Low awareness of MASLD/MASH and the need for public policies

Professor Jeffrey V Lazarus [Jeffrey.Lazarus@ISGlobal.org]

Professor of Global Health, CUNY Graduate School of Public Health & Health Policy, New York, NY, USA
Head, Health Systems Research Team, ISGlobal, Hospital Clínic, Barcelona, Spain
Affiliated Professor, WHO Collaborating Centre for Research and Training in the Patient Perspective on Medicines Use, Univ of Copenhagen
Director, Global Think-tank on Steatotic Liver Disease and MASH Cities
Chair, "Healthy Livers, Healthy Lives" (an AASLD, ALEH, APASL, and EASL collaboration)

CUNY SPH GRADUATE SCHOOL OF PUBLIC HEALTH & HEALTH POLICY

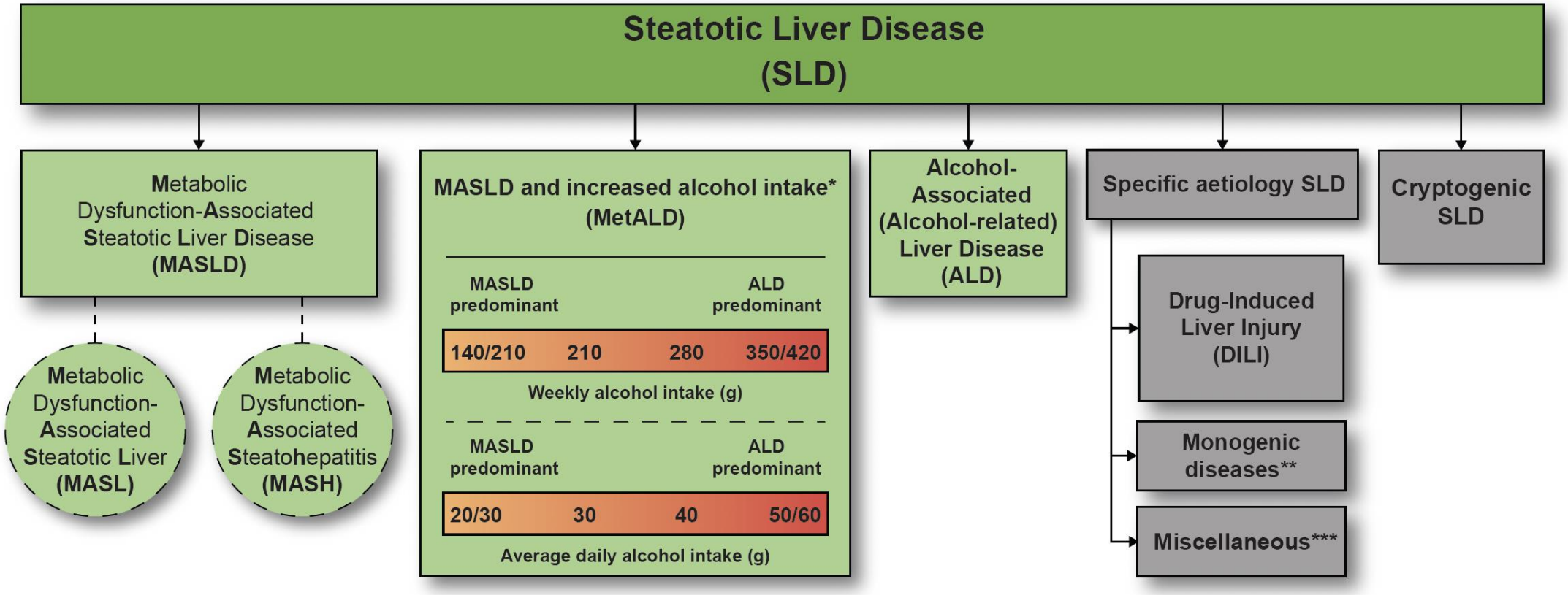
ISGlobal Barcelona Institute for Global Health

CLÍNIC BARCELONA Hospital Universitari

UNIVERSITAT DE BARCELONA

@JVLazarus

Consensus nomenclature change for NAFLD, 2023



*Weekly intake 140-350g female, 210-420g male (average daily 20-50g female, 30-60g male)
**e.g. Lysosomal Acid Lipase Deficiency (LALD), Wilson disease, hypobetalipoproteinemia, inborn errors of metabolism
***e.g. Hepatitis C virus (HCV), malnutrition, celiac disease, human immunodeficiency virus (HIV)

Source: Kanwal, Tetri, Loomba, Rinella. Metabolic dysfunction-associated steatotic liver disease (MASLD) in context: Implications for the AASLD clinical practice guidance on nonalcoholic fatty liver disease. *Hepatology* 2023.
Adapted from: Simultaneously published in the AASLD, ALEH, and EASL journals**.** Rinella, Lazarus, Ratziu…Newsome on behalf of the NAFLD Nomenclature consensus group. A multi-society Delphi consensus statement on new fatty liver disease nomenclature *Hepatology* 2023; Rinella *et al. Journal of Hepatology* 2023; Rinella *et al. Annals of Hepatology* 2023.

MASLD diagnostic criteria

Steatosis or undergoing evaluation for suspected steatosis

+

One or more of the following in the presence of confirmed or suspected hepatic steatosis

- **Diabetes/pre-diabetes:** fasting serum glucose ≥100 mg/dL or 2-hour post-load glucose levels ≥140 mg/dL or HbA1c ≥5.7% or type 2 diabetes mellitus (T2DM) or anti-diabetic treatment

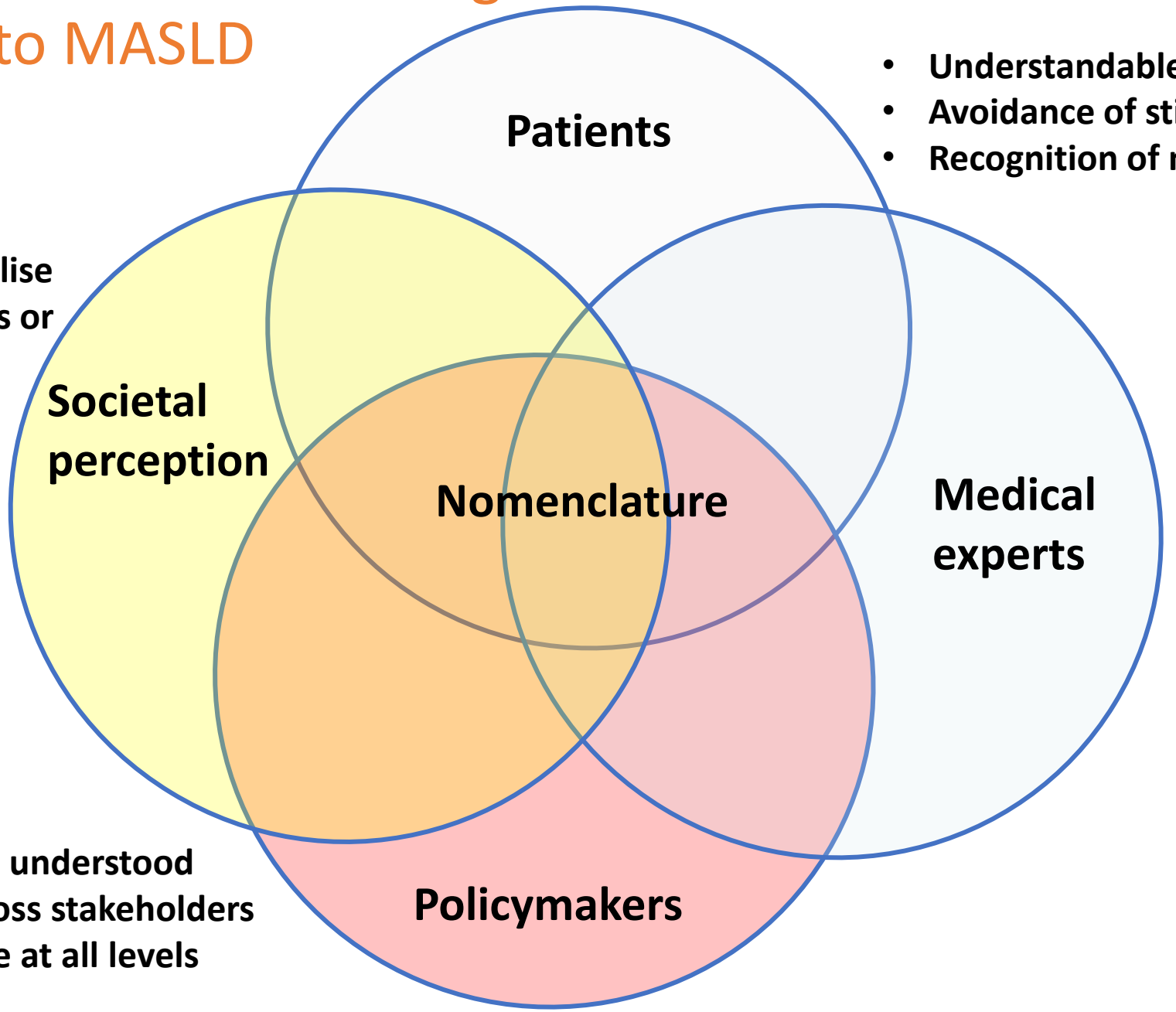
- **Central obesity:** body mass index (BMI) > 25 kg/m2 (23 Asia) or waist circumference >94 cm (M), 80 cm (F), or ethnically adjusted for Asian populations

- **Hypertension (HTN):** Blood pressure > 130/85 mmHg or use of antihypertensive therapy

- **Metabolic dyslipidaemia:**
  - Plasma triglycerides ≥ 150 mg/dL or use of lipid-lowering therapy
  - Plasma high-density lipoprotein (HDL) cholesterol ≤40 mg/dL (M), or ≤50 mg/dL (F) or use of lipid-lowering therapy

Source: Simultaneously published in the AASLD, ALEH, and EASL journals**.** Rinella, Lazarus, Ratziu…Newsome on behalf of the NAFLD Nomenclature consensus group. A multi-society Delphi consensus statement on new fatty liver disease nomenclature *Hepatology* 2023; Rinella *et al. Journal of Hepatology* 2023; Rinella *et al. Annals of Hepatology* 2023.

