PROJECT PROPOSAL

2025/6 Academic Entry Year – Cohort 4

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Project Details

Title: A primary care intervention to support patients and healthcare professionals in managing obesity-related liver disease in minority ethnic communities

Summary: Liver disease is rising globally, due to obesity, inactivity and poor nutrition. Initially, these factors promote excess liver fat, which is the primary feature of metabolic-associated-steatotic-liver-disease (MASLD). Over time this may progress to more advanced disease (liver inflammation and fibrosis) which exaggerates morbidity and mortality. Unfortunately, as liver disease is often asymptomatic early-on, patients commonly present to hospital with advanced disease that is difficult to treat. Earlier intervention in primary care is one solution to this problem, however, staff in general practice often lack the knowledge and confidence to proactively manage MASLD. Moreover, patients frequently know little about MASLD, including risk factor management. This is exemplified by the belief that all liver disease is alcohol related - an additional barrier to engagement of individuals from minority-ethnic communities. This studentship has two aims: 1) to co-develop and test a culturally sensitive education intervention in primary care (GPs and AHPs) focused on patient identification and early intervention; 2) to co-develop and test a culturally sensitive patient education and self-management intervention for individuals with or at high-risk of MASLD. A central theme of this research is to produce interventions able to engage those most in need, particularly individuals in minority ethnic groups.

Aim: To co-develop and investigate the impact of primary care education and patient self-management interventions for the management of obesity-related liver disease in minority ethnic communities.

Background: In high-come nations liver disease is rising due to increasing rates of metabolic associated steatotic liver disease (MASLD)(1). Obesity, inactivity and poor nutrition underpin this trend, which is amplified by type 2 diabetes (T2DM). In this population, ~40% have advanced liver disease(2), characterised by hepatic inflammation and fibrosis. Such individuals possess a heightened risk of cardiovascular and end-stage liver disease(3).

Whilst liver disease develops over time (4), the lack of symptoms early-on results in patients presenting to hospitals acutely unwell, with advanced disease which is difficult to treat. The lack of attention in primary care and the community underpins this problem(5). Qualitative research shows that healthcare professionals in primary care often lack knowledge about liver disease and do not have the confidence to identify and support patients at-risk (6,7). Moreover, these patients often lack the knowledge and skills to help self-manage their condition, yet welcome tailored support(8).

MASLD is overrepresented in poorer communities, often including ethnic minority groups(9). The risk is especially high in south Asian individuals given their propensity for ectopic fat storage and T2DM(10). Moreover, the assumption that liver disease results from alcohol abuse renders patients less willing to engage with health services. Therefore, in underserved populations, interventions seeking to proactively identify and manage MASLD require bespoke solutions tailored to cultural and religious sensitivities.

Research Plan: This mixed-methods studentship includes two integrated projects and will be supported by research teams in Leicester and Nottingham i.e. DESMOND, EDEN, Midland's Liver Research Alliance, Centre for Ethnic Health Research.

Leicestershire Healthcare Inequalities Improvement DTP

1 - Co-development and testing of a MASLD educational intervention for healthcare professionals in primary care

The Midland's Liver Research Alliance has co-created an educational intervention (Simplifying Liver Disease) seeking to improve the knowledge and confidence of GPs and AHPs regarding the management of MASLD in primary care. However, this resource has not been tailored for use in ethnic minority communities and needs testing in an RCT.

Using co-development techniques, the student will work with patients, general practice staff and community leaders to refine the Simplifying Liver Disease intervention to be culturally appropriate for use in ethnic minority (particularly south Asian) communities.

An RCT will then be undertaken to determine the impact of the intervention on knowledge and confidence (primary outcome) amongst healthcare practitioners in primary care.

2 – Co-development and testing an education and self-management intervention for patients in primary care with or at-risk of MASLD

Building on structured education resources for T2DM (DESMOND), co-creation techniques will be used to develop a culturally sensitive patient education and self-management intervention for people with or at-risk of MASLD. Based in minority ethnic communities, the intervention will be tested in a pilot RCT. The co-primary outcomes will be body weight and scores from a validated MASLD patient-report outcome tool.

Expected outcomes and impact: The project will provide the student with a comprehensive research training experience in mixed-methods and digital health technology. The research will produce tangible IP and resources designed to improve the quality of healthcare provision in communities recognised as most in-need.

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