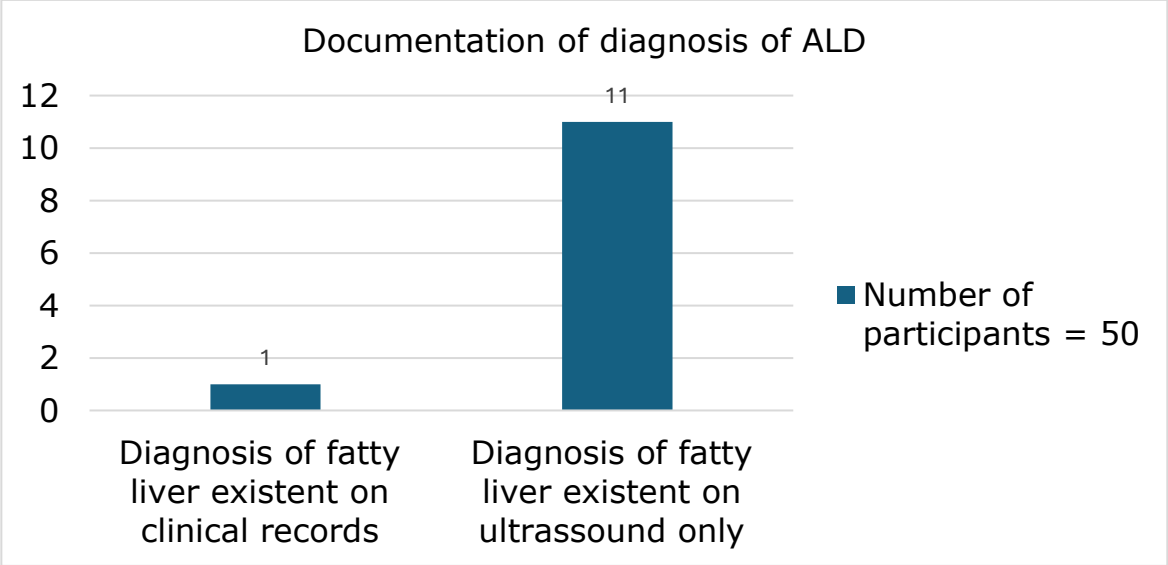

Figure 10: Documentation of diagnosis of ALD

4.5 Referrals to TE:

Within the audit sample, all individuals selected met criteria for referral to TE according to NICE Guidance NG50 (2023a). Out of 50 individuals, 8% (n=4) were referred to TE. With 92% (n=46) not being referred, despite meeting inclusion criteria for referral. No evidence was found that indicated individuals would have declined referrals. To reduce bias regarding this possibility, all existent records by key workers at A&D service for the involvement being evaluated were screened for documentation regarding offer of TE.

Out of the 4 individuals referred to TE, all referrals were accepted and there were none who did not attend (DNAs). It was also noted out of the 12 individuals with diagnosis of fatty liver disease (ALD), none were offered TE.

Different factors could have contributed to the low number of referrals. These include poor documentation of units consumed, period of consumption, and level of harm (Chen and Garcia-Webb, 2014). In Jersey, TE is offered by a separate service, involving an external referral process, NICE (2023b) recommends individuals are offered TE in a familiar environment where brief intervention and advice is delivered on same appointment. However, this is not the case in Jersey as the external referral process signifies that practitioners performing TE are not specialised in AUD. It could be argued the external process of referrals may also impact findings. Unfortunately, no reports regarding pathway of referrals or number of referrals in the UK were found for comparison.

Should these audit findings be addressed, it may inevitably lead to an increased number of referrals reflecting a higher demand for access to TE, which could suggest higher waiting times and challenges around ensuring provision. TE is advocated by NICE (2023b) to be used as a motivational tool to motivate behaviour change. It is a pertinent question to whether prolonged waiting times may reduce its effectiveness in this role, as delays may result in patients disengaging from services by the time they are offered an appointment.

Table 3: Frequency table of referrals to TE

Referrals to TE	Frequency (n=50)	Percentage
Number of individuals to which TE referral was offered	4	8%
Number of individuals with fatty liver to which TE referral was offered	0	0%
Number of individuals who did not attend TE appointment	0	0%
Number of individuals who declined referral to TE	0	0%
Number of individuals who attended TE appointment	4	8%
Number of individuals not referred to TE	46	92%

4.6 Conclusion

Overall, findings indicate a predominantly male cohort with harmful levels of alcohol use. All records also identified a high AUDIT score,

suggesting substantial exposure to alcohol-related harm (World Health Organization, 2001). All records selected met the criteria for referral to TE according to the NICE Guidance NG50 (NICE, 2023a). However, a low number of TE referrals were detected. Therefore, these findings answer the study question, demonstrating that referrals for TE in the Jersey APT are not compliant with NICE Guidance NG50 (NICE, 2023a).

The discrepancy between the high prevalence of ALD within the study sample and the low number of formal diagnosis and TE referrals, suggests that ALD is under detected in this population. This issue is further explored in the discussion chapter.

Chapter 5: Discussion Chapter

This audit aimed to explore whether patients accessing the Jersey Alcohol Pathway Team (APT) within the Alcohol and Drugs Service (A&D) are appropriately referred for TE in line with National Institute for Health and Care Excellence Guidance NG50 (NICE, 2023a).

This chapter discusses key findings of the audit, including participants demographics, harmful patterns of alcohol use, and the use of TE as screening tool for early diagnosis of ALD. Finally, it also explores the limitations of the audit.

5.1 Demographics

In Jersey, alcohol consumption is reported to be higher among men than women (HCJ, 2025). Women are usually at the helm of multiple social roles such as motherhood and paid employment, which may contribute to lower levels of alcohol consumption (Kuntsche *et al*., 2012). Therefore, differences in gender patterns may be related to cultural norms around alcohol use and gender differences (Almila and Karpyak, 2015).

In Jersey, 70% women are in employment (PWC, 2023), placing Jersey in the 15th place among the Organisation for Economic Co-operation and Development (OECD) countries for female workforce participation (PWC, 2023). This is likely to be linked with Jersey's cost of living. The cost of living is reported to be 10% higher than in the UK, with house prices being 51% higher than in the Southeast of England, and 23% higher than Guernsey (Policy Centre Jersey, 2026). Food is also reported to be 14% more expensive than the UK (Policy Centre Jersey,

2026). These financial stressors may lead to women requiring taking on multiple roles in addition to caregiving responsibilities, including paid employment, to afford housing and food.

Conversely, ongoing financial and social stressors can lead to co-occurring challenges such as anxiety and depression (McEwen, 2017), often resulting in the use of alcohol as a coping mechanism (Hasking, Lyvers and Carlopiod, 2011). In these instances, alcohol is identified as the UKs most used coping mechanism (Alcohol change UK, 2025). Therefore, it is feasible to argue whether Jersey's particular social and economic factors may influence alcohol consumption within the female population. A study by White (2020) demonstrated that the gender gap in alcohol consumption amongst adults is narrowing. These aspects raise pertinent questions regarding how stressors can specifically affect Jersey's female population and how this may increase the likelihood of alcohol related harm, such as ALD.

On the other hand, Iwamoto *et al*. (2012) states if men have a paid employment, it appears to contribute to reduced alcohol consumption. However, data from the Jersey Alcohol Profile (HCJ, 2025) contradicts this, reporting 72% of employed individuals reported binge drinking patterns, compared to 48% of individuals not working. It continues to say that high rates of alcohol consumption are seen in adults aged 35-54 (22%) and those aged 55+ (21%) which are at working age (HCJ, 2025).

Different cultural and socioeconomic factors could contribute to these demographics in Jersey's male working population. Historically, Jersey's economy was centered in tourism and finance, which attracted wealthy expatriates that contributed for tax revenue and economic development of the island (Policy Centre Jersey, 2024b). This economic

landscape may have fostered a culture that prioritises frequent social engagement, likely centred around alcohol consumption. Furthermore, Jersey is a small island, with 9 miles (14.5km) in length and 5 miles (8km) in width, offering over 400 restaurants, cafes and bars (Gov.je, 2023). This could reflect the demand for social and hospitality services within the local population. The location of the venues is usually within proximity, and relatively easy to reach (Gov.je, 2023). The easy accessibility to social venues may facilitate alcohol consumption by providing convenient opportunities for individuals to meet friends or family after work.

Beyond these factors, Jersey is also known for its mild winters and warm summers (Gov.je, 2026). Therefore, Jersey's climate can also encourage social interaction. All these factors could potentially support a culture of social drinking. Which correlates with the high incidence of harmful alcohol consumption reported in the Jersey Alcohol Profile (HCJ, 2025) and likely influences the harmful alcohol use pattern observed in this audit population.

Economic factors may also influence a higher alcohol consumption. Alcohol taxation in Jersey ranges around 75.74 pounds per hectolitre for drinks between 2.8% to 4.9% alcohol volume (Jersey Customs and Immigration Services, 2026). In comparison, in the UK this ranges around 9.96 pounds per liter on drinks with percentages between 1.3% to 3.4% alcohol volume (Gov.UK, 2026). Thus, it appears that alcohol taxation is higher in UK in comparison to Jersey, this may influence alcohol affordability, contributing to supporting higher alcohol consumption.

It could be argued that these demographic particularities of the local population in relation to alcohol consumption may result in increased susceptibility to alcohol induced harm, including harm from ALD. It is

important to consider that females are more susceptible to suffer from ill health, especially liver disease influenced by increased alcohol consumption comparatively to men (Almila and Karpyak, 2015). Locally the A&D service may require increasing awareness for early screen of ALD in the female population, as the likelihood of ALD may rise in comparison to historic reports.

Hazardous drinking in Jersey also appears not to be limited to socially disadvantaged groups and is often reported among individuals with higher incomes and lower engagement with health services and preventative measures (HCJ, 2025). However, in terms of alcohol harm, studies report that socially deprived individuals are more likely to suffer consequences from harmful levels of alcohol use (Collins, 2016).

This is important to consider in Jersey, as GP practices are managed privately, meaning access to GP can be costly. Therefore, for socially deprived individuals, this may signify a barrier to access screening for ALD. The A&D service is a public service and may provide an opportunity for early screening and diagnosis of early disease in vulnerable, socially deprived individuals. Interestingly, NICE (2023b) advocates offering TE in geographically accessible locations to individuals may help diagnose individuals from lower socioeconomic groups. In Jersey, this approach could be applied by offering the service within clinical settings that these individuals are most likely to frequent.

5.2 Alcohol related harm specifically ALD

It is known that binge to daily drinking patterns is associated with higher risk of developing ALD related cirrhosis (Graciela *et al*., 2024), with

a threshold for exclusion of non-alcoholic liver disease reported as 20 g of alcohol (2 units) per day in women and 30g of alcohol (3 units) per day in men (Idalsoaga *et al.,* 2020). This is equivalent to 14 units a week for women and 21 units a week for men. High AUDIT scores reflect chronic severe alcohol use and dependency, which links with high complex clinical, psychosocial needs and harmful levels of alcohol consumption (World Health Organization, 2001). The audit findings demonstrated a population consuming alcohol at harmful levels for long periods of time, with high AUDIT scores and high likelihood of ALD. Besides this, there was a low number of individuals with a documented diagnosis of fatty liver or fibrosis either on documentation (8.3% n=1) or existent ultrasound (91.6% n=11).

The Jersey Alcohol Profile (HCJ, 2025) captured 20 hospital admissions in 2022, 26.1 per 100,000 population attributed to ALD. This is lower than in the UK, which for the same year reports 49.4 admissions per 100,000 population (HCJ, 2025). This considerable difference is intriguing given the predominant harmful alcohol use found in this audit, as well as Jersey superseding the UK in alcohol consumption per capita (HCJ, 2025). Furthermore, the Jersey Alcohol Profile (HCJ, 2025) also acknowledges that data for 2023 was removed due to incomplete coding. Correlating findings from this audit alongside the data from the Jersey Alcohol Profile (HCJ, 2025), the low number of previously diagnosed ALD in the audit sample raises the possibility that ALD may be underdiagnosed within the Jersey population. Hence, this could justify the findings of lack of existent ultrasounds and former ALD diagnosis.

The literature review suggests that cirrhosis develops silently over decades, without detection until later stages of the disease when complications occur (Graupera *et al*., 2022). It is known that patients who

have late diagnosis are more likely to develop cirrhosis, facing several comorbidities, such as HCC (British Liver Trust, 2023). Therefore, it is also pertinent to question what is the impact that no diagnosis or late diagnosis of ALD has on individuals and secondary acute care.

5.3 TE as screening tool for early diagnosis of ALD

Despite the audit sample (n=50) meeting criteria for TE referral, only 8% (n=4) were referred. NICE (2023b) advises TE is to be offered in primary care. However, locally patients in primary care are managed by GPs, who, if concerned, refer the patient to gastroenterology consultants. Consequently, TE is not available within GP practices, with blood tests and ultrasound remaining the diagnostic tools of choice. Conversely, NICE (2023a) advises against the use of liver blood tests and ultrasound only, to diagnose cirrhosis and advocates for the use of TE.