Consensus nomenclature change from NAFLD to MASLD

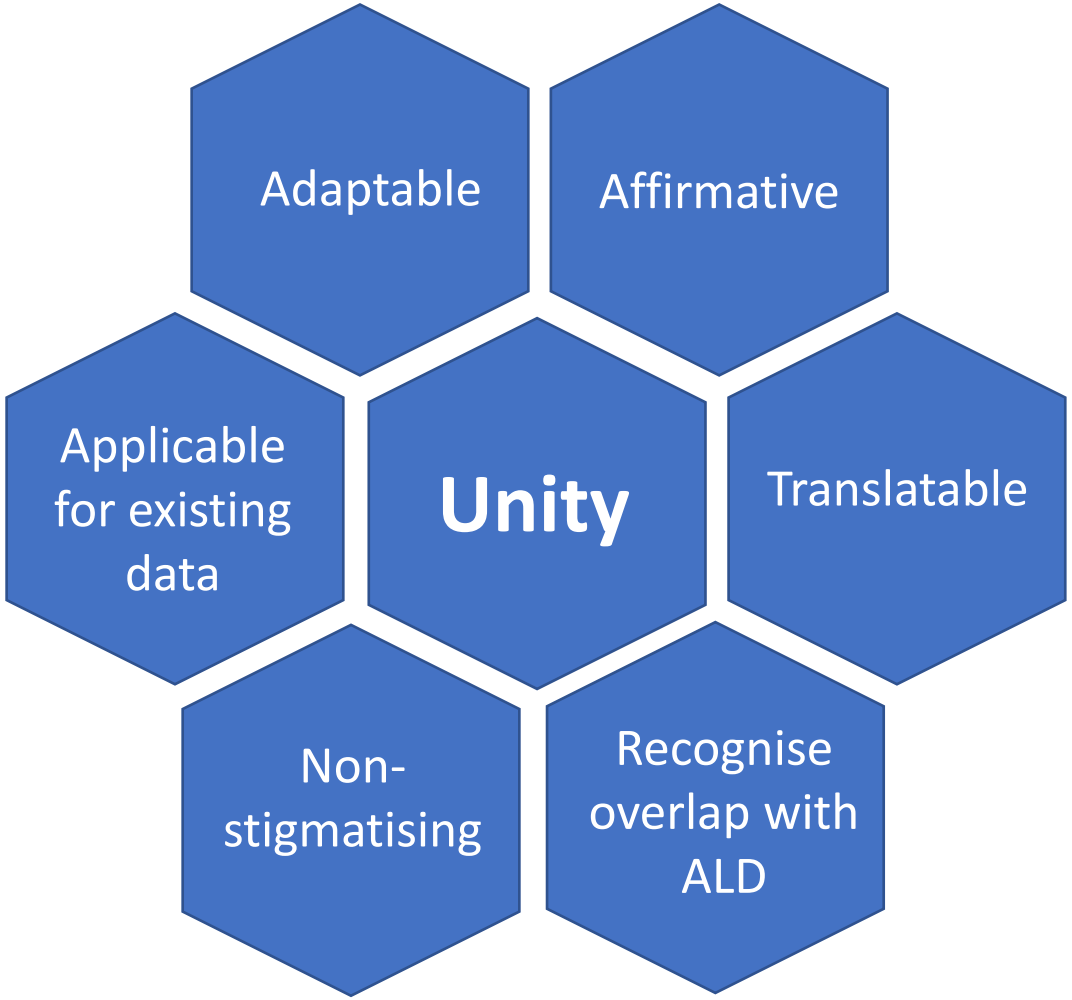


- Understandable
- Avoidance of stigma
- Recognition of multimorbidity

- Should not marginalise or stigmatise groups or individuals

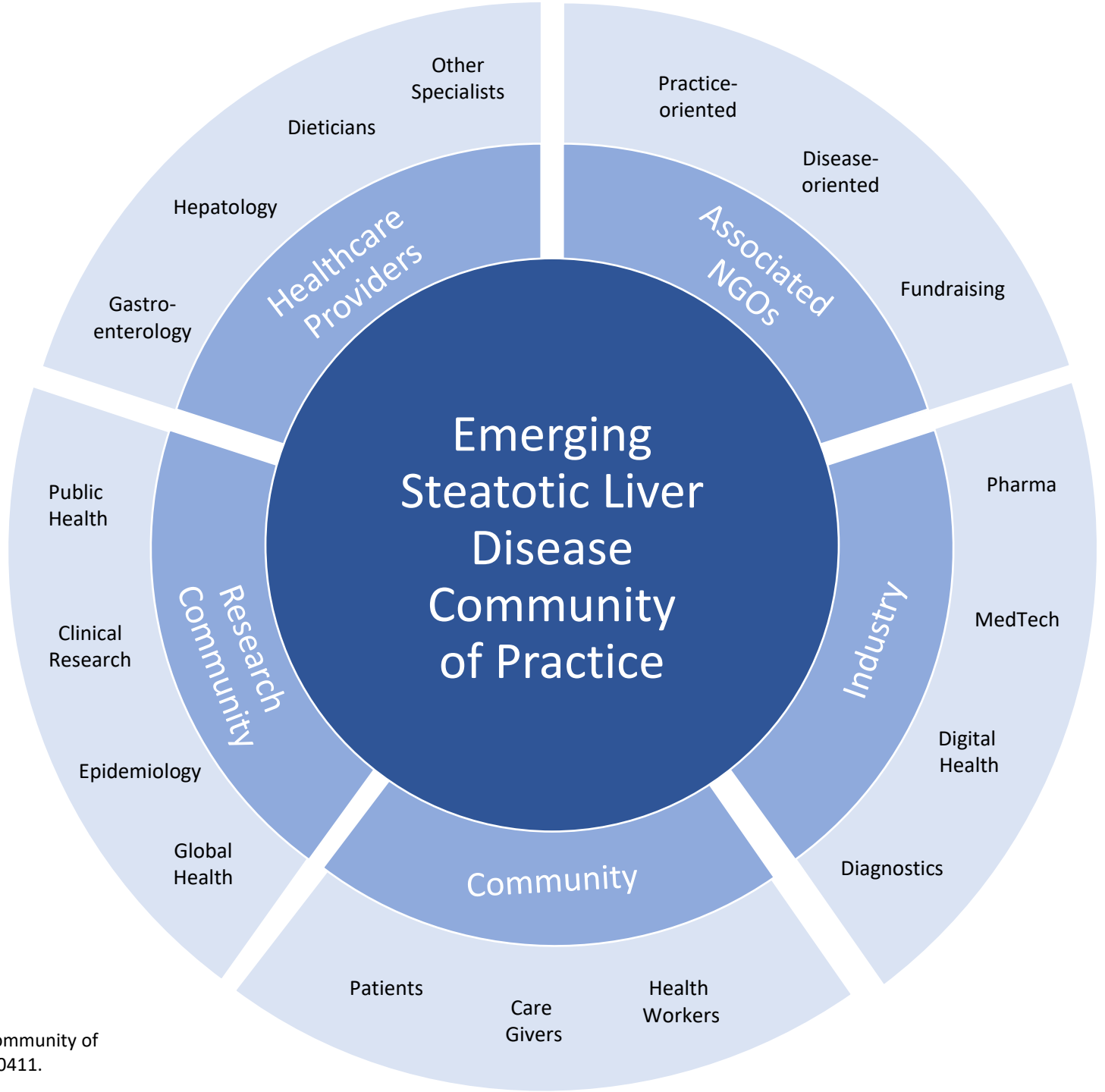
- Accuracy and precision
- Clear defining characteristics
- Clinical care pathway refinement
- Multi-disiciplinary teams and models of care

- Disease impact understood
- Awareness across stakeholders
- Policies in place at all levels



Impact on the field and related fields

Expand the community of practice

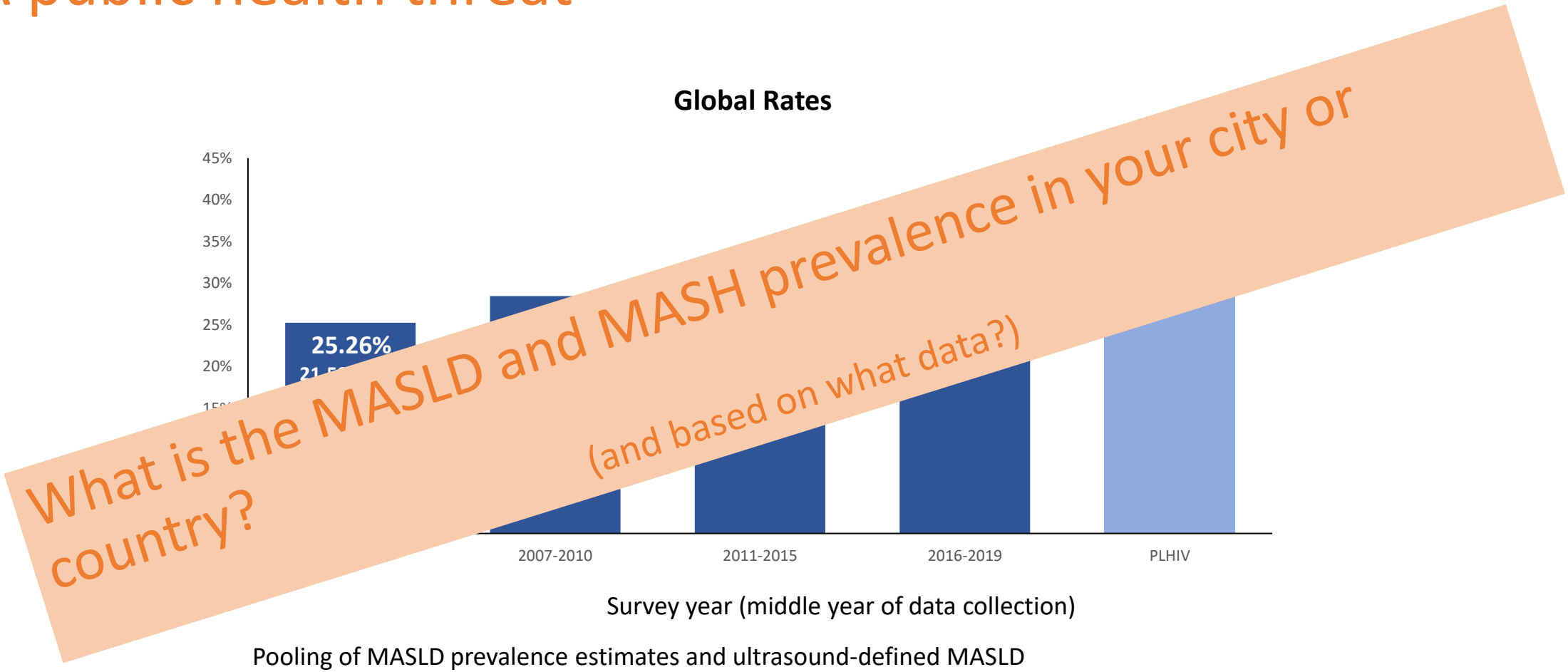


Source: Lazarus, JV *et al.* It is time to expand the fatty liver disease community of practice. *Hepatology*. 2023 Jun 23. doi: 10.1097/HEP.0000000000000411.

Beyond a liver-gut focus: the evolution of gastroenterology and hepatology in challenging the obesity and steatotic liver disease paradigm

Source: Brennan PN, *et al.* Beyond a liver-gut focus: the evolution of gastroenterology and hepatology in challenging the obesity and steatotic liver disease paradigm. *Gut.* 2023 Oct 28:gutjnl-2023-330771. doi: 10.1136/gutjnl-2023-330771.

Global MASLD prevalence is high and rising: A public health threat



Pooling of MASLD prevalence estimates and ultrasound-defined MASLD

Data are displayed as prevalence (95% CI)

Sources: Younossi ZM *et al.* The global epidemiology of nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH): a systematic review. *Hepatology*. 2023.

*Manzano-Nunez R. *et al*. Uncovering the NAFLD burden in people living with HIV from high- and middle-income nations: a meta-analysis with a data gap from Subsaharan Africa. *JIAS*. 2023.

