



EMPHNET's Research Digest

A Global Research Priority Agenda to Advance Public Health Responses to Fatty Liver Disease

Introduction

Non-alcoholic fatty liver disease (NAFLD), a condition estimated to affect approximately 38% of adults globally, is a silent epidemic that is quietly yet profoundly reshaping our healthcare landscape. This condition does not merely affect individuals; it reverberates through communities and societies, generating significant public health and economic challenges that we are only beginning to grasp.

As our understanding of NAFLD continues to evolve, it is clear that a robust multidimensional response from the global health community is urgently needed. While recent research efforts have brought much-needed attention to this disease, there is a pressing need to systematically organize and prioritize our research endeavors to effectively tackle NAFLD.

The aim of this paper, published in *Journal of Hepatology*, titled "[A Global Research Priority Agenda to](#)

[Advance Public Health Responses to Fatty Liver Disease.](#)" is to co-create an aligned, prioritized research agenda for NAFLD, providing a clear roadmap for liver health community to collaborate and focus their efforts. This agenda emerges from an in-depth process involving multiple rounds of expert reviews and feedback, analysis, and in-person debates, mirroring the very multidisciplinary collaboration it seeks to foster.

In creating this consensus-built research agenda, the study aspires to foster a step-change in addressing NAFLD, by not just treating it as a medical condition, but mitigating its individual and societal harms. More importantly, the objective is to transform our response to this disease, shifting our focus from merely managing the consequences to proactively altering its natural history through effective prevention, early identification, timely treatment, and comprehensive care.

Methodology

The study utilized a comprehensive Delphi methodology to create an informed research agenda to address NAFLD. A diverse panel of experts that included EMPHNET's Director of the Center of Excellence for Applied Epidemiology was established for this process. They developed research priorities around seven key topics, which were later narrowed to six following detailed discussions. The collected responses were carefully analyzed and used to revise the research priorities, resulting in a research agenda grounded in expert consensus, paving the way for a coordinated global response to NAFLD.

The Outcomes

The results of the study have culminated in a consensus on six primary domains for addressing NAFLD. Each domain presents a unique aspect of the disease, ranging from understanding its human and economic impact to the

development of effective leadership and policy interventions. Within each of these domains, distinct priorities were identified, forming a comprehensive roadmap for multifaceted action against NAFLD.

Domain 1: Human and Economic Burden

Investigations should be initiated to deepen our understanding of the burden of NAFLD, particularly in terms of health-related quality of life, within the general populace and distinct high-risk groups. The study suggests cohort studies to prospectively monitor the outcomes of patients with defined liver disease phenotypes like non-alcoholic steatohepatitis (NASH), NASH with fibrosis, cirrhosis, and hepatocellular carcinoma. There is a pressing need for further research on the socio-economic costs of NAFLD, encompassing both direct and indirect costs. Efforts should also be made to develop and validate risk prediction models, aimed at forecasting hepatic and extrahepatic outcomes, thereby informing clinical decision making. It's imperative to report data in a disaggregated form, delineated by sex, race, ethnicity, age, socioeconomic status, education level, and other variables linked to inequalities.

Domain 2: Defining and Implementing Models of Care

Determining the effectiveness of varying models of care for NAFLD is crucial, particularly their impact on patient outcomes and cost-effectiveness. Pediatric populations should not be overlooked, and multidisciplinary models of care need validation within this group. The performance of risk prediction models should be evaluated across different populations to ensure that they can be customized to suit diverse groups. Advancements in diagnostic processes can be achieved by validating non-invasive tests to enable early detection, prognosis, and tracking of liver disease progression. Novel digital technologies such

as artificial intelligence hold promising potential and should be incorporated within healthcare settings. Furthermore, digital health applications, interventions, and therapeutics should be assessed for their role in encouraging patients to modify their lifestyle behaviors. Lastly, further exploration into artificial intelligence's potential to improve diagnostics for NAFLD is recommended.

Domain 3: Patient and Community Perspectives

In terms of patient and community perspectives, it is important to conduct research that sheds light on the needs and experiences of NAFLD patients and communities at risk. This includes exploring their viewpoints on prevention, treatment, care, as well as mental health. Evaluating the efficacy of patient-led self-care programs in improving NAFLD outcomes is also suggested. New technologies like digital health applications, mobile interventions, and therapeutics could potentially enhance patient engagement in their own treatment and care, and their potential should be explored. Interventions aiming to reduce the stigma of liver disease among patients, the public, and healthcare providers should also be evaluated for their effectiveness.

Domain 4: Education and Awareness

Comparative population-based surveys are recommended to assess NAFLD knowledge among the general population and high-risk groups. This would subsequently guide the development of effective awareness-raising strategies. Healthcare providers' educational needs, especially those in primary care, diabetes/endocrinology, obesity medicine, and cardiology, should be identified and addressed. It is also crucial to assess the effectiveness of strategies aiming to impact NAFLD knowledge, attitudes, beliefs, and practices (KABPs) among healthcare professionals and high-risk groups.

Domain 5: Treatment and Care

Assessing the efficacy and cost-effectiveness of multifaceted strategies to prevent cirrhosis and hepatocellular carcinoma related to NAFLD is critical. The role of non-invasive tests in directing treatment indication, response, and discontinuation, as well as in predicting outcomes, should be studied. The impact of patient-centered decision making on NAFLD treatment and care outcomes also requires evaluation. It is necessary to assess the efficacy and cost-effectiveness of optimal management of related diseases such as diabetes and obesity on NAFLD and other liver-related outcomes.

Domain 6: Leadership and Policies for the Fatty Liver Disease Public Health Agenda

Regular studies of national and sub-national policies and guidelines for preventing and managing NAFLD can identify trends and gaps and assess implementation effectiveness. Policy successes and failures in addressing non-communicable diseases should be analyzed to inform the development of NAFLD -specific strategies. Lastly, the mentions of NAFLD within patient groups and professional societies outside the field of hepatology should be monitored, studied, and reported.

Conclusion

Delivering comprehensive health system and public health responses to NAFLD necessitates a significant shift in our global health perspective. This includes fostering an expanded community of practice, emphasizing collective action, and fostering collaboration.

The consensus NAFLD research agenda, born from this unique global multidisciplinary effort, provides a foundation for addressing this silent public health threat. This agenda, if effectively utilized, could be pivotal in turning the tide on this pervasive disease.

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