Liver disease is difficult to diagnose at early stages based on clinical presentation, as there may be no clinical evidence until late stage of disease (Graupera *et al*., 2022). Newsome *et al*. (2017) recommends risk stratification through clinical assessment and TE/ARFI elastography for harmful drinkers, with recommendation to secondary care in TE results >16kPa and/or signs and symptoms of advanced liver disease. It is feasible to question what happens to patients who consume alcohol at harmful levels presenting with deranged LFT's to GPs. In Jersey, primary care is managed privately, it would depend on stakeholders whether this is something they would see benefit to implement. These facts imply barriers for the early diagnosis of ALD.

Early diagnosis of liver disease is crucial for the appropriate management and looking at treatment options such as liver transplantation (Rinaldi *et al.*, 2023). Late diagnosis translates to increased mortality (British Liver Trust, 2023). However, specific data to death related purely to ALD is not available in Jersey. The Jersey Alcohol Profile 2024 (HCJ, 2025) reports alcohol-specific deaths as 45 for the period 2021-2023, which include ALD related deaths (HCJ, 2025).

It is known that individuals who experience chronic illness due to substance misuse are less likely to engage in health monitoring, with stigma contributing as a barrier to access healthcare services (Nyblade *et al.*,2019; Scottish Government, 2022). NICE (2023b) advocates TE should be performed in familiar environments where advice regarding alcohol use can be given at same time, using TE as a motivational tool to achieve abstinence (NICE, 2023a). The literature review also supports this by demonstrating that TE can support behaviour change by motivating abstinence (Levi-Strauss *et al.*, 2023; Gianni *et al.*, 2017; Madhusudhan *et al.*, 2024). Abstinence has also been associated with a reduction in liver fibrosis (Levi-Strauss *et al.*, 2023) Therefore, it could be argued there is value on using TE within A&D services, both as diagnostic and treatment intervention.

5.4 Limitations

The audit included a small sample of 50 patient records; this could have led to under-representation of genders and age groups. However, the sample size was appropriate for the timeframe of the study, allowing for collection and interpretation of data. Additionally, the support of the

HCJ audit team was beneficial, ensuring the audit tool captured relevant data to answer the study question.

The lack of documentation regarding daily and weekly alcohol consumption, AUDIT scores and diagnosis of ALD might have affected findings, introducing bias. Likewise, the variety of documentation regarding alcohol consumption such as units, strengths, number of drinks, contributes to difficulties interpreting data. This may have been associated with the use of free text templates and different practices of practitioners. Besides this, the existent knowledge of Project Lead regarding interpretation of different drink strengths and patterns of consumption could have supported the correct interpretation of data, improving relevance of data accessed.

The short time frame available to conduct the audit, alongside limited time for data collection and analysis, may have introduced bias to findings. Despite this limitation, comparing the audit findings with data from the Jersey Alcohol Profile 2024 (HCJ, 2025) and the Alcohol Profile UK (Department of Health and Social Care, 2024), it is clear data collected correlates positively with the same.

In terms of providing a clear understanding of the reality of early screening for ALD in Jersey, this audit does not look at what happens to patients who present with deranged LFTs to GPs. As such, it does not identify if there is a gap in the existent process, particularly for patients who refuse referral to A&D and continue harmful alcohol use. While this is an important consideration, it falls outside the scope of the audit, hence consideration can be given for future studies.

This audit revealed that, in comparison to NICE Guidance NG50 recommendations (2023a), Jersey is not meeting the recommended

standards. NICE (2023a) suggests that harmful patterns of alcohol consumption increase the risk of liver fibrosis and recommends that these patients are monitored using TE. Delayed or absent referrals to TE may therefore result in a missed opportunity for identification of ALD. NICE (2023b) advocates there should be a clear pathway and guidance established in collaboration with primary and secondary care, for professionals performing TE.

As a clinician working at an advanced level of practise for the A&D service in Jersey, the findings of this study prompted reflection on the potential to implement a structured pathway for the early screening of ALD. Possibly, it could enhance adherence to NICE Guidance NG50 (2023a) and improve access to early screening within Jersey's population. This could enable the appropriate management of confounding factors for accurate diagnosing and care of individuals with ALD. Additionally, it may contribute to reducing long-term comorbidities on these individuals and alleviating pressures on acute services and gastroenterology consultant lists.

Hence, it is feasible that an ACP with expertise in the management of AUD, could lead the implementation of this pathway within the Jersey A&D service. ACPs are educated to master levels, and possess an advanced understanding of pathophysiology, clinical assessment and examination skills. These competencies support the ability to establish differential diagnosis and the development of effective management plans (Robert Gordon University (RGU), 2026). Furthermore, ACPs are trained to work in complex clinical environments, managing and assessing varying levels of risk, exercising autonomy in decision making and holding accountability for the same (Government of Jersey, 2021). In addition, several hold a non-medical prescriber qualification (RGU, 2026), further

enhancing their capacity to deliver effective timely interventions (Nursing & Midwifery Council (NMC), 2025).

Chapter 6: Conclusion and Recommendations

6.1 Summary of Key findings

The audit revealed that irrespectively of most individuals presenting AUDIT scores between 20-25 and reporting alcohol consumption at harmful levels, for extended periods of time, there was a low number of documented diagnoses of ALD as well as of TE referrals.

6.2 Recommendations

Improving documentation of daily alcohol consumption, specifically of percentages and units recorded on initial assessment proforma, could enhance the quality and accuracy of future data. Including these on A&D proforma in Jersey may increase available data and veracity of future studies, as free text writing contributes to ambiguity of records (Chen and Garcia-Webb, 2014).

NICE (2023a) recommends TE for individuals consuming alcohol at harmful levels for several months. However, it was noted that individuals can at times achieve abstinence or reduce alcohol intake from the time of referral to initial assessment. Therefore, it is pivotal that practitioners consider alcohol consumption reported at the time of referral when considering eligibility for TE.

It would be pertinent to explore individual's journeys from the moment they present to GPs with deranged LFTs, including how many are diagnosed at later stages of the disease, and comorbidities they may face, including death. This may help clarify whether there are delays in

diagnosing ALD and provide a better understanding of morbidity and mortality of ALD in Jersey.

For future studies, it may be of benefit to explore a full year of data, as this could deepener the insight into themes identified in this audit. However, considering the findings, it is reasonable to suggest that Jersey may gain from the introduction of an ALD screening pathway within the A&D service.

The literature review highlights several confounding factors that can influence the performance and interpretation of TE findings. High alcohol intake with alcohol related hepatic inflammation can lead to over estimation of fibrosis (De Lédinghen *et al.*, 2017). Similarly, high BMI and use of inadequate probe size can compromise accuracy of readings (Harris *et al*., 2018). The absence of established reading cut offs for diagnosis of fibrosis in ALD can hinder interpretation by practitioners (Pavlov *et al*., 2015), with Parker *et al*. (2023) recommending that TE should be used alongside blood tests for diagnosis of fibrosis. It also highlights the importance of TE for early identification of liver fibrosis for motivating abstinence.

Furthermore, Parker *et al*. (2023) recommends all patients in primary care are screened for alcohol use using a validated tool as AUDIT, to ensure accurate assessment of their alcohol use. Practitioners should also recognise the increased risk of fibrosis on individuals with obesity (BMI>30 kg/m2) drinking above recommended limits, and that this combination should prompt further assessment of liver fibrosis.

Additionally, Parker *et al*. (2023) affirms that individuals identified as drinking at harmful levels should receive a brief intervention, along with written information on their alcohol use and strategies to manage it.

These individuals should be offered blood tests including ALT, AST, platelets, fibrosis-4 (FIB-4), AST to platelet ratio index (APRI), stand-alone specialist blood tests such as enhanced liver fibrosis (ELF) test, and TE for the evaluation of fibrosis. Individuals identified with high risk of advanced fibrosis or cirrhosis should be referred to secondary care (Parker *et al*., 2023).

Orgil *et al*. (2024) suggests that offering TE while individuals are still consuming alcohol at high levels may also constitute a great motivational tool, to encourage behaviour change. This is particularly relevant given that without changes in drinking behaviour it is not possible to prevent nor treat ALD (EASL, 2018). The Jersey APT includes an Alcohol Liaison Nurse (ALN) team working within acute services, these specialist nurses are often the only therapeutic connection that patients with severe AUD that are resistant to change, have with the A&D service. It is reasonable to question if offering referrals for an early detection of ALD screening pathway instead of full engagement with A&D community services could potentially motivate change and engagement within this group of patients.

Given these considerations, the implementation of an ACP led service for the diagnosis and management of ALD and AUD is proposed. This would ensure that non-invasive assessments are delivered consistently, interpreted appropriately and embedded within a structured clinical pathway, thereby strengthening clinical governance and ensuring patient safety (Kaini, 2019).

The pathway could incorporate a comprehensive assessment of individuals clinical needs, in which TE could be considered and offered. This would allow practitioners to evaluate the impact of confounding

factors that may influence TE results, thereby promoting accuracy of findings. It would also support practitioners to identify the risk of fibrosis overestimation and arranging timely rescreening to ensure accurate diagnosis and decision-making regarding risk stratification of ALD, alongside interventions for the management of AUD.

No established early screening pathways for ALD within A&D services were identified. However, when considering Jersey's specific demographics and patterns of harmful alcohol use, alongside barriers to access early diagnosis, such as the cost of accessing primary care and the fragmentation of services, this gap becomes more significant. Additionally, considering the complexity of recommendations outlined by the British Society of Gastroenterology (Newsome *et al*., 2017) for the assessment of ALD. It is pertinent to question whether the development of this pathway in Jersey is of particular significance within this setting.

In line with Stage 3 of the clinical audit cycle – Implementing change (Health Care Quality Improvement Partnership, 2020), the findings of this audit will be disseminated to key stakeholders, including the A&D service MDT and senior leadership team (SLT), gastroenterology department, primary care and public health.

An action plan will be developed collaboratively with the head of service. This plan will include a review of the current assessment proforma and liaison with the electronic patient record system provider to update the existent proforma. This should include mandatory fields such as type of drinks consumed, alcohol strength, units per drink, units per day, units per week, associated pattern of consumption as "hazardous" or "harmful" and a prompt to whether referral to TE is required or not. In addition, group training will be designed and delivered

to practitioners within Jersey's A&D service. This training will include discussion regarding criteria for referral to TE and confounding factors.

The ALN team will be encouraged to offer TE, where appropriate, during their assessments in acute care. Finally, a business case for establishing an ACP led ALD pathway within the Jersey A&D service will be developed in collaboration with lead nurse and head of service.

6.3 Conclusion

The referrals for TE in the Jersey APT are not compliant with the NICE Guidance NG50 (NICE, 2023a), recommendations for assessing liver fibrosis and cirrhosis, thereby answering the study question.

The audit has also identified an additional and important finding: lack of former diagnosis of ALD within the audit population. Considering the demographic patterns observed in the audit sample and data from the Jersey Alcohol Profile (HCJ, 2025), it suggests a significant likelihood of underdiagnosed ALD within Jersey's population. The literature review further enhanced understanding of the benefits of TE as a motivational and diagnostic tool and informed how this could support Jersey's population in early diagnosis of ALD.

References

Ahmed, S.K. (2024) 'Research methodology simplified: How to choose the right sampling technique and determine the appropriate sample size for research', *Oral Oncology Reports*, 12, pp.1–7. Available at: https://doi.org/10.1016/j.oor.2024.100662

Alcohol change UK (2025) *Alcohol and mental health.* Available at: https://alcoholchange.org.uk/alcohol-facts/fact-sheets/alcohol-and-mental-health (Accessed 14 March 2026).

Almila, E. and Karpyak, V. (2015) 'Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations', *Drug and Alcohol Dependence*, 156, pp. 1-13. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0376871615016166 (Accessed 23 February 2026).

American College of Occupational and Environmental Medicine (2025). *Substance use disorders*. Available at: https://www.publicsafetymedicine.org/leo/substance-use-disorders/appendix-a-dsm-iv-tr-and-dsm-5-diagnostic-criteria (Accessed 22 January 2026).

Aveyard, H., Payne, S. and Preston, N. (2021) *A post-Graduate's guide to doing a literature review*. 2nd edn. Open University Press.

Beauchamp, T.L. and Childress, J.F. (2013) *Principles of biomedical ethics*. Oxford University Press.

Booth, J. (2015) 'Observation', in K. Gerrish and J. Lathlean (ed) *The research process in nursing*. 7th edn. Willey-Blackwell, pp. 427-439.

British Liver Trust (2023) *New research reveals late detection of liver disease crisis with more than a third dying within a year of diagnosis*. Available at: https://britishlivertrust.org.uk/new-research-reveals-late-detection-of-liver-disease-crisis-with-more-than-a-third-dying-within-a-year-of-diagnosis/ (Accessed 30 November 2025).

British Liver Trust (2024a) *Liver cancer a call to action*. Available at: https://livercanceruk.org/wp-content/uploads/2023/10/LCUK-Report_SCREEN_Final-October-2023.pdf (Accessed 27 November 2025).

British Liver Trust (2024b) *Liver disease in numbers – key facts and statistics*. Available at https://britishlivertrust.org.uk/information-and-support/statistics/#diagnosis (Accessed 27 November 2025).