Obesity & metabolic syndrome are major drivers of the MASLD increase

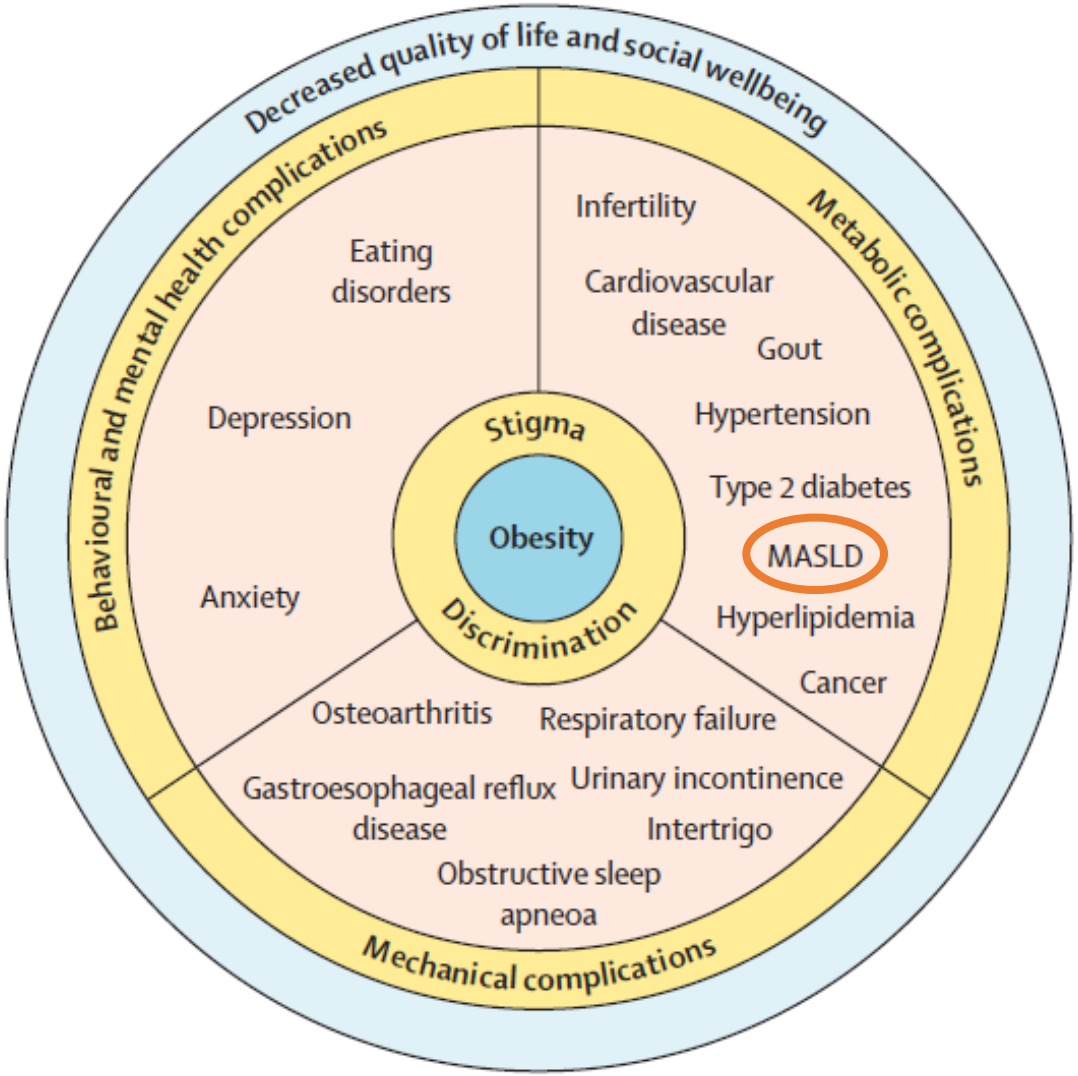
Obesity prevalence map

What is the obesity prevalence in your city region or country?

(and based on what data?)

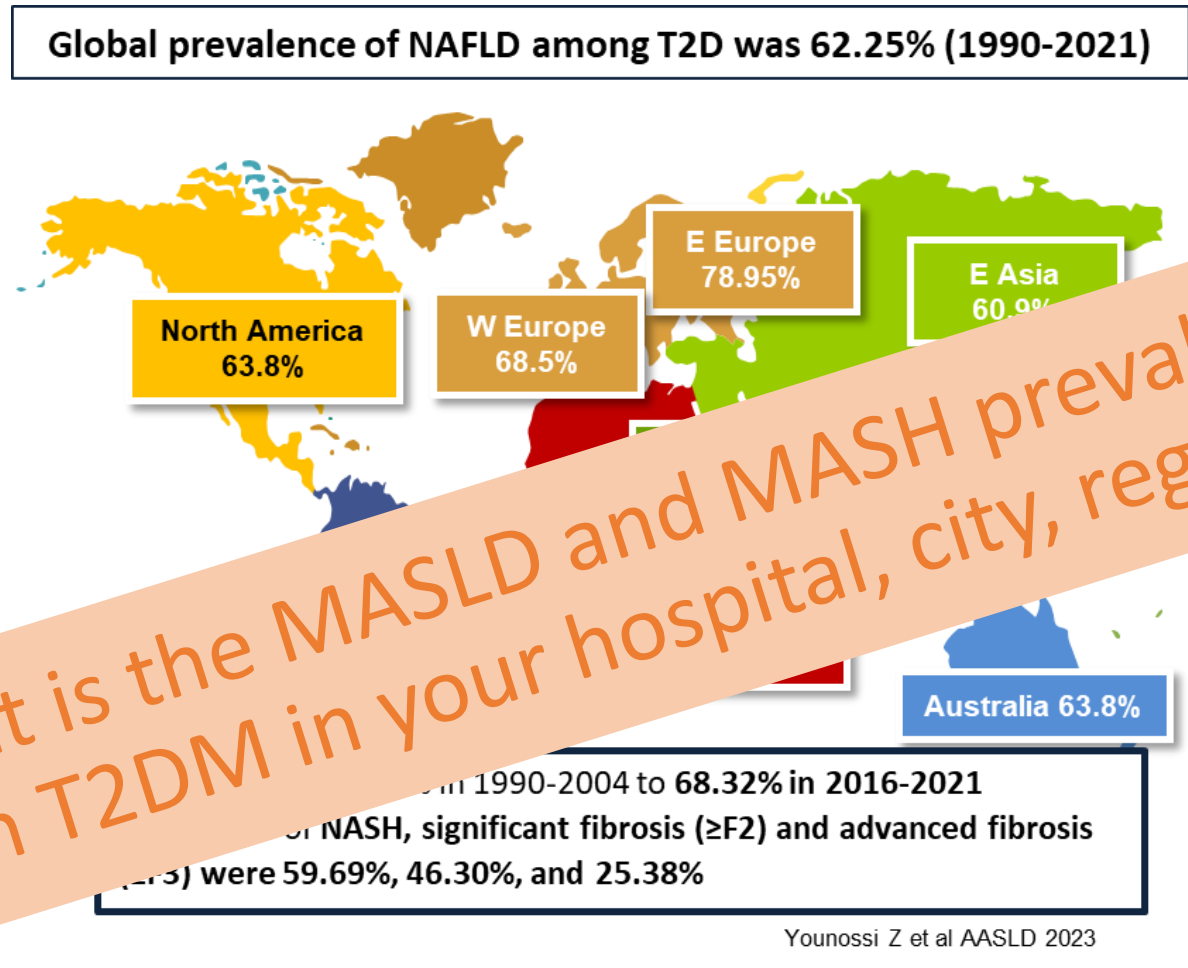
Source: World Obesity Federation: https://data.worldobesity.org/region/who-africa-region-2/#data_prevalence

Obesity in adults – a major MASLD and MASH risk factor



Source: Lingvay I, Cohen RV, le Roux CV, Sumithran P. Obesity in adults. *The Lancet* 2024.

Global MASLD prevalence in patients with T2DM



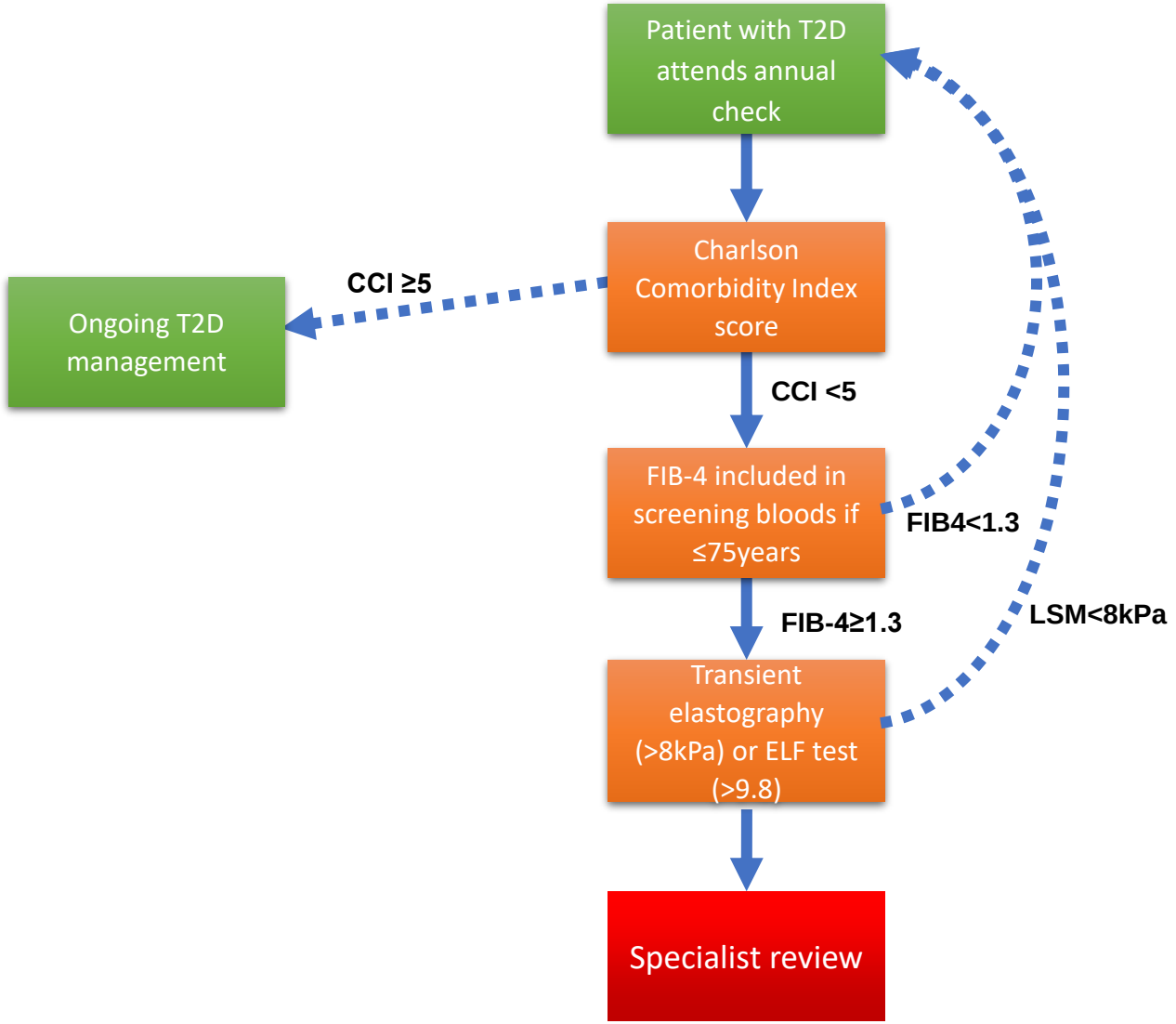
What is the MASLD and MASH prevalence in patients with T2DM in your hospital, city, region, country?

- 37.3%[†+] have MASH
- 17.0%[♀] have advanced fibrosis

[*]A 2023 systematic review and meta-analysis found a **65%** MASLD prevalence in patients with T2DM
[†]A 2023 systematic review and meta-analysis found a **32%** MASH prevalence in patients with T2DM
[+]A 2023 prospective study of 330 patients undergoing liver biopsy found a 58% MASH prevalence in those with T2DM
[♀]A 2023 systematic review and meta-analysis found a 15% advanced fibrosis prevalence in patients with T2DM

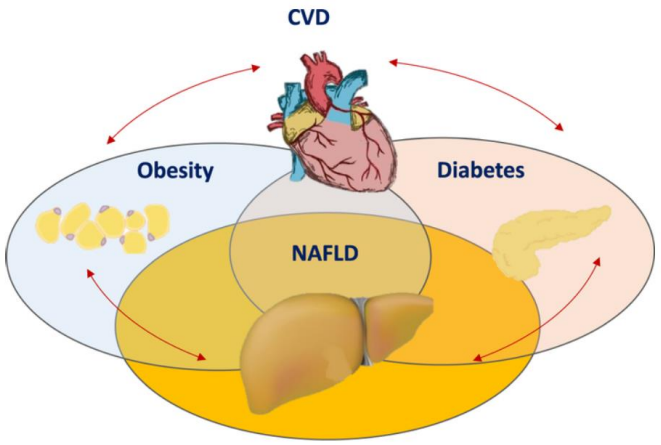
Sources: Younossi ZM *et al.* The global epidemiology of NAFLD and NASH in patients with type 2 diabetes: A systematic review and meta-analysis. *J Hepatol.* 2019;71:793.
Castera L *et al.* High Prevalence of NASH and Advanced Fibrosis in Type 2 Diabetes: A Prospective Study of 330 Outpatients Undergoing Liver Biopsies for Elevated ALT, Using a Low Threshold. *Diabetes Care.* 2023;46(0):1-9.
En Li Cho E *et al*. Global prevalence of non-alcoholic fatty liver disease in type 2 diabetes mellitus: an updated systematic review and meta-analysis. *Gut.* 2023 Jul 25:gutjnl-2023-330110.

Liver health check in all people with T2D, to start

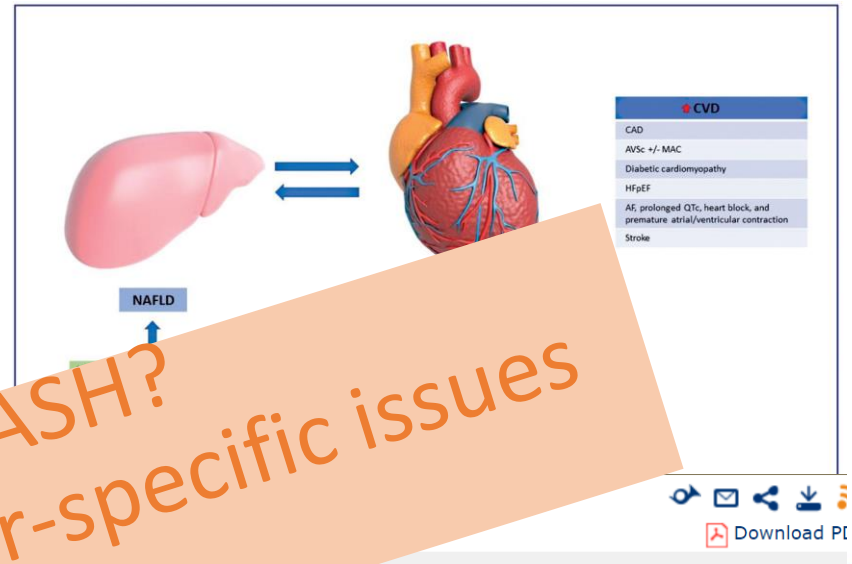


Source: Abeysekera *et al. Lancet GastroHep* 2024.

MASLD as a cardiovascular risk factor



Source: Schattenberg…Lazarus JV. A multistakeholder approach to innov… *Communciations Medicine* 2023



Do cardiologists know about MASLD/MASH?
Does preventive cardiology include liver-specific issues like MASLD screening?

Download PD

…ar Diseases: A Contributor or Comorbidity?

…Wilson Tang , Mario Rodriguez , Kathleen E. Corey , Arun J. Sanyal , Patrick S. Kamath , …Bozkurt , Hafeez Ul Hassan Virk , Gregg S. Pressman , Jeffrey V. Lazarus , Hashem B. El-Serag , Chayakrit Krittanawong

Arteriosclerosis, Thrombosis, and Vascular Biology

Journal of H…
Hypertension

…ovanni Targher[2,*]

Duell P *et a…* …ovascular risk: a scientific statement from the American H… *…rnb Vasc Biol.* 2022;42(6):e168-e185.

CURRENT OPINION

Cardiovascular risk in patients with nonalcoholic fatty liver disease: looking at the liver to shield the heart

Curr Opin Lipidol 2020;31:364-366.

Kenneth Cusi[a,b] and Eddison Godinez Leiva[b]

AHA SCIENTIFIC STATEMENT

Nonalcoholic Fatty Liver Disease and Cardiovascular Risk: A Scientific Statement From the American Heart Association

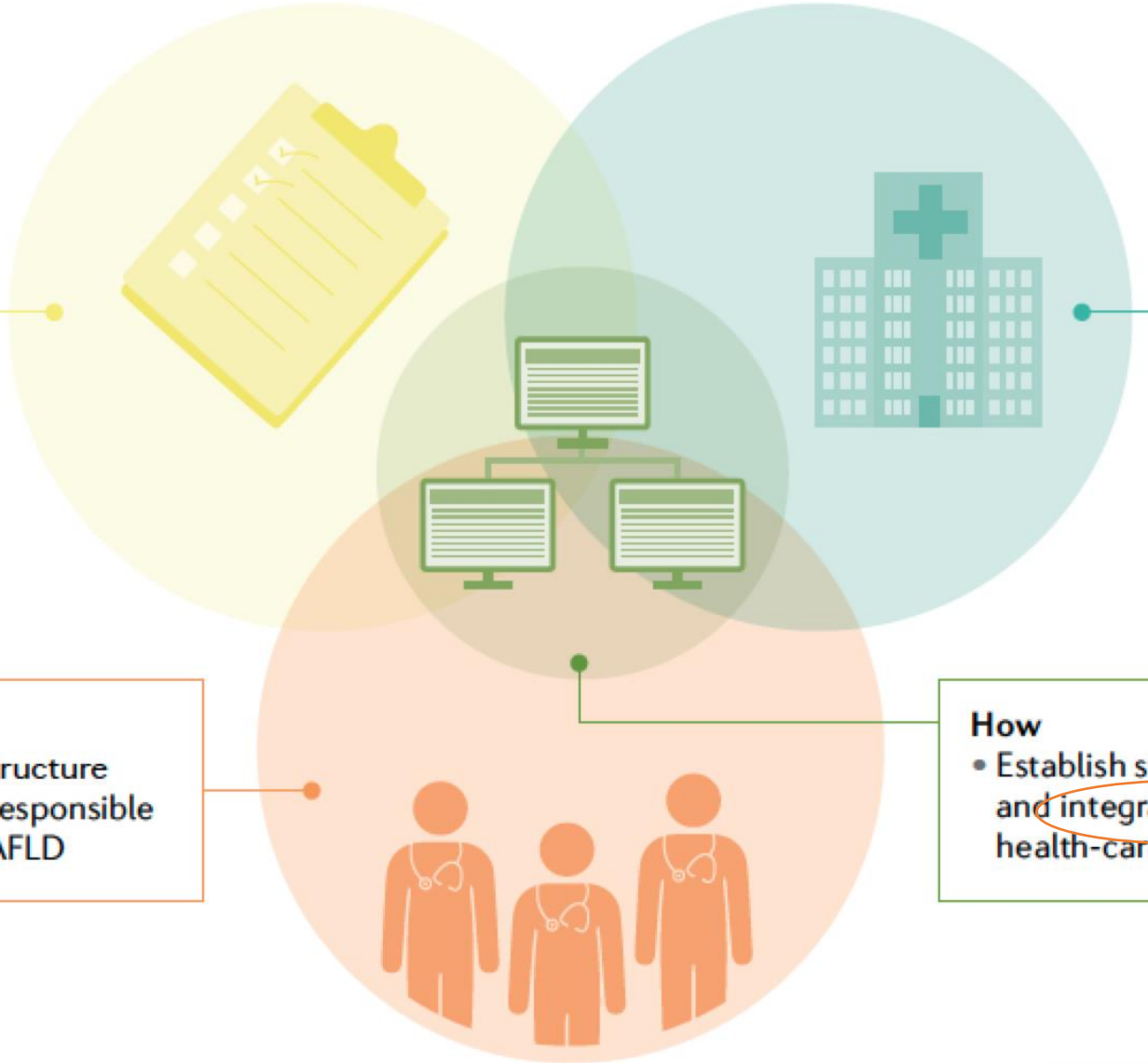
P. Barton Duell, MD, Chair; Francine K. Welty, MD, Vice Chair; Michael Miller, MD; Alan Chait, MD; Gmerice Hammond, MD, MPH; Zahid Ahmad, MD; David E. Cohen, MD, PhD; Jay D. Horton, MD; Gregg S. Pressman, MD; Peter P. Toth, MD, PhD; on behalf of the American Heart Association Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Hypertension; Council on the Kidney in Cardiovascular Disease; Council on Lifestyle and Cardiometabolic Health; and Council on Peripheral Vascular Disease

@JVLazarus

A need to improve MASLD & MASH models of care

What
- Develop guidance on screening and testing with non-invasive tests
- Establish patient-centred pathways tailored to the disease stage
- Outline actions to prevent disease progression
- Develop guidance on treatment strategies related to disease stage

Where
- Articulate the roles of and interactions between primary, secondary and tertiary care providers
- Establish where co-location of services for the treatment of NAFLD and common comorbidities is feasible

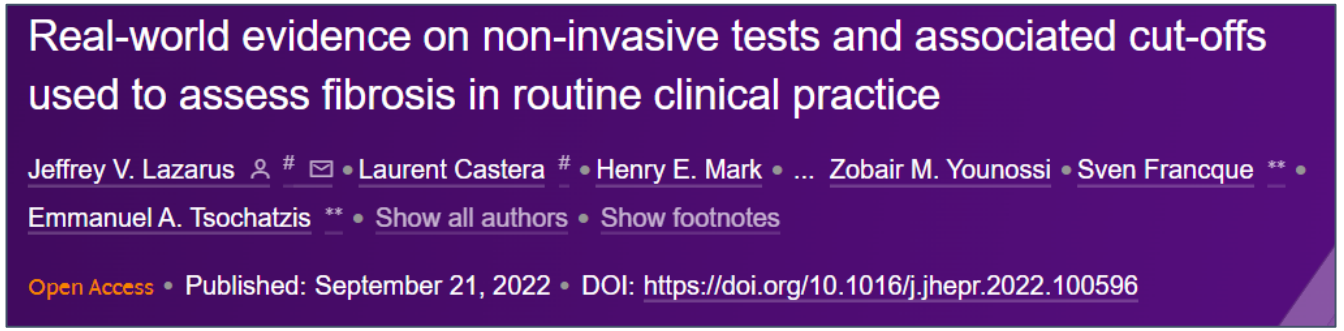


Who
- Define the composition and structure of the multidisciplinary team responsible for managing patients with NAFLD

How
- Establish systems for coordinating and integrating care across the health-care system

Source: Lazarus JV, *et al.* Defining comprehensive models of care for NAFLD. *Nat Rev Gastroenterol Hepatol* 2021;18(10):717-29.