Chen, E. and Garcia-Webb, M. (2014) 'An analysis of free-text alcohol use documentation in the electronic health record: early findings and implications', *Applied Clinical Informatics*, 5(2), pp. 402-15. Available at: doi: 10.4338/ACI-2013-12-RA-0101

Chivinge, A. *et al*. (2018) 'Risk-stratified screening for chronic liver disease using vibration-controlled transient elastography (FibroScan)',

Gastrointestinal Nursing, (16), pp.15–22. Available at: https://doi.org/10.12968/gasn.2018.16.5.s15

Collins, SE. (2016) 'Associations Between Socioeconomic Factors and Alcohol Outcomes', *Alcohol Research*, 38(1), pp.83-94. Available at: doi: 10.35946/arcr.v38.1.11

Critical Appraisal Skills Programme (CASP) (2026) *How to use the CASP checklists*. Available at: https://casp-uk.net/how-to-use-checklist/ (Accessed 20 March 2026).

Dahlberg, L. and McCaig, C. (2016) *Practical research and evaluation: a start-to-finish guide for practitioners.* Sage.

Day, J.W. and Rosenberg, W.M. (2018) 'The enhanced liver fibrosis (ELF) test in diagnosis and management of liver fibrosis', *British Journal of Hospital Medicine*, 79(12), pp.694–699. Available at: https://doi.org/10.12968/hmed.2018.79.12.694

David W. C. *et al*. (2020) 'Diagnosis and treatment of alcohol-associated liver diseases: 2019 Practice guidance from the American Association for the Study of Liver Diseases', *Hepatology*, 71(1). Available at: https://www.giboardreview.com/wp-content/uploads/2022/01/Guidelines-AASLD-alcohol-2020.pdf (Accessed 30 November 2025).

Data Protection (Jersey) Law 2018. Available at: https://www.jerseylaw.je/laws/current/PDFs/L_3_2018_20230505.pdf (Accessed 21 October 2025).

De Lédinghen, V. *et al.* (2017) 'Controlled attenuation parameter (CAP) with the XL robe of the fibroscan®: A comparative study with the M probe and liver biopsy', *Digestive Diseases Sci*ences, 62, pp. 2569–257. Available at: https://doi.org/10.1007/s10620-017-4638-3

Department of Health and Social Care (2024) *Alcohol profile.* Available at: https://fingertips.phe.org.uk/profile/local-alcohol-profiles (Accessed 30 November 2025).

Department of Health & Social Care (2025) *Guidance chapter 12: alcohol*. Available at: https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention/chapter-12-alcohol (Accessed 9 March 2026).

European Association for the Study of the Liver (2015) 'EASL-ALEH clinical practice guidelines: Non-invasive tests for evaluation of liver disease severity and prognosis', *Journal of* Hepatology, 63, pp. 237-264. Available at: https://easl.eu/wp-content/uploads/2018/10/Non-invasive-English-report.pdf (Accessed 30 November 2025).

European Association for the Study of the Liver (2018) 'EASL clinical practice guidelines: Management of alcohol-related liver disease', *Journal of Hepatology*, 69, pp.154–181. Available at: https://www.journal-of-hepatology.eu/action/showPdf?pii=S0168-8278%2818%2930214-9 (Accessed 30 November 2025).

Foncea, G. *et al.* (2022) 'The role of elastography for liver fibrosis screening in alcoholic liver disease', *Med Ultrason*, 24(4), pp. 406-413. Available at: https://research-ebsco-

com.ezproxy.rgu.ac.uk/c/hin62q/search/details/kxqmd6heej?db=cmedm&limiters=DT1%3A2017-01-01%2F2025-0311%2CFT%3AY&q=transient+elastography&searchMode=boolean&modal=details-bulk-download (Accessed 30 November 2025).

Gianni, E. *et al*. (2017) 'Prospective evaluation of liver stiffness using transient elastography in alcoholic patients following abstinence', *Alcohol and Alcoholism*, 52(1), pp.42–47. Available at: doi: 10.1093/alcalc/agw053

Gov.je (2023) *Jersey: a life less ordinary*. Available at: https://healthcareers.gov.je/wp-content/uploads/2023/11/Jersey-a-life-less-ordinary.pdf (Accessed 12 March 2026).

Gov.je (2026) *Moving to Jersey: Cost of living*. Available at: V https://www.gov.je/LifeEvents/MovingToJersey/LivingInJersey/pages/costliving.aspx (Accessed 12 March 2026).

Gov.UK (2026) *Guidance alcohol duty rates*. Available at: https://www.gov.uk/guidance/alcohol-duty-rates (Accessed 12 March 2026).

Government of Jersey (2021) *Multi-professional framework for advanced clinical practice in Jersey Health & Community Services Board briefing paper March 2021*. Available at: \\ois.gov.soj\sojdata\HSS_HomeDirs_I-L\JesusD\Desktop\ALN\ACP role\ACP Framework Jersey (1).pdf (Acessed 11 March 2026).

Graciela, E.C.N. *et al*. (2024) 'Alcohol-related liver disease: A global perspective'. *Annals of Hepatology*, 29(5). Available at: https://pubmed.ncbi.nlm.nih.gov/38582247/ (Accessed 24 November 2025).

Graupera. I. *et al*. (2022) 'Liver screen project: study protocol for screening for liver fibrosis in the general population in European countries', *BMC Public Health*, 22(1385). Available at: https://link.springer.com/article/10.1186/s12889-022-13724-6 (Accessed 30 November 2025).

Harris, R. *et al*. (2018) 'The XL probe: A luxury or a necessity? Risk stratification in an obese community cohort using transient elastography', *United European Gastroenterology Journal,* 6(9), pp. 1372-1379. Available at: https://doi.org/10.1177/2050640618772944

Hasking, P., Lyvers, M. and Carlopiod, C. (2011) 'The relationship between coping strategies, alcohol expectancies, drinking motives and drinking behaviour', *Addictive Behaviours*, 36(5), pp.479-487. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0306460311000347 (Accessed 14 March 2026).

Heaslip, V. and Lindsay, B. (2019) *Research and evidence-based practice: for Nursing, Health and Social Care students*. Lantern Publishing Ltd.

Healthcare Quality Improvement Partnership (2020) *Best practice in clinical audit*. Healthcare Quality Improvement Partnership Ltd.

HSE Science and Research (2021) *Understanding the difference between research and other activities.* HSE Science and Research.

Health and Care Jersey (HCJ) (2025) *Jersey alcohol profile 2024 – revised edition*. Available at: https://www.gov.je/SiteCollectionDocuments/Health%20and%20wellbeing/Alcohol%20Profile%202024.pdf (Accessed 30 November 2025).

Health and Community Services (HCS) (2024a) *Departmental survey for Health and Care* Jersey. Available at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/Departmental%20summary%20for%20Health%20and%20Community%20Services.pdf (Accessed 30 November 2025).

Health and Community Services (2024b) *Guidelines for the management of alcohol dependent patients in the hospital.* Available at: https://soj/depts/HSS/Registered%20Documents/P%20Management%20of%20Alcohol%20Dependent%20Patients.pdf (Accessed 9 March 2026).

Idalsoaga, F. *et al*. (2020) 'Non-alcoholic fatty liver disease and alcohol-related liver disease: Two intertwined entities', *Front Med (Lausanne)*, 7(448). Available at: doi: 10.3389/fmed.2020.00448

Iwamoto, D. *et al*. (2012) '"Man-ing" up and getting drunk: The role of masculine norms, alcohol intoxication and alcohol-related problems among college men', *Addiction Behaviour*, 36(9), pp. 906–911. Available at: doi: 10.1016/j.addbeh.2011.04.005

International Classification of Disease (2019) *Mental and behavioural disorders due to use of alcohol: Dependency syndrome*. Available at: https://icd.who.int/browse10/2019/en#/F10.2 (Accessed 22 January 2026).

Jersey Customs and Immigration Services (2026) *Jersey customs and immigration service excise duties (impôts)*. Available at: https://www.gov.je/SiteCollectionDocuments/Travel%20and%20transport/2026%20EXCISE%20AND%20VED%20RATES.pdf (Accessed 12 March 2026)

Kaini, B.K. (2019) 'Clinical governance for improving quality of healthcare', *Global Journal of Medical Research.* Available at: https://medicalresearchjournal.org/index.php/GJMR/article/view/1794/2-Clinical-Governance-for-Improving_JATS_NLM_xml#content/contributor_reference_1 (Accessed 10 Abril 2026).

Kotronoulas, G. (2023) 'An overview of the fundamentals of data management, analysis, and interpretation in quantitative research', *Seminars in Oncology Nursing*, 39(2), p.151-398. Available at: https://doi.org/10.1016/j.soncn.2023.151398

Kuntsche, A. et al. (2012) 'Housewife or working mum – each to her own? The relevance of societal factors in the association between social roles and alcohol use among mothers in 16 industrialised countries'*, Addiction*, 106(11), pp. 925–1932. doi: 10.1111/j.1360-0443.2011.03507

Levi-Strauss, T. *et al*. (2023) 'Enhanced liver fibrosis score is stable after withdrawal in patients with heavy alcohol consumption: A pilot study',

Alcohol Clinical and Experimental Research, 48, pp. 1088-1095. Available at: https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/tn7bvphqc5?db=ccm&limiters=DT1%3A2017-01-01%2F2025-03-11%2CFT%3AY&q=transient+elastography&searchMode=boolean (Accessed 4 November 2025).

Madhusudhan, G. *et al*. (2024) 'Correlation of severity of alcohol dependence with liver dysfunction (by transient elastography) in freshly diagnosed cases of alcohol dependence syndrome', *Industrial Psychiatry Journal*, 33(2), pp. 360-365. Available at: https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/gmzndr246n?db=cmedm&limiters=DT1%3A2017-01-01%2F2025-03-11%2CFT%3AY&q=transient+elastography&searchMode=boolean&modal=details-bulk-download (Accessed 30 November 2025).

Marino, M. *et al*. (2021) 'Missing data in primary care research: importance, implications and approaches', *Family Practice*, pp. 199–202. Available at: doi:10.1093/fampra/cmaa134

Masuzaki, R. *et al*. (2020) 'Non-invasive assessment of liver fibrosis: current and future clinical and molecular perspectives', *International Journal of Molecular Sciences*, 21(4906). Available at: doi:10.3390/ijms21144906

McEwen, BS. (2017) 'Neurobiological and systemic effects of chronic stress', *Chronic Stress* 1, pp. 1-11. Available at: doi: 10.1177/2470547017692328

Mortimore, G. (2016) 'FibroScan: assessing cirrhosis and advanced fibrosis with vibration-controlled transient elastography', *Gastrointestinal Nursing*, 14(10), pp.10–15. Available at: https://doi.org/10.12968/gasn.2016.14.sup10.s10

Natalia A. O., Terrence M. D and Kusum K. K. (2017) 'Alcoholic liver disease: Pathogenesis and current Management', *Alcohol Research*, 38(2). Available at: https://pubmed.ncbi.nlm.nih.gov/28988570/ (Accessed 30 November 2025).

National Institute for Health and Care Excellence (NICE) (2010) *Alcohol-use disorders: diagnosis and management of physical complications*. CG100. Available at: https://www.nice.org.uk/guidance/cg100/chapter/recommendations#terms-used-in-this-guideline (Accessed: 24 November 2025).

National Institute for Health and Care Excellence (NICE) (2023a) *Cirrhosis in over 16s: assessment and management.* NG50. Available at: https://www.nice.org.uk/guidance/ng50/chapter/Recommendations#diagnosis (Accessed: 14 October 2025).

National Institute for Health and Care Excellence (NICE) (2023b) *FibroScan for assessing liver fibrosis and cirrhosis outside secondary and specialist care*. HTG682. Available at: https://www.nice.org.uk/guidance/dg48 (Accessed: 27 November 2025).

National Institute on Alcohol Abuse and Alcoholism (2025) *Stigma: Overcoming a pervasive barrier to optimal care.* Available at: https://www.niaaa.nih.gov/health-professionals-communities/core-

resource-on-alcohol/stigma-overcoming-pervasive-barrier-optimal-care (Accessed: 23 February 2025).

Newsome, PN. *et al*. (2017) 'Guidelines on the management of abnormal liver blood tests', *Gut Online First*, pp.1–14. Available at: doi:10.1136/gutjnl-2017-314924

NHS (2022) *Health survey for England*. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2022-part-1 (Accessed: 24 November 2025).

NHS England (2024) *Hepatocellular carcinoma surveillance: minimum standards*. Available at: https://www.england.nhs.uk/long-read/hepatocellular-carcinoma-surveillance-minimum-standards/ (Accessed: 27 November 2025).

NHS England (2025) *Capability framework for the drug and alcohol treatment and recovery workforce*. Available at: https://www.england.nhs.uk/long-read/capability-framework-for-the-drug-and-alcohol-treatment-and-recovery-workforce/#5-clinical-role-capabilities (Accessed: 13 April 2026).

Nursing & Midwifery Council (NMC) (2025) *Principles for advanced practice these principles include a definition of advanced level practice.* Available at: https://www.nmc.org.uk/globalassets/sitedocuments/advanced-

practice-review/principles-for-advanced-practice-english.pdf (Accessed 15 March 2026).

Nyblade, L. *et al*. (2019) 'Stigma in health facilities: why it matters and how we can change it', *BMC Medicine*, 17(1). Available at: doi: 10.1186/s12916-019-1256-2

Office for Health Improvement & Disparities (2024) *Official statistics liver disease profile, April 2024 update*. Available at: https://www.gov.uk/government/statistics/liver-disease-profile-april-2024-update/liver-disease-profile-april-2024-update (Accessed: 27 November 2025).