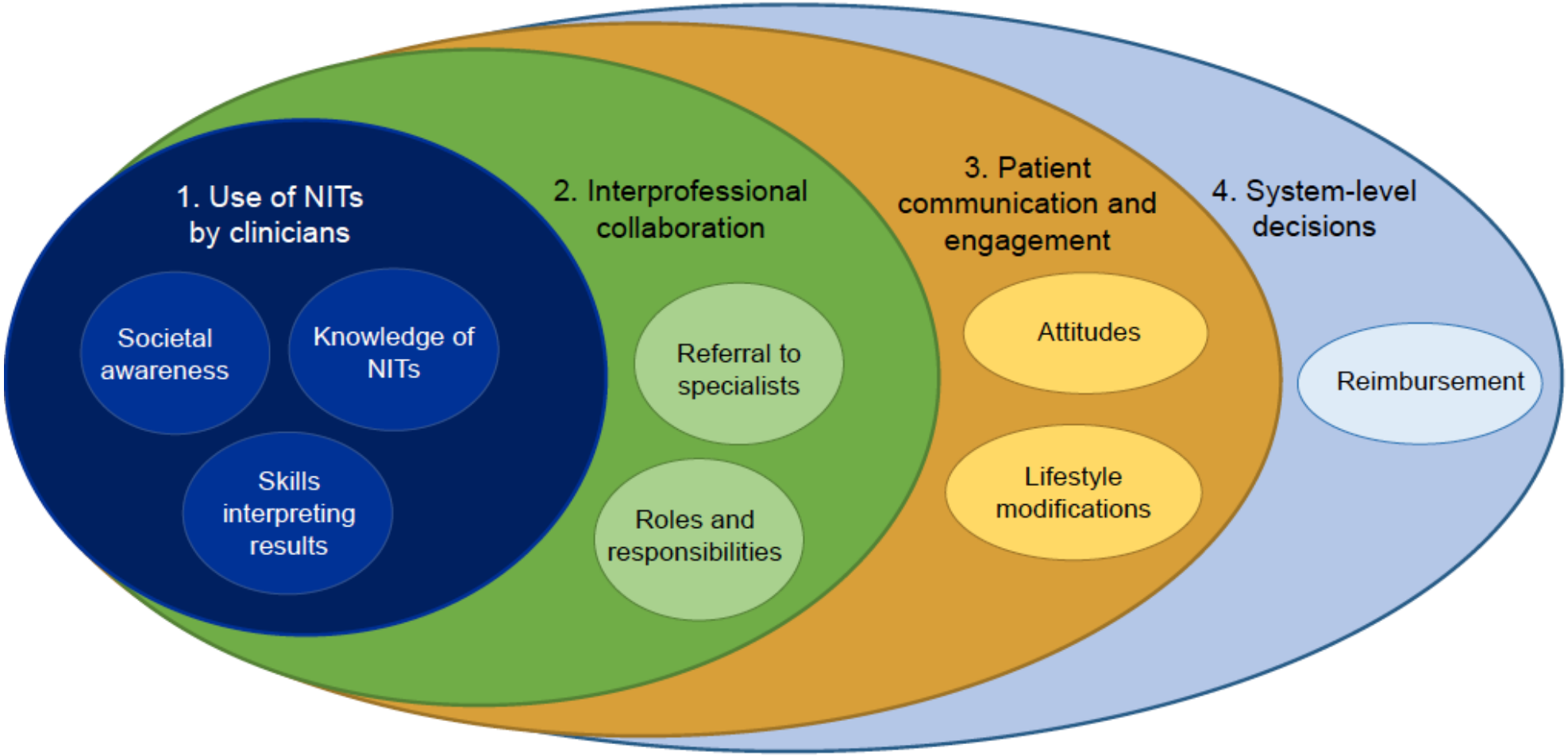
NITs to assess fibrosis levels



- Non-invasive tests (NITs) are valuable in identifying patients with MASLD and fibrosis who require specialist care.
- Among 35 survey respondents, 14 different NITs were used, of which FIB-4 and transient elastography were the most common.
  - **Cut-offs used for the same NITs for MASLD risk-stratification vary between clinicians.**
- Lower and upper cut-offs have important implications for test performance and clinical decisionmaking.
- **Guidelines to standardise NIT cut-offs are needed** to improve and monitor consistency in risk-stratification in MASLD.
- Our GNC study will reach >1,000 practitioners in 2024 to assess the current situation.

Source: Lazarus JV *et al.* Real-world evidence on non-invasive tests and associated cut-offs used to assess fibrosis in routine clinical practice. *JHEP Reports*. 2022;5(1):100596.

Barriers to NIT implementation



Source: Tsochatzis, Valenti, Thiele et al. *Liver International* 2024

Potential AI applications in liver disease in general

Routine Clinical/Laboratory Data
Prediction of fibrosis
Prediction of cirrhosis complications
Prediction of mortality
Transplant outcomes

Multi-Omics
Identification of high-risk genetic and epigenetic features
Lipidomic, glycomic, hormonal analysis
Prediction of hepatotoxicity in drug development

Radiology-based Image Recognition
Prediction of fibrosis
Prediction of steatosis
Classification of liver masses
Prediction of treatment response
Estimation of portal hypertension

Natural language processing
Identification of specific diagnoses from electronic health records
Automated interpretation and analysis of clinical reports
Detection of hepatic encephalopathy

Pathology-based Image Recognition
Automated identification and quantification of histopathologic features of liver diseases

Real-time Biomonitoring
Identification of patients at risk of clinical decompensation and hospital admission
Timely intervention for high risk patients

Source: Ahn JC, *et al.* Application of Artificial Intelligence for the Diagnosis and Treatment of Liver Diseases. *Hepatology.* 2021 Jun;73(6):2546-2563.

The economic burden of MASLD and MASH

- Two studies found that in **Europe** alone, the annual economic burden of **MASLD and MASH** is **estimated at ~€35 and ~€20 billion**, respectively, in direct medical costs, and ~€191 billion in societal costs due to loss of quality-adjusted life-years for NAFLD.
- Another **European** study found that the total economic costs of MASH were €8,548-19,546 million.
  - Of these, health system costs were €619-1,292 million.
  - Total well-being costs were €41,536-90,379 million.
- In the **United States**, MASLD has annual direct medical costs of about $103 billion.
- Patients with MASH have been reported to have a similar level of health-related quality of life, work productivity and activity impairment to individuals with T2DM but have reported worse mental status and a higher level of health resource use including emergency care and hospitalisation.

Sources: Younossi ZM et al. The economic and clinical burden of nonalcoholic fatty liver disease in the United States and Europe. *Hepatology*. 2016;64:1577-1586; O'Hara J et al. Cost of non-alcoholic steatohepatitis in Europe and the USA: The GAIN study. *JHEP Rep*. 2020;2(100142); Schattenberg JM et al. Disease burden and economic impact of diagnosed non-alcoholic steatohepatitis in five European countries in 2018: A cost-of-illness analysis. *Liver Int*. 2021;41(6):1227-1242; Balp M-M, Krieger N, Przybysz R, et al. The burden of non-alcoholic steatohepatitis (NASH) among patients from Europe: A real-world patient-reported outcomes study. *JHEP Reports*. 2019; 1(3): 154-61.

Economic burden: A MASH investment framework

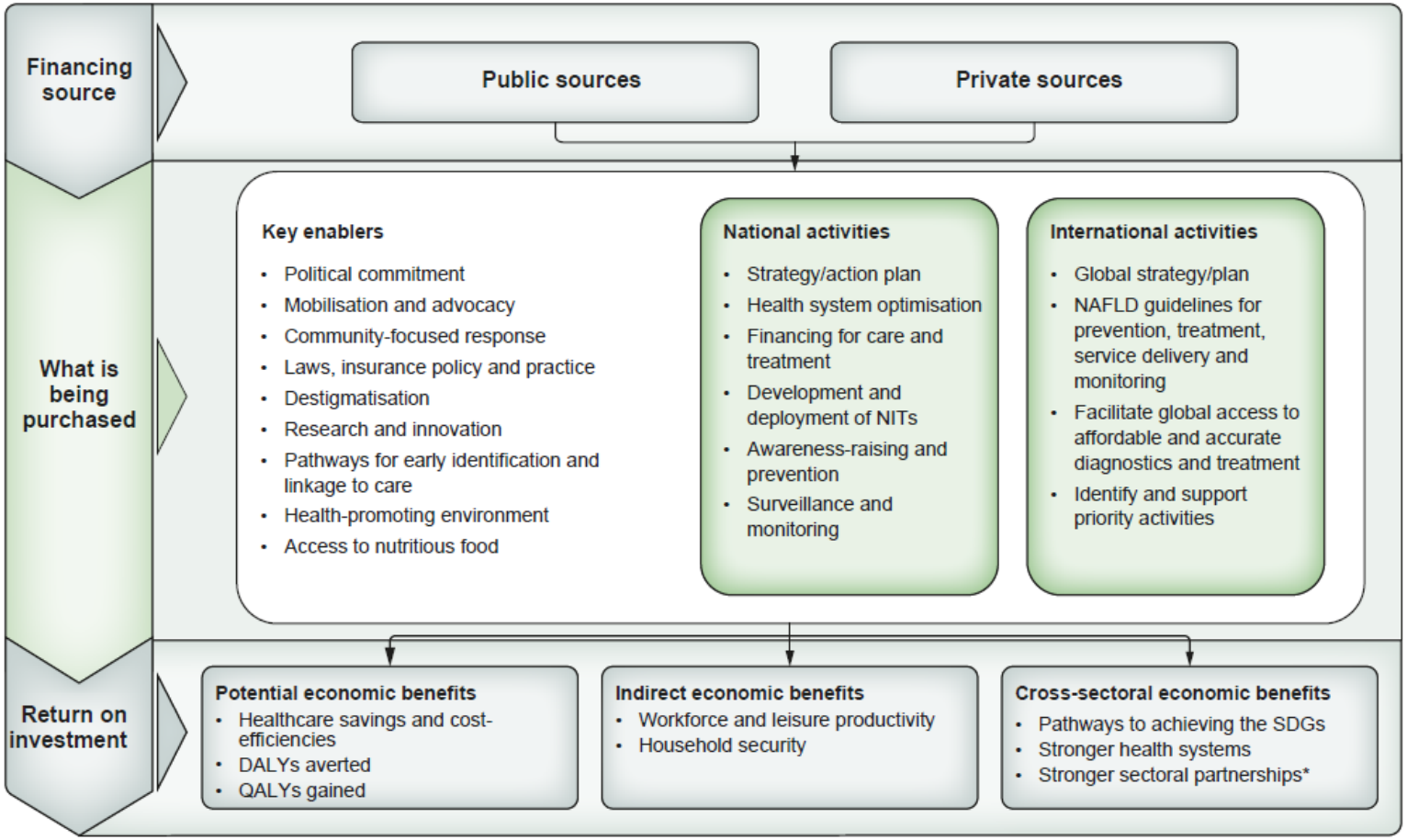
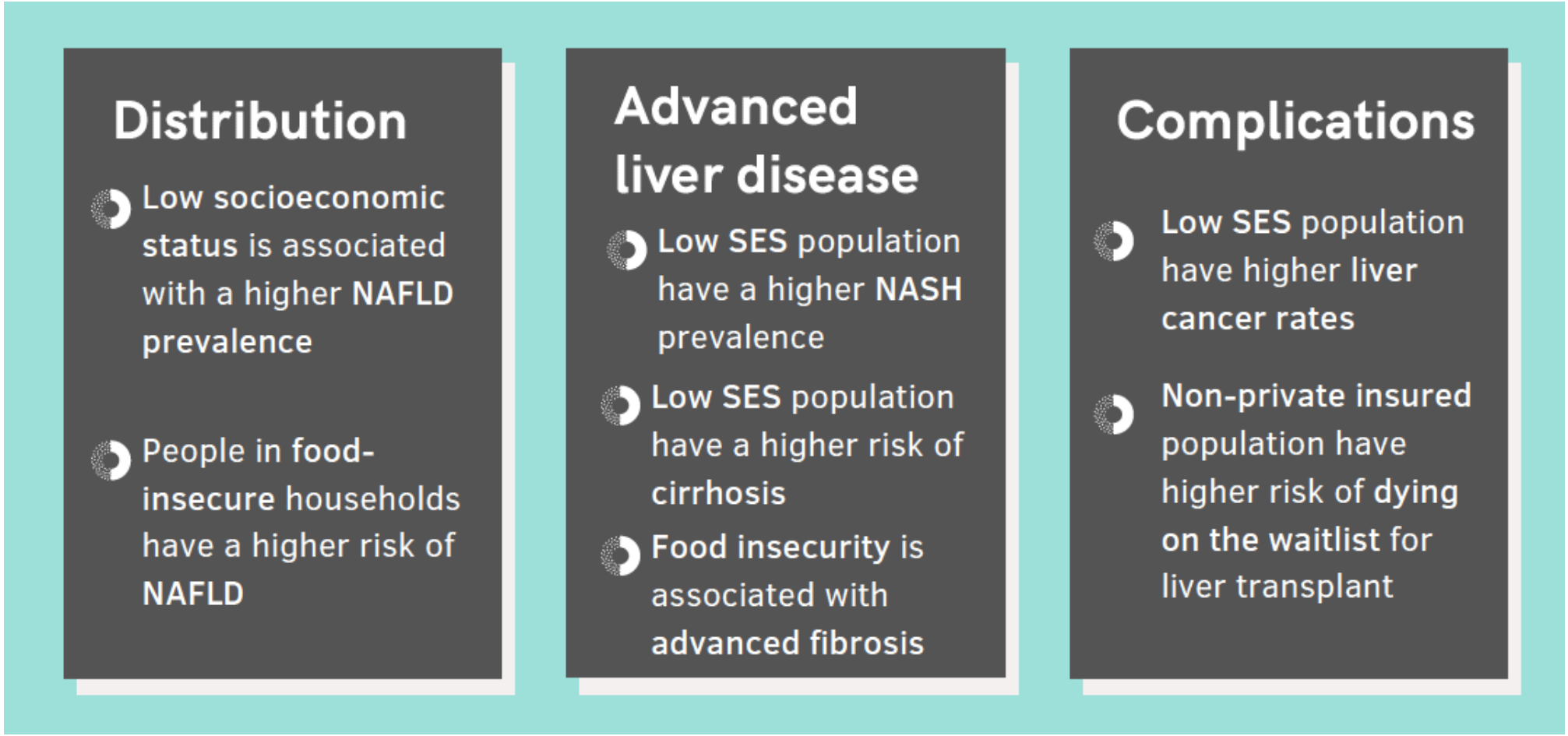


Fig. 3. Proposal for a global NAFLD/NASH investment framework. DALYs, disability-adjusted life years; NAFLD, non-alcoholic fatty liver disease; NASH, non-alcoholic steatohepatitis; NITs, non-invasive tests; QALYs, quality-adjusted life years; SDGs, sustainable development goals.

Source: Allen, Lazarus, Younossi. Healthcare and socioeconomic costs of NAFLD: A global framework to navigate the uncertainties. *JHEP* 2023.

Social Determinants of Health for NAFLD Distribution and Outcomes



NAFLD, non-alcoholic fatty liver disease; SES, socioeconomic status.

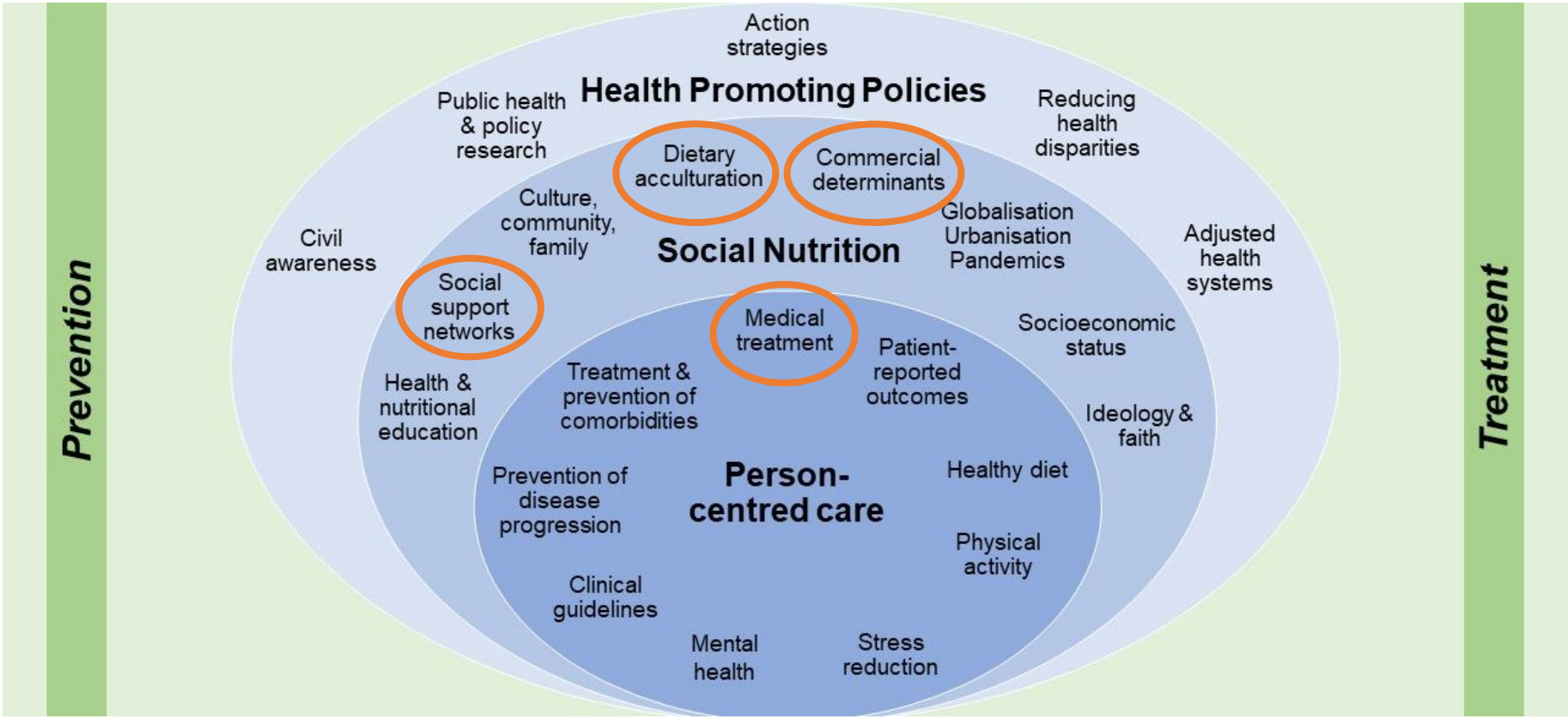
Source: Talens M et al. What do we know about inequalities in NAFLD distribution and outcomes? A scoping review. *J Clin Med*. 2021;10(21):5019.

Preventive hepatology through social nutrition

Social prescribing: linking individuals with suitable non-medical resources to enhance their well-being

Social nutrition: how social factors influence:

- What, when, how, and why individuals eat
- The likelihood of developing NCDs



Source: Ivancovsky Wajcman D *al*. Integrating social nutrition principles into the treatment of steatotic liver disease. *Communications Medicine*. 2023.