Orgil, A. *et al*. (2024) 'Early detection of liver disease in patients with alcohol use disorder improves long-term abstinence', *Alcohol and Alcoholism,* 59. Available at: https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/vigxq6waiz?db=ccm&limiters=FT%3AY%2CDT1%3A2017-01-01%2F2025-03-11&q=transient+elastography+OR+fibroscan+OR+liver+stiffness&searchMode=boolean&modal=details-bulk-download (Accessed 4 November 2025).

Parahoo, K. (2014) *Nursing research: principles, processes and issues,* Palgrave MacMillan.

Park, J. *et al*. (2021) 'Non-invasive evaluation of liver fibrosis: comparison of the stretched exponential diffusion-weighted model to other diffusion-weighted MRI models and transient elastography', *European Radiology,* 31, pp. 4813–4823. Available at: https://doi.org/10.1007/s00330-020-07600-3

Park, Y.S., Konge, L. and Artino, A.R. (2020) 'The positivism paradigm of research', *Academic Medicine* 95(5), pp.690–694. Available at: https://doi.org/10.1097/ACM.0000000000003093

Parker, R *et al*. (2023) 'Quality standards for the management of alcohol-related liver disease: consensus recommendations from the British Association for the Study of the Liver and British Society of Gastroenterology ARLD special interest group', *BMJ Open Gastroenterology*, 10(1). Available at: doi:10.1136/bmjgast-2023-001221

Patino, C. and Ferreira, J. (2018) 'Inclusion and exclusion criteria in research studies: Definitions and why they matter', *Jornal Brasileiro De Pneumologia* 44(2), p.84. Available at: https://doi.org/10.1590/s1806-37562018000000088

Pavlov, C.S. *et al*. (2015) 'Transient elastography for diagnosis of stages of hepatic fibrosis and cirrhosis in people with alcoholic liver disease', *Cochrane Database of Systematic Reviews*. 1. Available at: https://doi.org/10.1002/14651858.cd010542.pub2

Pavlov, C.S. *et al*. (2016) 'Ultrasonography for diagnosis of alcoholic cirrhosis in people with alcoholic liver disease', *Cochrane Database of Systematic Reviews* (3). Available at: https://doi.org/10.1002/14651858.cd011602.pub2

Pérez-Guerrero, E.E. *et al*. (2024) 'Methodological and statistical considerations for cross-Sectional, case–Control, and cohort Studies', *Journal of Clinical Medicine*, 13 (4005). Available at: https:// doi.org/10.3390/jcm13144005

Policy Centre Jersey (2024a) *Knowledge centre Jersey's* population. Available at: https://www.policy.je/papers/jerseys-population (Accessed 30 November 2025).

Policy Centre Jersey (2024b) *Knowledge Centre Jersey's history*. Available at: https://www.policy.je/papers/jerseys-history/ (Accessed: 12 March 2026).

Policy Centre Jersey (2026) *Policy briefs cost of living*. Available at: https://www.policy.je/papers/cost-of-living/ (Accessed 12 March 2026).

Polit, D.F. and Beck, C.T. (2021) *Essentials of nursing research appraising evidence for nursing research*. 10th edn. Wolters Kluner

PRISMA (2020) *PRISMA flow diagram*. Available at: https://www.prisma-statement.org/prisma-2020-flow-diagram (Accessed: 21 November 2026).

PWC (2023) *Women in work index 2023 closing the gender pay gap for good: A focus on the motherhood penalty*. Available at: https://www.pwc.com/jg/en/publications/women-in-work-channel-islands-2023.pdf (Accessed 12 March 2026).

Public Health England (2017) *Local alcohol consumption survey national report*. Available at: C:\Users\jesusd\Downloads\Local_alcohol_consumption_survey_report.pdf (Accessed: 22 January 2026).

Rinaldi, L. *et al*. (2023) 'Non-invasive measurement of hepatic fibrosis by transient elastography: A narrative review', *Viruses,* 15(1730). Available at: https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/cucfkwbvxf?db=cmedm&limiters=DT1%3A2017-01-01%2F2025-03-11%2CFT%3AY&q=Transient+elastography+OR+fibro+scan+OR+liver+stiffness&searchMode=boolean&modal=details-bulk-download (Accessed 20 December 2025).

Robert Gordon University (2016) *Research ethics policy*. Available at: https://www.rgu.ac.uk/research/research-governance/research-integrity-and-ethics#anchor-3 (Accessed 21 October 2025).

Robert Gordon University (2024) *Research governance*. Available at: https://www.rgu.ac.uk/research/research-governance (Accessed 21 October 2025).

Robert Gordon University (2025) *Grey literature*. Available at: https://library.rgu.ac.uk/greyliterature#:~:text=In%20relation%20to%20health%20information,located%20and%20can%20be%20evaluated (Accessed 9 January 2026).

Robert Gordon University (RGU) (2026) *Master of science [MSc] advancing healthcare practice. Available at:* https://rgu.akarisoftware.com/index.cfm/page/course/coursecode/0674 (Accessed 15 March 2026).

Sand, A. (2022) 'Inferential statistics is an unfit tool for interpreting data', *Applied Sciences*, 2(7691). Available at: https://doi.org/10.3390/app12157691

Scottish Government (2022) Drug and alcohol services - co-occurring substance use and mental health concerns: literature and evidence review. Available at: https://www.gov.scot/publications/co-occurring-substance-use-mental-health-concerns-scotland-review-literature-evidence/pages/4/#page-top (Accessed 5 March 2026).

States of Jersey (2018) *Data protection policy*. States of Jersey.

States of Jersey (2025) *Alcohol issues and getting help*. Available at: https://www.gov.je/Health/AlcoholDrugs/pages/alcoholhelp.aspx#:~:text=Alcohol%20Pathway%20Team,-The%20Alcohol%20Pathway&text=We%20work%20with%20clients%20to,health.gov.je%E2%80%8B (Accessed 30 November 2025).

Sterrantino, F.A. (2024) 'Observational studies: practical tips for avoiding common statistical pitfalls', *The Lancet Regional Health.* Available at: https://www.thelancet.com/action/showPdf?pii=S2772-3682%2824%2900065-9 (Accessed 29 March 2026).

Sterling, R.K. *et al*. (2025) 'AASLD practice guideline on imaging-based non-invasive liver disease assessment of hepatic fibrosis and steatosis', *Hepatology*, 81(2), pp.672-724. Available at: https://journals.lww.com/hep/fulltext/2025/02000/aasld_practice_guideline_on_imaging_based.30.aspx (Accessed: 9 January 2026).

Stratton, S.J. (2021) 'Population research: Convenience sampling strategies', *Prehospital and Disaster Medicine,* 36(4). Available at: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/B0D519269C76DB5BFFBFB84ED7031267/S1049023X21000649a.pdf/population-research-convenience-sampling-strategies.pdf (Accessed 29 March 2026).

UK Committee on Research Integrity (2025) *The concordat to support research integrity.* Available at: https://ukcori.org/wp-content/uploads/2025/04/The-Concordat-to-Support-Research-Integrity-2025.pdf (Accessed 14 October 2025).

UK General Data Protection Regulation 2018. C. 679. Available at: https://www.legislation.gov.uk/eur/2016/679/contents (Accessed 15 October 2025).

UKRI Medical Research Council (2022) *Retention framework for research data and records*. Available at: https://www.ukri.org/wp-content/uploads/2023/03/MRC-100323-RegulatorySupportCentre-RetentionFrameworkResearchDataRecords.pdf (Accessed 14 October 2025).

Vranic, L. *et al*. (2022) 'Liver and spleen stiffness as assessed by vibration controlled transient elastography for diagnosing clinically significant portal hypertension in comparison with other elastography-based techniques in adults with chronic liver disease', *Cochrane Database of Systematic Reviews* 8, Available at: DOI: 10.1002/14651858.CD015415

White A. (2020) 'Gender differences in the epidemiology of alcohol use and related harms in the united states', *Alcohol Research*, 40(2). Available at: doi: 10.35946/arcr.v40.2.01

Wiśniowski, A. *et al*. (2019) 'Integrating probability and nonprobability samples for survey inference', *Journal of Survey Statistics and Methodology*, 8(1), pp. 120–147. Available at: https://doi.org/10.1093/jssam/smz051

World Health Organization (2001) *AUDIT: the alcohol use disorders identification test: guidelines for use in primary health care*. Available at: https://www.who.int/publications/i/item/WHO-MSD-MSB-01.6a (Accessed: 22 January 2026).

World Medical Association (2024) 'World Medical Association Declaration of Helsinki'. *JAMA* 333(1). Available at: https://doi.org/10.1001/jama.2024.21972

Appendices

Appendix I: Study proposal Form

NUM100 Advancing Practice Dissertation

Study Proposal Form

Name of Student:	Daniela Jesus
Name of Supervisor:	Dr Moyra Journeaux
Study/Working title:	Compliance with NICE NG50: NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis in the Jersey Alcohol Pathway Team.
Study design:	Retrospective observational clinical audit
Proposed question, aim and objectives: The PICO framework was adopted to assist composing the clinical audit question.	

P	Male individuals or people who have been registered male at birth who drink over 50 units of alcohol a week for several months and Women or people registered female at birth who drink over 35 units a week for several months
I	Transient elastography
C	No early screening for liver fibrosis
O	Early detection of liver fibrosis.

Figure 1. PICO framework

The proposed research question is therefore Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?

Aim:

This study aims to measure whether patients (over 16 years) within the Jersey Alcohol Pathway Team are appropriately referred for transient elastography in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis.

Objectives:

1. To identify the number of patients within the Jersey Alcohol Pathway Service who meet the criteria for assessment of liver fibrosis or cirrhosis in line with NICE Guidance NG50.
2. To identify how many patients fitting the criteria for referral are referred for Transient elastography.
3. To assess the number of eligible patients who did not consent to referral.

4. To assess the number of referred patients who did not attend (DNA) their appointment for Transient Elastography.
5. To assess the consistency of documentation of referral decisions and patient consent, refusal or DNA.

Background: In the UK liver disease is a significant cause of mortality accounting for more than 11,000 deaths a year (British liver trust, 2024; National Institute for Health and Care Excellence, 2023). In 2022, there were 155.2 per 10000 population hospital admissions related to liver disease, with 27 of these attributed to alcohol liver disease (Office for Health Improvement & Disparities, 2024). In the same year, 5776 premature deaths resulted from alcoholic liver disease, a figure that increased by 61.3% in 2023 (Office for Health Improvement & Disparities, 2024).

In Jersey, statistics from 2019 to 2021 indicate that there were 31 hospital admissions related to chronic liver disease, with an account of 30 deaths (Government of Jersey, 2023). A proportion of 1 in 5 adults drink over the Direction of health recommended limits of 14 units a week, drinking in a hazardous or harmful way (Government of Jersey, 2023). According to the National Institute for Health and Care Excellence last review of “Alcohol-use disorders: prevention” guidelines (National Institute for Health and Care Excellence, 2010) harmful drinking is defined as exceeding 35 units per week for women and 50 units for men. In 2022, alcohol consumption in Jersey was estimated as 12 litres of pure alcohol per person aged 15 or older (Government of Jersey, 2023). This would be equivalent to 1200 units a year, 25 units per week. In comparison to UK statistics and considering prevalence of hazardous and harmful drinking, Jersey faces a significant risk of increasing cases of alcohol related liver disease.

National Institute for Health and Care Excellence (2023) on DG48 recommends transient elastography (Fibroscan) as an option for the assessing liver fibrosis and cirrhosis. NICE (2023) on NG50 also recommends that this should be

offered as diagnostic tool to people with Hepatitis C infection, people diagnosed with alcoholic liver disease, men who drink more than 50 units a week, women who drink more than 35 units a week, and have done so for several months.

Transient elastography (FibroScan) is a non-invasive technique used to measure liver stiffness (Pavlov et al., 2015; Pavlov et al., 2016). NICE Guideline NG50 recommends its use for the early detection of cirrhosis in individuals who have been consuming alcohol at harmful levels over an extended period of time (National Institute for Health and Care Excellence, 2010).

Project Design:

Philosophical Approach: The project question positions the project within the positivist paradigm. Positivism assumes that reality is tangible and has associations or causal relationships that can be generated to lead to prediction of a certain phenomenon; knowledge is generated from this objectively (Park, Konge and Artino, 2020). Quantitative methods align with this paradigm, as it allows measuring generating knowledge from findings (Park, Konge and Artino, 2020).

Methodology: A quantitative methodology fits with the positivist philosophical approach and aligns with clinical audit. Clinical audit is a quantitative methodology and quality improvement methodology which aims to assess whether a service meets defined quality standards (Heaslip and Lindsay, 2019; Health Care Quality Improvement Partnership, 2020). The specific methodology for the project is a retrospective observational design. A retrospective observational design is non-interventional and is a useful methodology that can suggest possible causation relationships (Thiese, 2014). This design fits the study as the study aims to examine past phenomena in order to inform policy changing (Parahoo, 2014).

Methods:

Data collection methods:

The project will adopt a retrospective observational approach to data collection. Secondary data will be collected by auditing patient referrals for the preceding year. By extracting data from the existing patient electronic record system, as date of referral to Alcohol Pathway Team, gender, age, reported daily or weekly alcohol intake in units at time of referral, existing or absence of diagnosis of Hepatitis C infection or alcoholic liver disease, offered or not referral to Transient Elastography, consent or refusal of referral, acceptance or decline of referral by undertaking department, attendance or DNA to transient elastography appointment.

Data Management: Data will be stored as an Excel spreadsheet, by attributing codes to replace patient URN numbers ensuring anonymity and confidentiality. It will be stored in a locked one drive folder on a password protected computer. The project lead is the data custodian. However, this data will also be accessible to my Academic Supervisor. Data will be kept as per UKRI Medical Research Council (2022), recommendation that data should be retained for at least 10 years post completion of study, which aligns with UK General Data Protection Regulation (UK Government, 2018) and RGU Data Management Policy (Robert Gordon University, 2024). This also complies with the Data Protection (Jersey) Law 2018 which states that data should be retained for as long as it is required.

Data Analysis Methods: Data will be analysed using descriptive statistics. This is more suitable for clinical audit than inferential as descriptive statistics enables to gain insight into existing service and possible gaps (Heaslip and Lindsay, 2019; Parahoo, 2014), whilst inferential statistics aids on linking variables and making comparisons

between the same (Kotronoulas, 2023). Findings will be presented descriptively using tables and graphs.

Sample: The sample of patient records will be determined based on the total number of referrals received by the Alcohol and Drugs Service in 2025. These records will be accessed through the existing patient electronic record system. The audit tool will be developed in collaboration with Health and Care Jersey (HCJ) clinical audit team.

Inclusion Criteria: The study will use a convenience sample, including referrals of patients who meet the study criteria. Patient records will be included for individuals over 16 who have been referred to the Alcohol Pathway Team who have a Hepatitis C virus infection, have a diagnosis of alcohol related liver disease, drink over 50 units of alcohol a week if male or 35 units if female.

Ethical considerations and approvals: While clinical audit is not considered research according to the Health Research Authority (HRA) Decision Tool (NHS Health Research Authority, 2025), it is important that the principles of research ethics are aligned with to ensure rigour and validity. The ethical issues are considered in relation to Beauchamp and Childress (2013) principles of Beneficence, Non-Maleficence, Autonomy and Justice. A risk assessment has been completed to aid addressing ethical issues (Appendix 1).

Beneficence: This study fulfils the beneficence principle as the goal on undertaking this clinical audit is to inform service changes which could improve the experience of service users. Working with the HCJ Clinical Audit Team will help ensure the audit tool measures the defined standard. This will enable recommendations to promote

the development of new policies, procedures or service provisions if required. This also aligns with principles 4 and 7 of the Declaration of Helsinki (1964) by the World Medical Association.

Non-maleficence: Whilst this study is non-interventional the principle of non-maleficence must still be considered. Safe storage of data is key to protect confidentiality. A data management plan is included (Appendix 2).

Anonymity will be assured by attributing a code to each participant's URN number. It is also important to consider the impact findings may have on practitioners. The dissemination of findings will be supported by the Head of Service. Findings will also be shared at the end of study, in a non-blame approach. Permission to access records as the project lead will be obtained from the organisation, by request to the Head of Alcohol and Drugs Service (Appendix 3).

Autonomy: This aligns with principle of autonomy and principles 9, 24 and 25 of The Declaration of Helsinki (1964). According to Robert Gordon University (2016) data is assumed to be under control of person or organisation to whom it relates. The General Data Protection Regulation 2018 (GDPR) and States of Jersey Data Protection Policy (2018) which complies with the provisions of the Data Protection (Jersey) Law 2018 for processing personal data will also be considered.

Justice: Ethical issues related to the principle of justice are addressed as the findings will provide understanding in relation to whether local individuals receive the expected standard of care, as outlined in NICE NG50: NICE Guidance NG50, as those nationwide. According to principle 17 of The Declaration of Helsinki (1964) and the UK Committee on Research Integrity (UKRI, 2025) assessing risks and burdens

for participants is crucial, particularly in vulnerable populations as stigmatised and marginalised groups. Data from all referrals that meet inclusion criteria within the identified timeframe will be collected and this provides an equal opportunity to all patients who accessed the service within the timeframe. Findings may lead to increased awareness of the need for referral to transient elastography.

As a quality improvement study, the proposal will be submitted to the School of Health Ethics Review Panel at Robert Gordon University (RGU) for scientific review. It will also require registration with Health and Care Jersey Quality and Audit Team (Appendix 4).

Timelines: A timeline for the project through to dissemination is included as Appendix 5.

References:

British Liver Trust (2024) *Liver disease in numbers – key facts and statistics*. Available at: https://britishlivertrust.org.uk/information-and-support/statistics/#diagnosis (Accessed: 14 October 2025)

Government of Jersey (2023) *Strategic Policy, Planning and Performance Report Public Health Intelligence*. Available at: https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/Alcohol%20Profile%202022.pdf (Accessed 15 October 2025)

Heaslip, V. and Lindsay, B. (2019) *Research and Evidence-based Practice for Nursing*, Health and Social Care Students. Oxford: Lantern Publishing

Healthcare Quality Improvement Partnership. (2020) *Best practice in clinical audit*. London: Healthcare Quality Improvement Partnership Ltd.

National Institute for Health and Care Excellence (NICE) (2010) *Alcohol-use disorders: prevention*. PH24. Available at: https://www.nice.org.uk/guidance/ph24 (Accessed: 14 October 2025)

Kotronoulas, G. (2023) 'An Overview of the Fundamentals of Data management, analysis, and Interpretation in Quantitative Research', *Seminars in Oncology Nursing* 39(2), p.151-398. Available at: doi:https://doi.org/10.1016/j.soncn.2023.151398.

UKRI Medical Research Council (2022) *MRC Regulatory Support Centre Retention Framework for research data and records.* Available at: https://www.ukri.org/wp-content/uploads/2023/03/MRC-100323-RegulatorySupportCentre-RetentionFrameworkResearchDataRecords.pdf

National Institute for Health and Care Excellence (NICE) (2023) *FibroScan for assessing liver fibrosis and cirrhosis outside secondary and specialist care.* DG48. Available at: https://www.nice.org.uk/guidance/dg48/chapter/1-Recommendations (Accessed: 14 October 2025)

National Institute for Health and Care Excellence (NICE) (2023) *Cirrhosis in over 16s: assessment and management.* NG50. Available at: https://www.nice.org.uk/guidance/ng50/chapter/Recommendations#diagnosis (Accessed: 14 October 2025)

NHS Health Research Authority (2025) *Applying to a Research Ethics Committee.* Available at: https://www.hra.nhs.uk/approvals-amendments/what-approvals-do-i-need/research-ethics-committee-review/applying-research-ethics-committee/ (Accessed: 15 October 2025)

Office for Health Improvement & Disparities (2024) *Alcohol profile*. Available at: https://fingertips.phe.org.uk/profile/local-alcohol-profiles. Accessed 07/05/2025 (Accessed: 15 October 2025)

Parahoo, K. (2014) *Nursing research: principles, processes and issues,* Hampshire: Palgrave MacMillan

Park, Y.S., Konge, L. and Artino, A.R. (2020) 'The positivism paradigm of research', *Academic Medicine* 95(5), pp.690–694. Available at: https://doi.org/10.1097/ACM.0000000000003093

Pavlov, C.S et al. (2016) Ultrasonography for diagnosis of alcoholic cirrhosis in people with alcoholic liver disease, *Cochrane Database of Systematic Reviews* (3). Available at: https://doi.org/10.1002/14651858.cd011602.pub2

Pavlov, C.S et al. (2015) Transient elastography for diagnosis of stages of hepatic fibrosis and cirrhosis in people with alcoholic liver disease, *Cochrane Database of Systematic Reviews* (1). Available at: https://doi.org/10.1002/14651858.cd010542.pub2

Robert Gordon University (2024) *Research Governance*. Available at: https://www.rgu.ac.uk/research/research-governance (Accessed 21 October 2025)

Robert Gordon University (2016) *Research Ethics Policy*. Available at: https://www.rgu.ac.uk/research/research-governance/research-integrity-and-ethics#anchor-3 (Accessed 21 October 2025)

Thiese, M.S. (2014) Observational and interventional study design types, *Biochemia Medica* 24(2), pp. 199-210. Available at: https:??doi.org/10.11613/bm.2014.022

World Medical Association (2024) 'World Medical Association Declaration of Helsinki'. *JAMA* 333(1). Available at: https://doi.org/10.1001/jama.2024.21972.

States of Jersey (2018) *Data Protection Policy*. States of Jersey

UK Committee on Research Integrity (2025) *The concordat to support research integrity.* Available at: https://ukcori.org/wp-content/uploads/2025/04/The-Concordat-to-Support-Research-Integrity-2025.pdf (Accessed 14 October 2025)

UK Government (2018) *UK General Data Protection Regulation*. Available at: https://www.legislation.gov.uk/eur/2016/679/contents (Accessed 15 October 2025)

Student signature & date:	Daniela Jesus 17 October 2025
Supervisors signature & date:	JALamprière 17 October 2025

Appendix II: Data Management Plan

- Extracted data will be stored in an Excel spreadsheet, by attributing codes to replace patient URN numbers to identify participants ensuring anonymity and confidentiality.
- Data will be stored in a locked one drive folder on a password protected computer. The project lead is the data custodian.
- The data will also be accessible to my Academic Supervisor from the Faculty of Health Education who is approved by Robert Gordon University.
- Analysed data will be presented descriptively in tables and graphs and no patient names or URN numbers will be attributed to this.
- The findings will be written up as a dissertation for assessment and presented in a poster to an invited audience.
- The findings will be presented to the Alcohol and Drug Service Team.
- Data will be kept as per UKRI Medical Research Council (2022), recommendation that data should be retained for at least 10 years post completion of study, which aligns with UK General Data Protection Regulation (UK Government, 2018) and RGU Data Management Policy (Robert Gordon University, 2024). This also complies with the Data Protection (Jersey) Law 2018 which states that data should be retained as long as is required.

Appendix III: GANTT Chart

	2025			2026			
Activity	**October**	**November**	**December**	**January**	**February**	**March**	**April**
Scoping							
Literature review							
Discuss audit with Health and Care Jersey (HCJ) clinical audit team							
Submit Proposal							
Submission of clinical audit registration form							
Data collection							
Data analysis							
Compose discusion of data							
Writing up							
Preparing Poster							
Submission of dissertation							
Dissemination to quality and audit							
Poster Presentation							

Appendix IV: Audit Registration Form

Office use only:	
Registration Number	
Clinical Auditor	Date Audit Registered
Support Required ☐Y ☐N	Data Collection Tool ☐Y ☐N

STATES OF JERSEY HEALTH & SOCIAL SERVICES

Audit Registration Form

This form is to be completed by all healthcare professionals who are about to undertake an audit.

Project Details		
Project Title: Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?		
Project Aim: This study aims to measure whether patients (over 16 years) within the Jersey Alcohol Pathway Team are appropriately referred for transient elastography in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis.		
Project Type: (select all which apply)	☒ Clinical Audit ☐ Service Evaluation ☐ Service User Questionnaire ☐ Other: Click here	
	☐ National ☒ Local ☐ Other:	
	☐ Re-audit/Repeat (provide details):	
Priorities for Undertaking Project: (select all which apply)	☐ Organisational priority	☒ Service priority
	☐ Organisational policy/guideline	☐ Service policy/guideline
	☒ A change in service	☒ Introduction of new guidelines
	☐ High volume process/procedure	☐ High cost process/procedure
	☐ High risk process/procedure	☒ Quality concern
	☒ Clinical concern	☐ Formal complaint
	☐ Service user feedback	☐ Serious Untoward Incident (SUI)/Clinical risk reporting
	☐ Professional body:	☐ National Clinical Audit Programme (NCAPOP)
	☐ UK national healthcare initiative	☐ Other:
Does the project relate to guidance/standards/evidence? ☒ Yes ☐ No Please list source(s), or attach copy.		

Criterion: a specific statement of what should be happening. (Please continue and attach on a separate piece of paper if required)	**Standard:** minimum level of acceptable performance for criterion– ONLY APPLICABLE TO CLINICAL AUDIT
e.g. Patients over 75 are assessed for Cognitive Impairment (CI) in the ED	100%
Patients who have an active diagnosis of hepatitic C infection, have been consuming	100%
alcohol at harmful levels over an extended period of time, or have had a diagnosis of	
Alcoholic liver disease are offered transloelastrography for early detection of liver disease.	

1

Recording Activity

The Clinical Audit and Effectiveness Department holds a database of project works. Brief details of your project will be recorded on this database and may be recorded on the Clinical Governance intranet pages. A Clinical Audit Officer may contact you periodically over the course of your project to obtain a brief update on its progress. The results of this project belong to States of Jersey Health and Social Services Department and they may be made available to anyone who requests them.

By signing this form you are agreeing to ensure that this project is completed, the results shared, and a report submitted to the Clinical Audit and Effectiveness Department; you have considered patient confidentially and are acting in agreement with the Caldicott Principles and Data Protection policies. You are agreeing to address any identified shortcomings of patient care from this project ethically and responsibly, and have considered a plan to ensure that any changes made as a result are measured for their effectiveness.