@JVLazarus

Stigma

The Lancet Commissions

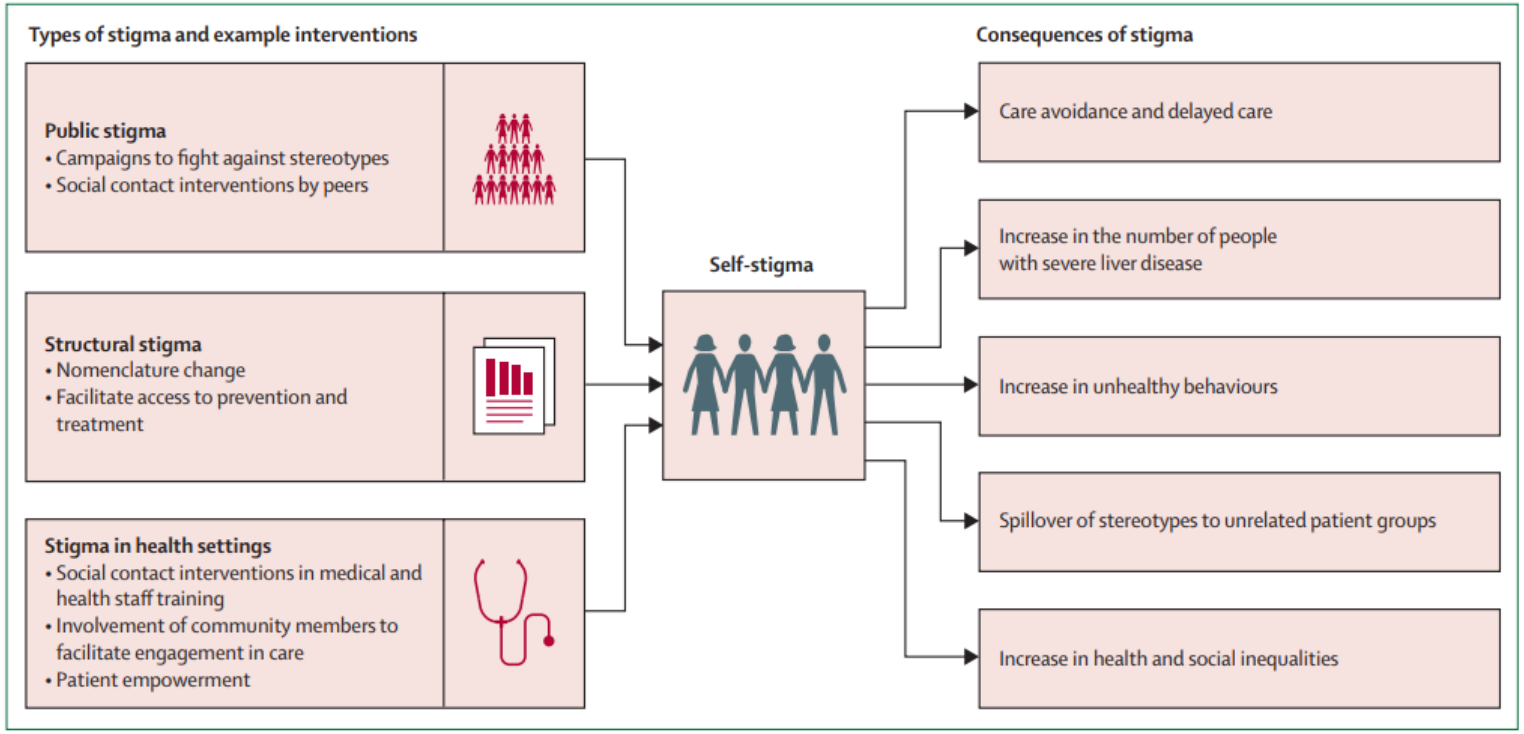


Figure 15: **Types of stigma and their consequences with example interventions**
Stigma and discriminatory attitudes towards people at risk of or with liver disease occur at different levels. To reduce the liver disease burden attributable to stigma, anti-stigma interventions should target each level and be combined. Printed with permission from Kari Toverud.

Source: Karlsen TH, *et al.* The EASL-Lancet Liver Commission: protecting the next generation of Europeans against liver disease complications and premature mortality. *Lancet*. 2022;399:61-116.

Paradigm Shift to People-Centred Care via “metabolic dysfunction

Focus on the liver

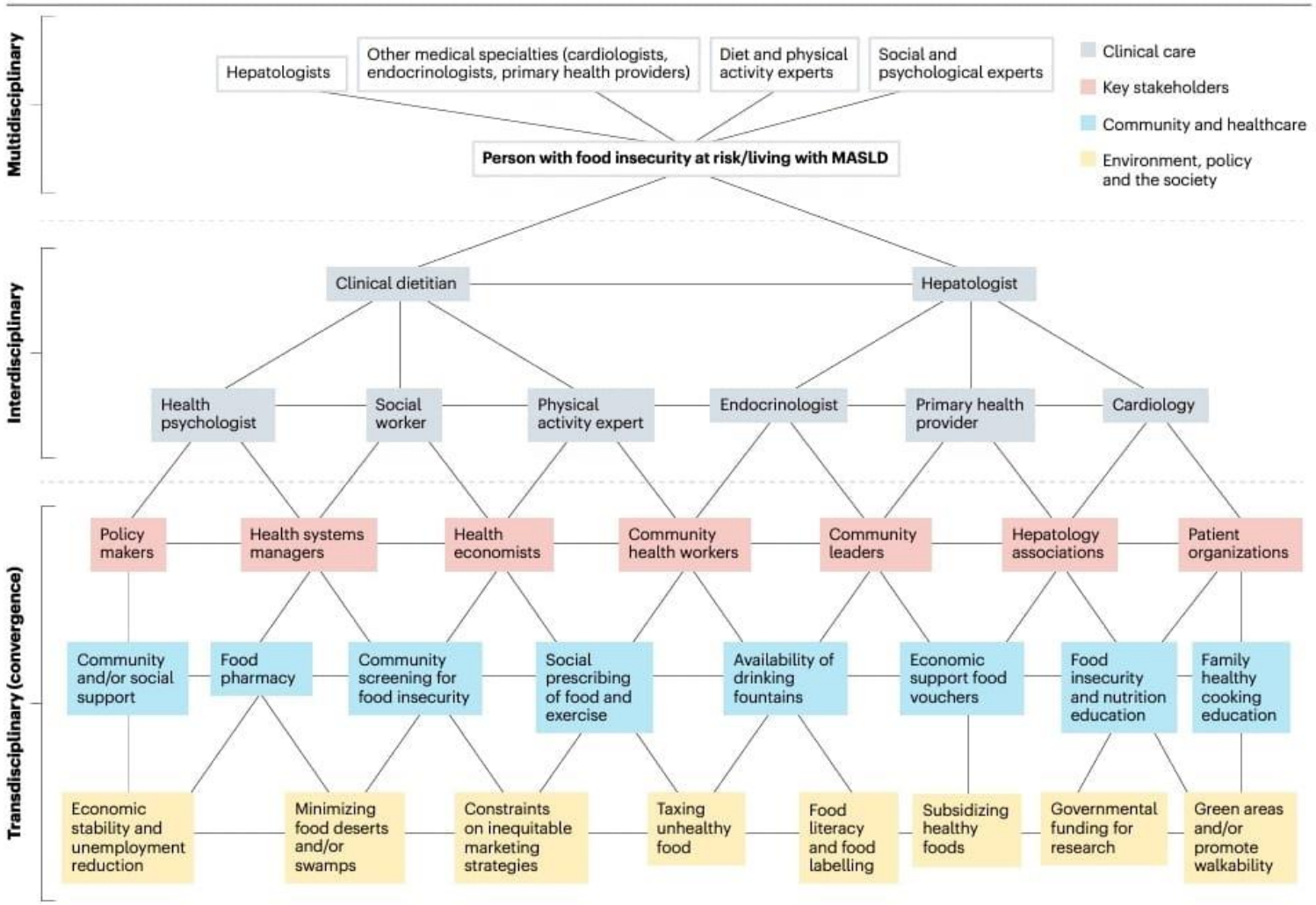
Focus on comorbidities and HRQoL

Sources: Lazarus JV et al. Consensus statement on the role of health systems in advancing the long-term well-being of people living with HIV. *Nat Commun* 2021;12(1):4450; Lazarus JV *et* al. Advancing the global public health agenda for NAFLD: a consensus statement. *Nature Reviews GastroHep*. https://www.nature.com/articles/s41575-021-00523-4.

Multidisciplinary, interdisciplinarity and convergence structures in MASLD management

There are three main types of cross-disciplinary structures:

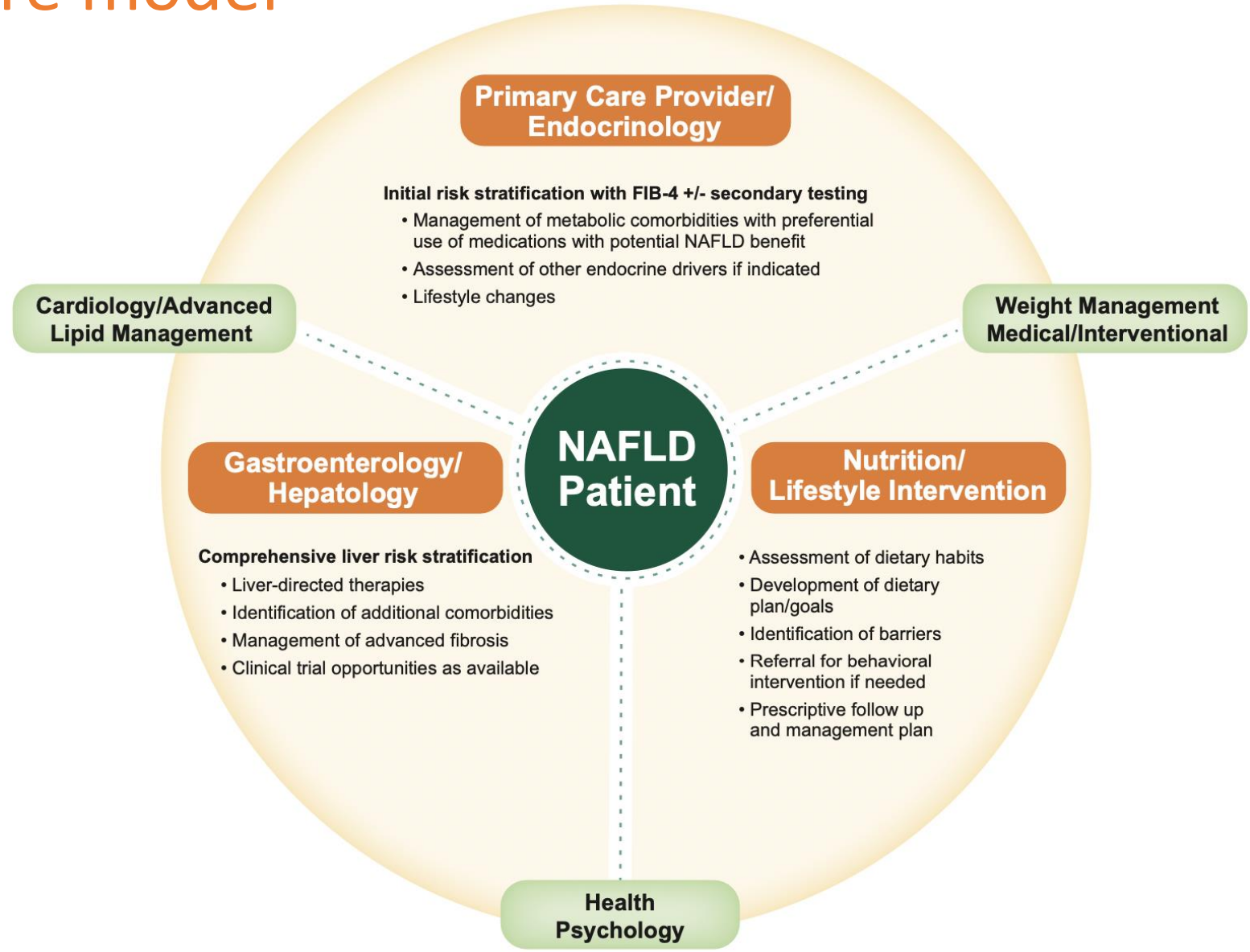
- **multidisciplinary** (clinicians from various disciplines working together for the same goal);
- **interdisciplinary** (transfer of knowledge from one discipline to another and integration of actions);
- **transdisciplinary** (bringing together experts from multiple disciplines to work together to address multilevel determinants of health disparities, integrating knowledge from science and society, with a broader focus beyond the individual level).