Auditor and Sponsor Details

Primary Contact/Audit Lead: (responsible for project work)		**Sponsors Details:** (e.g. senior specialty lead or relevant senior clinician/manager)	
Name	Daniela Jesus	Name	Dr Moyra Journeaux
Job Title	Clinical Nurse Specialist	Job Title	Academic Lead
Consultant Team	Dr.Tanya Emgelbrecht	Division	Faculty of Health Education on behalf of RGU
Division	Mental Health Services	Specialty	MSc Advancing Practice
Specialty	Alcohol and Drugs	Sponsor Signature*:	MJourneaux
Audit Lead Signature:	Daniela Jesus		
Date	23/10/2025	Date	23/10/2025

* Sponsor

I authorise this clinical audit project and confirm that priority and resource implications have been considered and discussed with relevant clinicians and managers. I agree that should the primary contact not be able to complete the project, I will be responsible for ensuring it is completed. I will be responsible for agreeing an action plan as a result of clinical audit/service evaluation projects and where applicable introducing change, overseeing improvement and scheduling future re-audits/evaluations.

Submission of Registration Form

Please submit your completed form to:

Clinical Audit and Effectiveness Department

1st Floor Peter Crill House

Gloucester Street, St Helier

JE1 3QS

Tel: 01534 444182/01534 442181

Email: hssclinicalauditdepartment@health.gov.je

Appendix V: Letter of Permission to Access Site as a Researcher

Appendix 3 – Letter of Permission to Access Site as a Researcher

HEALTH AND CARE JERSEY
FACULTY OF HEALTH EDUCATION
UNIVERSITY EDUCATION

Daniela Jesus
MSc Student in Advancing Practice
Jersey Faculty of Health Education and Robert Gordon University

Laura Hunter
Head of Service Alcohol and Drugs Service
Maison Le Pape
The Parade
St. Helier
JE2 3PU

23 October 2025

Request for Permission to Access Patient Records for Dissertation Clinical Audit

Project Question: Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?

Dear Laura,

I am undertaking Masters in Advancing Practice and as part of this I am completing a dissertation project. I am planning to conduct a clinical audit with the aim to measure whether patients (over 16 years) within the Jersey Alcohol Pathway Team are appropriately referred for transient elastography in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis.

The clinical audit has the following objectives:

1. To identify the number of patients within the Jersey Alcohol Pathway Service who meet the criteria for assessment of liver fibrosis or cirrhosis in line with NICE Guidance NG50.
2. To identify how many patients fitting the criteria for referral are referred for Transient elastography.
3. To assess the number of eligible patients who did not consent to referral.
4. To assess the number of referred patients who did not attend (DNA) their appointment for Transient Elastography.
5. To assess the consistency of documentation of referral decisions and patient consent, refusal or DNA.

It focuses on individuals with Hepatitis C virus infection, men consuming over 50 units of alcohol per week, women consuming more than 35 units weekly, over several months, or those diagnosed with Alcohol-related Liver Disease, evaluating adherence to NICE Guideline NG50 and identifying potential gaps within the referral pathway.
I am requesting permission to access patient records in my capacity as an MSc student for my Clinical Audit project.

Please be assured that:

- Patients will be anonymised
- Strict data protection policies and ethical standards as outlined by Robert Gordon University Data Protection Policy (RGU, 2022) will be adhered to
- The project has been scientifically reviewed with a favourable outcome by the Robert Gordon University School of Health Ethics Review Panel
- Robert Gordon University will sponsor this project

- The project lead will have a local research supervisor from the Faculty of Health Education who is approved by Robert Gordon University
- The project will be registered as a quality improvement project with HCJ clinical audit team

If you are happy to agree to this, please can you sign the statement at the end of this letter.

Yours sincerely,

Daniela Jesus
MSc Advancing Practice Student
Jersey Faculty of Health Education and Robert Gordon University

Response

- I can confirm that we are happy to provide permission for you as the project lead to access patient records for the purpose of gathering data for the clinical audit.
- I am happy to support the clinical audit being registered as a quality improvement project with the HCJ Clinical Audit Team.
- I can confirm data gathered from study can be analysed and used to write up a dissertation, present in a poster to an invited audience at the Faculty of Health Education, included in a research report to share with our service, and for any future publications arising from this.

Name: LAURA HUNTER
Role: HEAD OF ALCOHOL & DRUG SERVICES
Signed:
Date: 23/10/25

Appendix VI: Tripartite Agreement Form

Tripartite Agreement

ROBERT GORDON UNIVERSITY ABERDEEN

NUM100 Advancing Practice Dissertation

TRIPARTITE AGREEMENT FORM

Name of student:	Daniela Jesus
Name and role of clinical mentor:	Dr. Tanya Engelbrecht
Name of academic supervisor:	Dr Julie Lempriere
Title of study:	Audit of referrals for transient elastography in the Alcohol Pathway Team and their alignment with NICE Guideline NG50: Cirrhosis in over 16s: assessment and management
Brief synopsis of study (150 words)	The proposed question for this study is *"Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?".* This study aims to measure whether patients (over 16 years) within the Jersey Alcohol Pathway Team are appropriately referred for transient elastography in line with NICE Guidance NG50 for the assessment of liver fibrosis and cirrhosis.

	It focuses on individuals with Hepatitis C virus infection, men consuming over 50 units of alcohol per week, women consuming more than 35 units weekly, over several months, or those diagnosed with alcohol-related liver disease. Clinical Audit using retrospective observation of patient records will be used to measure adherence to NICE Guideline NG50 and identifying potential gaps within the referral pathway.

This signed agreement confirms that all parties are aware of and agree to the student undertaking the proposed study.

Student: Daniela Jesus Date: 23/10/2025

Clinical mentor: Engelbrecht Date: 23.10.2025

Academic supervisor: Jennifer Date: 27 Oct 2025

Appendix VII: Risk Assessment Form

Specific risks at project level			
Project Title	Are referrals for transient elastography in the Jersey Alcohol Pathway Team, compliant with NICE Guidance NG50, recommendations for assessing liver fibrosis and cirrhosis?		
Sponsor Investigator / Project Leader Name, phone and email address	Dr Moyra Journeaux on behalf of Jersey Faculty of Health Education and Robert Gordon University m.journeaux@health.gov.je Daniela Jesus MSc Advancing Practice Student		
Site contact	01534 445019		
Infrastructure / Data Systems			
Risk of bias due to missing or incomplete records	☒ low ☐ high		Records accessed will be from existing Electronic Patient Record System.

			Project Lead is trained in using existing electronic record system to allow correct collection of data. All data collection will be cross-checked from multiple parts of the medical record (e.g., electronic health records, discharge summaries, nursing notes) to fill in gaps where data may be missing in one source.

Risks at project level			
Description	**Rating**	**Rationale for rating / Comments**	**Risk-minimising measures**
Project Design			
Risk of project design not fulfilling ethical principles.	☒ low ☐ high		Ensure audit scope aligns with NICE guideline NG50. Request support from HCJ Clinical Audit Team with designing audit tool.

			Confirm review by School of Health Ethics Review Panel at Robert Gordon's University (RGU).
Data Collection / Project-specific Procedures			
Risk of breach of confidentiality	☒ low ☐ high		Data will be extracted from existing clinical records. Data will be anonymised by attribution of codes to replace URN numbers. Data will be stored in a locked one drive folder on a password protected computer. Follow The General Data Protection Regulation 2018 (GDPR), States of Jersey Data Protection Policy (2018) which complies with the provisions of the Data Protection (Jersey) Law 2018 and RGU Research Data Management Policy.
Project Site			

Risk of access to data being restricted	☒ low ☐ high		Send letter to request permission to access site as a student collecting data for a dissertation project. Confirm authorisation to access site as a project lead from Head of Alcohol and Drugs Service.
Monitoring			
Risk of incomplete auditing processes	☒ low ☐ high		Meet with HCJ Clinical Audit Team to design audit tool. Check in regularly with Clinical Audit Team for ongoing support in collecting, analysing and interpreting data. Ensure audit trail is maintained. Follow HQIP “New Principles of Best Practice in Clinical Audit” Clinical Audit Cycle. Book in periodic check-ins with Academic Supervisor.

Others			
Risk of blurring between a student accessing data for the purpose of a dissertation project and the access permitted in Clinical Nurse Specialist role	☒ low ☐ high		Clearly communicate role and audit scope to all relevant staff by sharing Study's Proposal on weekly Multidisciplinary Team meeting at beginning of study. Schedule non-clinical time solely for the purpose of clinical audit related activities. Send letter to request permission to access site as a student to access data for a dissertation project. Document all audit interactions on audit trail.

Completed by	Daniela Jesus
Role	MSc Advancing Practice Student
Date	24 October 2025

Appendix VIII: CASP Tools

CASP Checklist:

Critical Appraisal Skills Programme

For Cohort Studies

Reviewer Name:	Daniela Jesus
Paper Title:	Early detection of liver disease in patients with alcohol use disorder improves long-term abstinence
Author:	Orgil, A. *et al*. (2024) 'Early detection of liver disease in patients with alcohol use disorder improves long-term abstinence', *Alcohol and Alcoholism,* 59.
Web Link:	https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/vigxq6waiz?db=ccm&limiters=FT%3AY%2CDT1%3A2017-01-01%2F2025-03-11&q=transient+elastography+OR+fibroscan+OR

	+liver+stiffness&searchMode=boolean&modal=details-bulk-download.
Appraisal Date:	09/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
1. Did the study address a clearly focused issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
2. Was the cohort recruited in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
3. Was the exposure accurately measured to minimise bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	

4. Was the outcome accurately measured to minimise bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
5. (a) Have the authors identified all important confounding factors?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
6. a) Was the follow up of subjects complete enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	

7. What are the results of this study?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
8. How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
9. Do you believe the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
10. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
11. Do the results of this study fit with other available evidence?	☒Yes ☐ No ☐ Can't Tell

12. What are the implications of this study for practice? Transient elastography is helpful in the early diagnosis of advanced liver disease in patients with severe AUD (Alcohol use disorder)	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *for certain questions, observational studies provide the only evidence* • *recommendations from observational studies are always stronger when supported by other evidence*	

Critical Appraisal Skills Programme

CASP Checklist:

For Cohort Studies

Reviewer Name:	Daniela Jesus
Paper Title:	Noninvasive evaluation of liver fibrosis: comparison of the stretched exponential diffusion-weighted model to other diffusion-weighted MRI models and transient elastography
Author:	Park, J. *et al*. (2021) 'Noninvasive evaluation of liver fibrosis: comparison of the stretched exponential diffusion-weighted model to other diffusion-weighted MRI models and transient elastography', *European Radiology,* 31, pp. 4813–4823.

Web Link:	https://doi.org/10.1007/s00330-020-07600-3
Appraisal Date:	09/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
13. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
14. Was the cohort recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
15. Was the exposure accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:*	

• *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
16. Was the outcome accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
17. (a) Have the authors identified all important confounding factors?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
18. a) Was the follow up of subjects complete enough?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	

Section B: What are the results?	
19.What are the results of this study? Transient elastography may not be effective on identifying F0 to F1 stages of fibrosis (early liver disease).	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
20.How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
21.Do you believe the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
22.Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study*	

Critical Appraisal Skills Programme

• *If you can quantify the local benefits and harms*	
23. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell
24. What are the implications of this study for practice? Increase awareness that although the use of transient elastography may be beneficial for identification of F2 to F4 levels of fibrosis there is a risk patients with earlier stage disease would be missed.	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *for certain questions, observational studies provide the only evidence* • *recommendations from observational studies are always stronger when supported by other evidence*	

CASP Checklist:

For Cohort Studies

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a

Reviewer Name:	Daniela Jesus
Paper Title:	Enhanced liver fibrosis score is stable after withdrawal in patients with heavy alcohol consumption: A pilot study
Author:	Levi-Strauss, T. *et al*. (2023) 'Enhanced liver fibrosis score is stable after withdrawal in patients with heavy alcohol consumption: A pilot study', *Alcohol Clinical and Experimental Research,* 48, pp. 1088-1095.
Web Link:	https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/tn7bvphqc5?db=ccm&limiters=DT1%3A2017-01-01%2F2025-03-11%2CFT%3AY&q=transient+elastography&searchMode=boolean.
Appraisal Date:	10/12/2025

large number of “Can’t tell” responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
25. Did the study address a clearly focused issue?	☒Yes ☐ No ☐ Can’t Tell
CONSIDER: *A question can be ‘focused’ in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
26. Was the cohort recruited in an acceptable way?	☒Yes ☐ No ☐ Can’t Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
27. Was the exposure accurately measured to minimise bias?	☒Yes ☐ No ☐ Can’t Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
28. Was the outcome accurately measured to minimise bias?	☒Yes ☐ No ☐ Can’t Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
29. (a) Have the authors identified all important confounding factors?	☒Yes ☐ No ☐ Can’t Tell

CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
30. a) Was the follow up of subjects complete enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	
31.What are the results of this study? ELF score is not affected by alcohol withdrawal and can be used for the assessment of fibrosis and cirrhosis in Alcoholic liver disease.	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	

32.How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
33.Do you believe the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
34.Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
35.Do the results of this study fit with other available evidence?	☒Yes ☐ No ☐ Can't Tell
36.What are the implications of this study for practice? Transient elastography post withdrawal can affect results, as transient elastography values drop 1st few weeks post withdrawal, due to decreased inflammation.	☒Yes ☐ No ☐ Can't Tell

Critical Appraisal
Skills Programme

CONSIDER:

- *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *for certain questions, observational studies provide the only evidence*
- *recommendations from observational studies are always stronger when supported by other evidence*

CASP Checklist:

For Cohort Studies

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Reviewer Name:	Daniela Jesus
Paper Title:	Prospective Evaluation of Liver Stiffness Using Transient Elastography in Alcoholic Patients Following Abstinence
Author:	Gianni, E. *et al*. (2017) 'Prospective Evaluation of Liver Stiffness Using Transient Elastography in Alcoholic Patients Following Abstinence', *Alcohol and Alcoholism*, 52(1), pp.42–47.
Web Link:	Available at: doi: 10.1093/alcalc/agw053
Appraisal Date:	10/12/2025

Section A: Are the results valid?

37. Did the study address a clearly focused issue?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
38. Was the cohort recruited in an acceptable way?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
39. Was the exposure accurately measured to minimise bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
40. Was the outcome accurately measured to minimise bias?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
41. (a) Have the authors identified all important confounding factors?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
42. a) Was the follow up of subjects complete enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	
43.What are the results of this study? Abstinence improves transient elastography results. In abstinent patients on 4 week follow up out of 40 patients 13 still had LS of 7 kPa or above, 18 still had deranged transaminases. 16 reduced their LS measures in comparison to active drinkers.	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
44.How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER:	

• *look for the range of the confidence intervals, if given*	
45. Do you believe the results?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
46. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
47. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell
48. What are the implications of this study for practice? As out of 40 patients on 4 week follow up 12 of these had a 20% reduction of LS measures in comparison to baseline values. 16 patients reduced their LS stages when compared to active drinkers. At 24 weeks follow up, out of 22 abstinent patients, 4 had LS equal or above 7 kPa. 4 had reduced LS to T0.	☒ Yes ☐ No ☐ Can't Tell

CONSIDER:

- *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *for certain questions, observational studies provide the only evidence*
- *recommendations from observational studies are always stronger when supported by other evidence*

CASP Checklist:

For systematic reviews

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Reviewer Name:	Daniela Jesus
Paper Title:	Transient elastography for diagnosis of stages of hepatic fibrosis and cirrhosis in people with alcoholic liver disease (Review)
Author:	Pavlov, C.S. *et al*. (2015) Transient elastography for diagnosis of stages of hepatic fibrosis and cirrhosis in people with alcoholic liver disease, *Cochrane Database of Systematic Reviews*. 1.
Web Link:	https://doi.org/10.1002/14651858.cd010542.pub2.
Appraisal Date:	11/12/2025

Section A: Are the results of the review valid?

1. Did the review address a clearly focused question?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER:

Did the researchers state a research question?

For a systematic review, a research question can be 'formulated' in terms of the PECO framework:

- *Population*
- *Exposure/Risk factor*
- *Comparator/Controls*
- *Outcome/s or Event/s*

2. Did the authors look for the right type of papers?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER:

The best sort of studies' would

- Address the review's question
- Have an appropriate study design (usually RCTs for papers evaluating interventions)

3. Do you think all the important, relevant studies were included?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER:

- Which bibliographic databases were used
- Follow up from reference lists

- Personal contact with experts
- Unpublished as well as published studies
- Non-English language studies

4. Did the review's authors do enough to assess quality of the included studies?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER:

The authors need to consider the rigour of the studies they have identified. Lack of rigour may affect the studies' results ("All that glisters is not gold" Merchant of Venice – Act II Scene 7)

5. If the results of the review have been combined, was it reasonable to do so?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER:

- Results were similar from study to study
- Results of all the included studies are clearly displayed
- Results of different studies are similar
- Reasons for any variations in results are discussed

Section B: What are the results?

6. What are the overall results of the review? Studies demonstrated high sensitivity of transient elastography on diagnosing stage 2,3 and 4 of fibrosis/ cirrhosis.	☒Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: • *If you are clear about the review's 'bottom line' results* • *What these are (numerically if appropriate)* • *How were the results expressed (NNT, odds ratio etc.)*	
7. How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: *Look at the confidence intervals, if given*	
Section C: Will the results help locally?	
8. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: • The patients covered by the review could be sufficiently different to your population to cause concern • Your local setting is likely to differ much from that of the review	

9. Were all important outcomes considered?	Yes ☒ No ☐ Can't Tell
CONSIDER WHETHER: • There is other information you would like to have seen	
10. Are the benefits worth the harms and costs?	Yes ☒ No ☐ Can't Tell
CONSIDER WHETHER: • Even if this is not addressed by the review, what do you think?	

CASP General SR Checklist: Collation of critical appraisal responses

Yes	Checklist question	Can't tell	No

A. Are the results of the review valid?

Y	1. Did the review address a clearly focused question?		
Y	2. Did the authors look for the right type of papers?		
Y	3. Do you think all the important, relevant studies were included?		
Y	*4.* Did the review's authors do enough to assess quality of the included studies?		
Y	5. If the results of the review have been combined, was it reasonable to do so?		

B. What are the results?

Y	6. What are the overall results of the review?		
Y	7. How precise are the results?		

C. Will the results help locally?

Y	8. Can the results be applied to the local population?		
Y	9. Were all important outcomes considered?		
Y	10. Are the benefits worth the harms and costs?		

CASP Checklist:

For Cohort Studies

Reviewer Name:	Daniela Jesus

Paper Title:	Correlation of severity of alcohol dependence with liver dysfunction (by transient elastography) in freshly diagnosed cases of alcohol dependence syndrome
Author:	Madhusudhan, G. *et al*. (2024) 'Correlation of severity of alcohol dependence with liver dysfunction (by transient elastography) in freshly diagnosed cases of alcohol dependence syndrome', *Industrial Psychiatry Journal*, 33(2), pp. 360-365.
Web Link:	https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/gmzndr246n?db=cmedm&limiters=DT1%3A2017-01-01%2F2025-03-11%2CFT%3AY&q=transient+elastography&searchMode=boolean&modal=details-bulk-download.
Appraisal Date:	13/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
49. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
50. Was the cohort recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
51. Was the exposure accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
52. Was the outcome accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
53. (a) Have the authors identified all important confounding factors?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
54. a) Was the follow up of subjects complete enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	
55.What are the results of this study? Abstinence decreases levels of liver stiffness by the 4 week. Demonstrated by Transient elastography	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results*	

• *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
56. How precise are the results?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
57. Do you believe the results?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
58. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
59. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell
60. What are the implications of this study for practice?	☒ Yes ☐ No ☐ Can't Tell

Critical Appraisal Skills Programme

CONSIDER:

- *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making*
- *for certain questions, observational studies provide the only evidence*
- *recommendations from observational studies are always stronger when supported by other evidence*

CASP Checklist:

For systematic reviews

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers

Reviewer Name:	Daniela Jesus
Paper Title:	Review Noninvasive Assessment of Liver Fibrosis: Current and Future Clinical and Molecular Perspectives
Author:	Masuzaki, R. *et al*. (2020) 'Noninvasive Assessment of Liver Fibrosis: Current and Future Clinical and Molecular Perspectives', *International Journal of Molecular Sciences*, 21(4906).
Web Link:	Available at: doi:10.3390/ijms2114490
Appraisal Date:	15/12/2025

have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results of the review valid?	
11. Did the review address a clearly focused question?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER WHETHER: *Did the researchers state a research question?* *For a systematic review, a research question can be 'formulated' in terms of the PECO framework:* • *Population* • *Exposure/Risk factor* • *Comparator/Controls* • *Outcome/s or Event/s*	
12. Did the authors look for the right type of papers?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: *The best sort of studies' would* • Address the review's question • Have an appropriate study design (usually RCTs for papers evaluating interventions)	
13. Do you think all the important, relevant studies were included?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: • Which bibliographic databases were used • Follow up from reference lists	

• Personal contact with experts • Unpublished as well as published studies • Non-English language studies	
14. Did the review's authors do enough to assess quality of the included studies?	☐ Yes ☐ No ☒ Can't Tell
CONSIDER WHETHER: *The authors need to consider the rigour of the studies they have identified. Lack of rigour may affect the studies' results ("All that glisters is not gold" Merchant of Venice – Act II Scene 7)*	
15. If the results of the review have been combined, was it reasonable to do so? 16.	☐ Yes ☐ No ☒ Can't Tell
CONSIDER WHETHER: • Results were similar from study to study • Results of all the included studies are clearly displayed • Results of different studies are similar • Reasons for any variations in results are discussed	
Section B: What are the results?	
17. What are the overall results of the review?	☒ Yes ☐ No ☐ Can't Tell

Elastography is useful on diagnosis fibrosis.	
CONSIDER WHETHER: • *If you are clear about the review's 'bottom line' results* • *What these are (numerically if appropriate)* • *How were the results expressed (NNT, odds ratio etc.)*	
18. How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: *Look at the confidence intervals, if given*	
Section C: Will the results help locally?	
19. Can the results be applied to the local population?	☒Yes ☐ No ☐ Can't Tell
CONSIDER WHETHER: • The patients covered by the review could be sufficiently different to your population to cause concern • Your local setting is likely to differ much from that of the review	

20. Were all important outcomes considered? Cut offs documented for different liver disease etiologist.	Yes ☒ No ☐ Can't Tell
CONSIDER WHETHER: • There is other information you would like to have seen	
21. Are the benefits worth the harms and costs?	Yes ☒ No ☐ Can't Tell
CONSIDER WHETHER: • Even if this is not addressed by the review, what do you think?	

CASP General SR Checklist: Collation of critical appraisal responses

Yes	Checklist question	Can't tell	No

C. Are the results of the review valid?

Y	11. Did the review address a clearly focused question?		
Y	12. Did the authors look for the right type of papers?		
Y	13. Do you think all the important, relevant studies were included?		
	14. Did the review's authors do enough to assess quality of the included studies?	x	
	15. If the results of the review have been combined, was it reasonable to do so?	x	

D. What are the results?

Y	16. What are the overall results of the review?		
Y	17. How precise are the results?		

C. Will the results help locally?

Y	18. Can the results be applied to the local population?		
Y	19. Were all important outcomes considered?		
Y	20. Are the benefits worth the harms and costs?		

Critical Appraisal Skills Programme

CASP Checklist:

For diagnostic test studies

Reviewer Name:	Daniela Jesus
Paper Title:	Controlled Attenuation Parameter (CAP) with the XL Probe of the Fibroscan®: A Comparative Study with the M Probe and Liver Biopsy
Author:	De Lédinghen, V. *et al.* (2017)
Web Link:	https://doi.org/10.1007/s10620-017-4638-3
Appraisal Date:	15/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results of the study valid?	
22. Did the study address a clearly formulated research question?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question should include information about* • *the population* • *the test*	

• *the setting* • *the outcomes*	
23. Was there a comparison with an appropriate reference standard?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is this reference test(s) the best available indicator in the circumstances*	
24. Did all patients get the diagnostic test and reference standard?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *were both received regardless of the results of the test of interest* • *Check the 2x2 table (verification bias)*	
25. Could the results of the test have been influenced by the results of the reference standard?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *was there blinding* • *were the tests performed independently* • *could there have been review bias*	
26. Is the disease status of the tested population clearly described?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *presenting symptoms* • *disease stage of severity* • *co-morbidity* • *differential diagnoses (spectrum bias)*	
27. Were the methods for performing the test described in sufficient detail?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Was a protocol followed*	
Section B: What are the results?	
28. What are the results?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *are the sensitivity and specificity and/or likelihood ratios presented* • *are the results presented in such a way that we can work them out*	
29. How sure are we about the results? Consequences and cost of alternatives performed?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *could they have occurred by chance* • *are there confidence limits* • *what are they*	
Section C: Will the results help locally?	
30. Can the results be applied to your patients/the population of interest?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *Do you think your patients/population are so different from those in the study that the results cannot be applied, such as age, sex, ethnicity and spectrum bias.*	
31. Can the test be applied to your patient or population of interest?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *resources and opportunity costs* • *level and availability of expertise required to interpret the tests* • *current practice and availability of services*	
32. Were all outcomes important to the individual or population considered?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *will the knowledge of the test result improve patient wellbeing* • *will the knowledge of the test result lead to a change in patient management*	
33. What would be the impact of using this test on your patients/population? Improve fibrosis detection by using of appropriate probe size	

Critical Appraisal Skills Programme

CASP Checklist:

For Cohort Studies

Reviewer Name:	Daniela Jesus
Paper Title:	The XL probe: A luxury or a necessity? Risk stratification in an obese community cohort using transient elastography
Author:	Harris, R. *et al*. (2018)
Web Link:	https://doi.org/10.1177/2050640618772944
Appraisal Date:	15/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
61. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
62. Was the cohort recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
63. Was the exposure accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
64. Was the outcome accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
65. (a) Have the authors identified all important confounding factors?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *list the ones you think might be important, and ones the author missed*	
b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
66. a) Was the follow up of subjects complete enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	
67.What are the results of this study?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
68.How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
69.Do you believe the results?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
70. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
71. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell
72. What are the implications of this study for practice?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: • *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *for certain questions, observational studies provide the only evidence* • *recommendations from observational studies are always stronger when supported by other evidence*	

CASP Checklist:

For Cohort Studies

Reviewer Name:	Daniela Jesus
Paper Title:	The role of elastography for liver fibrosis screening in alcoholic liver disease

Author:	Foncea, G. *et al.* (2022) 'The role of elastography for liver fibrosis screening in alcoholic liver disease', *Med Ultrason*, 24(4), pp. 406-413.
Web Link:	https://research-ebsco-com.ezproxy.rgu.ac.uk/c/hin62q/search/details/kxqmd6heej?db=cmedm&limiters=DT1%3A2017-01-01%2F2025-0311%2CFT%3AY&q=transient+elastography&searchMode=boolean&modal=details-bulk-download.
Appraisal Date:	15/12/2025

During critical appraisal, never make assumptions about what the researchers have done. If it is not possible to tell, use the "Can't tell" response box. If you can't tell, at best it means the researchers have not been explicit or transparent, but at worst it could mean the researchers have not undertaken a particular task or process. Once you've finished the critical appraisal, if there are a large number of "Can't tell" responses, consider whether the findings of the study are trustworthy and interpret the results with caution.

Section A: Are the results valid?	
73. Did the study address a clearly focused issue?	☒ Yes ☐ No ☐ Can't Tell

CONSIDER: *A question can be 'focused' in terms of* • *the population studied* • *the risk factors studied* • *is it clear whether the study tried to detect a beneficial or harmful effect* • *the outcomes considered*	
74. Was the cohort recruited in an acceptable way?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Look for selection bias which might compromise the generalisability of the findings:* • *was the cohort representative of a defined population* • *was there something special about the cohort* • *was everybody included who should have been*	
75. Was the exposure accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *were all the subjects classified into exposure groups using the same procedure*	
76. Was the outcome accurately measured to minimise bias?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: *Look for measurement or classification bias:* • *did they use subjective or objective measurements* • *do the measurements truly reflect what you want them to (have they been validated)* • *has a reliable system been established for detecting all the cases (for measuring disease occurrence)* • *were the measurement methods similar in the different groups* • *were the subjects and/or the outcome assessor blinded to exposure (does this matter)*	
77. (a) Have the authors identified all important confounding factors?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *list the ones you think might be important, and ones the author missed*	

b) Have they taken account of the confounding factors in the design and/or analysis?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors*	
78. a) Was the follow up of subjects complete enough?	☐Yes ☐ No ☐ Can't Tell
CONSIDER: • *the persons that are lost to follow-up may have different outcomes than those available for assessment* • *in an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort*	
b) Was the follow up of subjects long enough?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *the good or bad effects should have had long enough to reveal themselves*	
Section B: What are the results?	
79.What are the results of this study?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *what are the bottom line results* • *have they reported the rate or the proportion between the exposed/unexposed, the ratio/rate difference* • *how strong is the association between exposure and outcome (RR)* • *what is the absolute risk reduction (ARR)*	
80.How precise are the results?	☒Yes ☐ No ☐ Can't Tell
CONSIDER: • *look for the range of the confidence intervals, if given*	
81.Do you believe the results?	☒Yes ☐ No ☐ Can't Tell

CONSIDER: • *big effect is hard to ignore* • *can it be due to bias, chance or confounding* • *are the design and methods of this study sufficiently flawed to make the results unreliable* • *Bradford Hills criteria (e.g. time sequence, dose-response gradient, biological plausibility, consistency)*	
Section C: Will the results help locally?	
82. Can the results be applied to the local population?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *Is a cohort study the appropriate method to answer this question* • *If the subjects covered in this study could be sufficiently different from your population to cause concern* • *If your local setting is likely to differ much from that of the study* • *If you can quantify the local benefits and harms*	
83. Do the results of this study fit with other available evidence?	☒ Yes ☐ No ☐ Can't Tell
84. What are the implications of this study for practice?	☒ Yes ☐ No ☐ Can't Tell
CONSIDER: • *one observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making* • *for certain questions, observational studies provide the only evidence* • *recommendations from observational studies are always stronger when supported by other evidence*	

Appendix IX: Data Collection using Audit Tool

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
1	36-45	Male	02/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 24, binge drinking heavely since university, classified 8 - 10 units daily on assessment, 56 - 70 a week .
2	55-64	Male	02/01/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 27, Uss 2018 - fatty liver, not documented on PMH as diagnosis, 26 units a day, 182 a week, drinking depdently, using alcohol since 2014 steadily increasing levels, fibroscan referral mentioned on care plan, not documented if offered.
3	26-35	Male	02/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 29 , 20 UNITS a day drinking depdently, 140 a week
4	36-45	Male	06/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 24, 16 - 24 units daily, drinking depdently,112 - 168 a week alcohol use reported since 2010.
5	26-35	Male	09/01/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 23, 2021-2024, his alcohol use increased to 12 14 pints a night, 24 - 28 units a day, 168 -196 a wee. Drinking depdently, uss abdo 09/01 documents fatty liver, not documented on past medical history.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
6	36-45	Male	14/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	No AUDIT. 4 bottles of whisky weekly (160 units), alcohol increased past 3 years
7	36-45	Male	13/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	No AUDIT, Drinking 10pints a day (20 units) 3 to 4 days a week, 60 - 80 units a week, since covid (2019), stopped few months in 2024. Abstinent previous 3 weeks prior to assessment.
8	55-64	Male	20/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	Binge drinking, AUDIT 21. binge daily 1 - 2 weeks and stop, used alcohol since teenage years,previous detoxifications, abstienet 4 years many years ago, not drinking by time of assessment.
9	65-73	Male	28/01/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT 27, on ultrassound 2017 fatty liver, not documented on past medical history, 28 units a day, 196 a week.
10	74-82	Female	28/01/2025	fatty liver	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT=22 , ultrassound 2024 fatty liver, 1 to 2 bottles of wine daily, 63 units - 126 units a week, seen by ALN fibroscan not offered.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
11	16-25	Female	03/02/2025	fatty liver	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT= 40 , 30 to 35 units a day, 210 to 245 a week, ultrassound 2024 shows fatty liver.
12	46-55	Male	21/01/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT= 22, 10 to 15 cans of lager, 20 to 30 units a day, around 210 units a week.
13	36-45	Male	02/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=24, binge drinking, 3 4 days a week, "heavy", with 1/2 bottle daily (4.5 units). ? How long, documented was drinking in December 24. 31.5 units week without counting in binges.
14	46-55	Male	06/02/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT= 38, also seen by ALN duing this involvement 8 cans of 8.5% lager , 64 units a day, 448 units a week, relapsed 3 months before. Ultrassound 2021 shows fatty liver
15	46-55	Male	04/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT = 25, 4 to 5 Cans stella a night, 8 - 10 units a day, 56 to 70 units a week since 2024.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
16	46-55	Male	11/02/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT= 29, 8 cans lager a day, 16 units, 112 units a week, drinking depdendently for 2 months, prior was drinking daily not experiencing withdrawal, ultrassound 2024 shows fatty liver. Also seen by ALN. Referred to fibroscan by gastro following hospital adm. diagnosed cirrhosis.
17	36-45	Male	12/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT = 35, Binge drinking, Period of abstinence April 24- Feb 25. 1 to 2 litres of vodka 40 to 80 units a day, 280 units - 560 a week. Also seen by ALN
18	36-45	Male	13/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT= 38. ¾ l vodka plus beers on drinking days (most days), 30 units a day, aap. 210 units a week. Alcohol intake increased since 2023. Drinking dependently
19	36-45	Male	17/02/2025	None	Yes	N/A - Male	Yes	No	Yes	No	No	AUDIT= 30, 40 units a day, drinking since he was 18. Period of abstiennece as in rehab. Relapse of 1 month. Referred to Fibroscan 3 months post referral as continued to use alcohol.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
20	26-35	Male	17/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=25, 1/2 litre vodka a day (20 units), 140 units a week, for the past 8 years.
21	26-35	Male	25/02/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=37, 16 cans of fosters, 19 units a day, 133 units a week, alcohol problematic since he was 17, relapse Christmas time 2024.
22	36-45	Male	03/03/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=30, Variable- 2-3 bottles of wine, 9-27 units a day, 136 - 189 units a week, last couple months, also seen by ALN.
23	46-55	Male	13/03/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=24, 1 bottle of wine a day 9 units a day, 63 units a week, last couple of months, binge drinking through life.
24	55-64	Female	03/03.2025	None	N/A - Female	Yes	Yes	No	Yes	No	No	AUDIT=28, 2 bottles of wine a night 18 units a day, 126 units a week, drinking dependently.
25	46-55	Male	05/03/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=24, 8 to 10 beers, 16 to 20 units a day, 112 - 140 units a week, drinking dependently

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
26	36-45	Female	05/03/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT = 24, 1 bottle of white or red wine (9 units) Gin/Vodka/Rum – not measured (approx. 6 units) total 15 units per day – 105 per week
27	65-73	Male	10/03/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=30,"Has cut down to 6-8 units daily and more at weekends", 42-46 + (drinking at harmful levels)
28	46-55	Male	12/03/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=28, approx 40-48 units /a day, 280-336 units a week, reported alcohol use over 4 years, Ultrassound May 2023 shows fatty liver
29	55-64	Male	14/03/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=24, 1 bottle of red wine 9 units to 2 bottles of red wine 18 units per day, 63 units plus a week, not established for how long, PMHx from GP states Alcohol use disorder since 2005, ultrassound Feb 2023 - fatty liver.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
30	65-73	Female	14/03/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT= not documented, drink 1 bottle of wine per day between 7 - 11 bottles of wine per week on average, 63-99 units a week,drinking increased 4 years ago.
31	26-35	Male	28/03/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=not documented, 8 - 12 cans a day, 16 to 24 units a day, 112-168 units a week
32	36-45	Female	07/02/2025	None	N/A - Female	Yes	Yes	N/A	Yes	N/A	No	AUDIT=26, 1 to 2 bottles of wine a night, 9 to 18 units a day, 63-126 units a week, not clear how long, referred in March seen in April, at least couple months.
33	55-64	Male	28-Mar-25	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT= not documented,Fatty liver documented on GP referral as PMHx. 2 bottles of wine (16 units) to 2 and 1/2 (20 units), 112-140 units a week, drinking depdently, reports years of alcohol misuse, not clear how long on this episode, referred in March seen in May, more that couple months.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
34	46-55	Female	31/03/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT=24, 10 units a day, 70 units a week, since lockdown 2019
35	16-25	Male	7.4.2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=25, 9 cans of beer, 18 units a day, 126 units a week. Length of time "a number of years", "recently more problematic".
36	36-45	Female	11/04/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT=24, Drinking one bottle of wine daily for an extended period, 63 units a week, more than 2 months
37	16-25	Female	15/04/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT= not documented , consumes 10-15 units most days in the form of a bottle of wine or shared vodka, 70-105 units a week, following this pattern for about 7 months.
38	55-64	Female	15/04/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT=34, 40 units per week.
39	16-25	Male	17/04/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=28, 20 cans a day, 40 units, 280 units a week, not documented how long, but drinking dependently.
40	55-64	Male	22/04/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	[illegible] a day (9units) and weekends would start drinking from 1 pm to finish at 2 am. 63 + units a week, years.

Patient No.	Age	Gender	Date of Referral to APT	Current diagnosis of Alcoholic Liver Disease?	Drinking more than 50 units of alcohol a week for several months at time of referral? (Applicable for males/ Not applicable for females)	Drinking more than 35 units of alcohol a week for several months at time of referral? (Applicable for females/ Not applicable for males)	Referral for Transient elastography offered? (Applicable for patients fitting criteria)	Patient declined referral for Transient elastography? (Applicable for patients fitting criteria)	Referral for Transient elastography accepted?	Referral for Transient elastography declined?	Did the patient DNA the Transient elastography appointment?	Free text
41	55-64	Male	22/04/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=30, Intake 27.6u daily, app. 193 units per week, no dry days for years. Drinking at dependent levels Uss 2019 - fatty liver not acknoledged on diagnosis.
42	36-45	Female	23/04/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	AUDIT= 32, 3 bottles of white wine a day 11.5% - approx. 24 units per day, 168 units a week. Had had detox in February 2025 disengaged, assessed May 2025.
43	26-35	Male	23/04/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=32, 16-25 units daily, 112 - 175 units a week.
44	16-25	Female	23/04/2025	None	N/A - Female	Yes	No	N/A	Not referred	N/A	Not referred	wine a night, approx 27 units/a night, 189 units a week. 10 year problematic history of drinking since leaving uni.
45	36-45	Male	23/04/2025	None	Yes	N/A - Male	Yes	No	Yes	No	No	AUDIT=, 60-100 units a week,
46	36-45	Male	24/04/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT = 40 , 0-60 units, "drinking progressed for the last 5 years".
47	26-35	Male	25/04/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	Audit = 29, Alcohol – consuming 8 x 500ml cans of 5% Cronenbourg Lager daily, app. 112 units a week. Had Fibroscan referral in 2023 - DNA

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48	55-64	Male	16/06/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=31, 8-12 cans Budweiser a day, 112-168 units a week, relapsed 9 months prior to date of assessment 30/06/2025
49	55-64	Male	18/06/2025	None	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT =34,1 litre of whiskey a day for last 3 months, 280 units a week.
50	26-35	Male	20/06/2025	fatty liver	Yes	N/A - Male	No	N/A	Not referred	N/A	Not referred	AUDIT=25, 8 x 440ml cans of 5% lager daily (18 units) for years. Uss abdo 2024 - Fatty liver. Not documented on medical history