Source: Zelber-Sagi *et al*. Food inequity and insecurity and MASLD: burden, challenges, and interventions *NRGH* 2024.

@JVLazarus

Optimal care model



Source: Rinella *et al.* Guidance on the clinical assessment and management of nonalcoholic fatty liver disease. *Hepatology.* 2023 May 1;77(5):1797-1835.

The future of MASH treatment: Nutrition aligned drug roll-out

https://doi.org/10.1038/s41591-024-02958-z

Opportunities and challenges following approval of resmetirom for MASH liver disease

Jeffrey V. Lazarus, Dana Ivancovsky Wajcman, Henry E. Mark, Zobair M. Younossi, Christopher J. Kopka, Nevin Cohen, Meena B. Bansal, Michael Betel & Paul N. Brennan

The US Food and Drug Administration (FDA) has approved the first drug, resmetirom, for metabolic dysfunction-associated steatohepatitis (MASH), but much work remains for the industry, practitioners and health systems so that this approval will benefit all patients.

Millions of people, and their doctors, have long wished for an approved pharmacological therapeutic to treat MASH (previously known as NASH). MASH represents a necroinflammatory variant of metabolic dysfunction-associated steatotic liver disease (MASLD), formerly known as non-alcoholic fatty liver disease (NAFLD)[1]. MASH is charac-

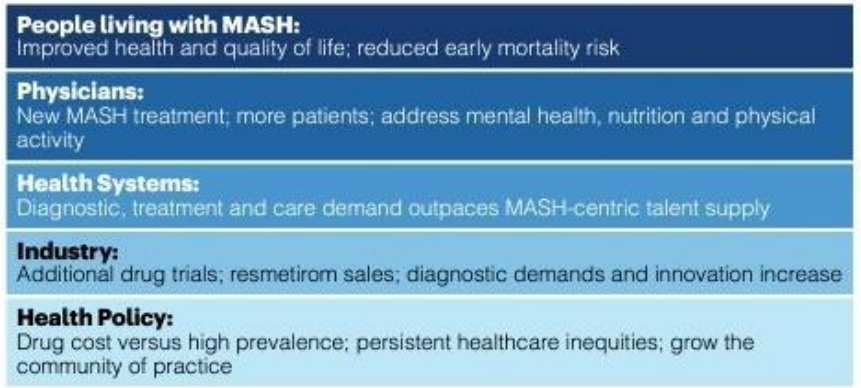


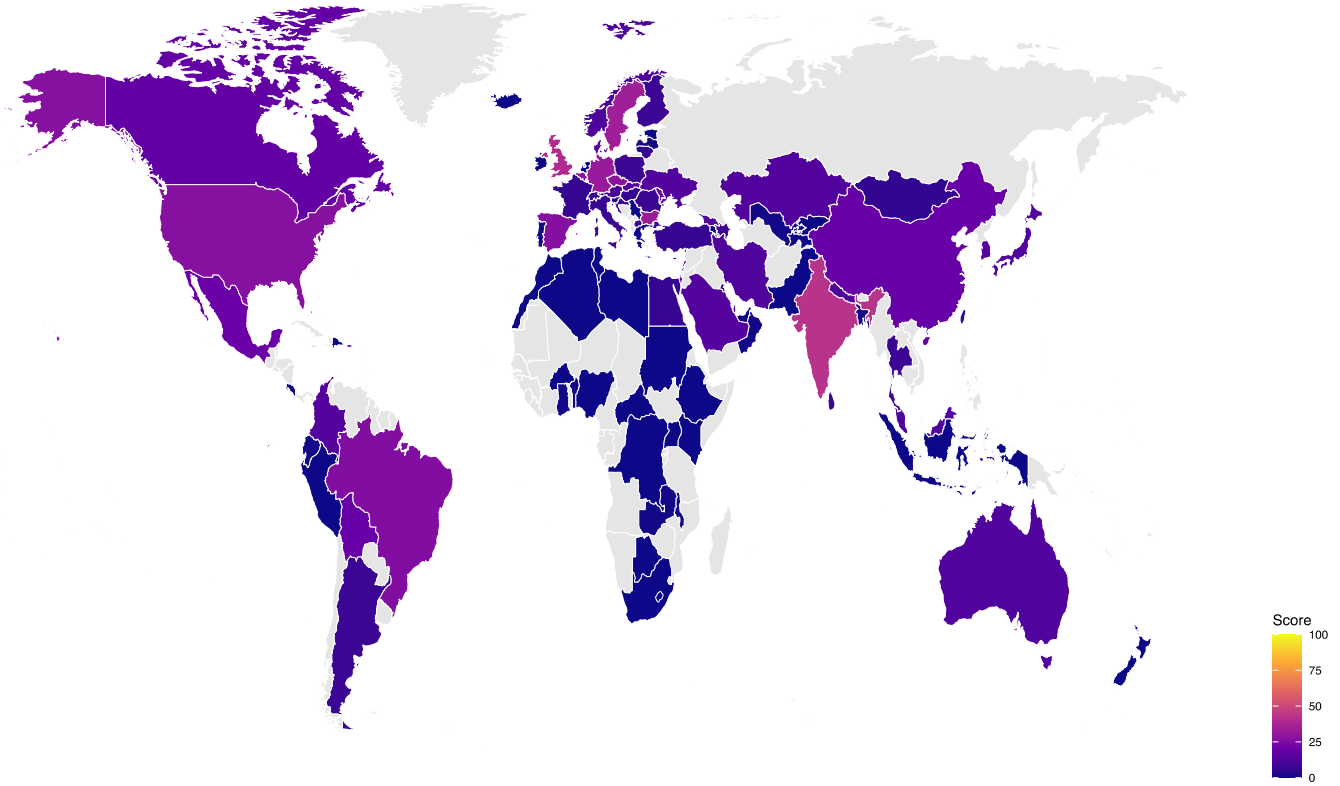
Fig. 1 | Cascading effects of the approval of resmetirom. In addition to directly affecting people living with MASH, resmetirom's approval will have implications that will influence practice, systems, industry and policy around the world.

Source: Lazarus JV *et al. Naure Medicine* 2024, https://www.nature.com/articles/s41591-024-02958-z.

@JVLazarus

Establishing a policy baseline for action

A global review of MASLD and MASH related policies



- **None of the 102 countries was found to be well prepared to address MASLD.**
- Close to a third of countries received an overall score of zero.
- The results can assist countries in identifying priority actions to improve their MASLD preparedness.
- We can use the index to track national, regional, and global progress over time.

EASL | JOURNAL OF HEPATOLOGY

Source: Lazarus JV *et al.* The global NAFLD policy review and preparedness index: Are countries ready to tackle the challenge?. *J Hepatology*. 2021;76(4):771-780.

@JVLazarus

Key strategies & policies for addressing MASLD

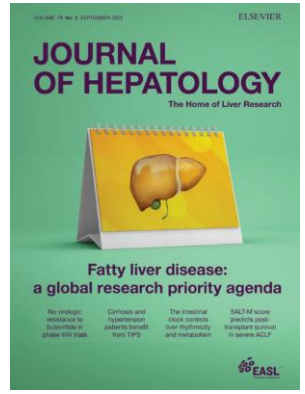
- National or sub-national MASLD/MASH strategy + the inclusion of MASLD/MASH in the national or sub-national strategies of key diseases or conditions related to MASLD/MASH

Region	MASLD/MASH Strategy	Obesity	Alcohol	CVD	Liver disease	Diabetes	Healthy habits/nutrition
East Asia & Pacific	0/12 (0%)	0/11˜ (0%)	0/11˜ (0%)	0/11˜ (0%)	0/12 (0%)	0/11˜ (0%)	0/11˜ (0%)
Europe & Central Asia	0/42 (0%)	2/40˜ (5%)	1/39˜ (3%)	1/40˜ (3%)	1/41˜ (2%)	0/38˜ (0%)	1/39˜ (3%)
Latin America & Caribbean	0/12 (0%)	0/12 (0%)	0/12 (0%)	0/12 (0%)	0/12 (0%)	0/12 (0%)	0/12 (0%)
Middle East & North Africa	0/14 (0%)	0/13˜ (0%)	0/14 (0%)	0/13˜ (0%)	0/14 (0%)	0/13˜ (0%)	0/14 (0%)
North America	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)	0/2 (0%)
South Asia	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/4˜ (0%)
Sub-Saharan Africa	0/15 (0%)	0/14˜ (0%)	0/14˜ (0%)	0/14˜ (0%)	0/13˜ (0%)	0/14˜ (0%)	0/13˜ (0%)
Total	**0/102 (0%)**	**2/97˜ (2%)**	**1/97˜ (1%)**	**1/97˜ (1%)**	**1/99˜ (1%)**	**0/95˜ (0%)**	**1/95˜ (1%)**

CVD, cardiovascular disease. ˜Denominator for each variable adjusted to remove missing values and responses of “don’t know”.

Source: Lazarus JV *et al.* (2021). The global NAFLD preparedness index: are countries ready to tackle the challenge? https://www.journal-of-hepatology.eu/article/S0168-8278(21)02168-1/fulltext.

A research & action agenda to turn the tide on steatotic liver disease



- Using a Delphi methodology, over two rounds steatotic liver disease research and action priorities were reviewed and ranked
- Across rounds, consensus increased in all domains for both the research and action domains
- The final agenda includes:
  - 👩🏾‍🔬 28 research priorities to tackle steatotic liver disease (*Journal of Hepatology* 2023)
  - 🎯 29 action priorities to turn the tide on steatotic liver disease (*Hepatology* 2023)

Sources: Lazarus, JV *et al.* A global research priority agenda to advance public health responses to fatty liver disease. *J Hepatol.* 2023 Sep;79(3):618-634. **and** Lazarus, JV *et al.* A global action agenda for turning the tide on fatty liver disease. *Hepatology.* 2023 Aug 4. doi: 10.1097/HEP.0000000000000545.

Highest ranking action priorities within the six domains

Defining and Implementing Models of Care

1. Liver specialists should collaborate with primary care experts to determine which non-invasive tests are most appropriate for use in primary care settings. (1)
2. Clinical societies/health authorities should develop clear guidance on care pathways that promote the timely referral of fatty liver disease patients within healthcare settings. (2)

Education and Awareness

1. Promote awareness among healthcare providers & patients of the possibility of multiple diagnoses (e.g., fatty liver disease and type 2 diabetes mellitus and/or alcohol-related liver disease) & accompanying challenges & opportunities in treatment and care (1)
2. Disseminate educational resources on the implementation of non-invasive tests in different settings, including primary care, diabetes, and obesity clinics, tailoring the content to the audience. (2)

Leadership and Policies

1. Advocate for fatty liver disease to be incorporated into relevant non-communicable disease strategies and guidelines, including those published by the World Health Organization. (1)
2. Further develop collaborations with key stakeholders (e.g., diabetes, obesity) to deliver an aligned non-communicable diseases agenda, inclusive of fatty liver disease. (2)

Action Priorities Agenda for Fatty Liver Disease

Human and Economic Burden

1. Promote standardization of data collection and reporting on the human and economic burden of fatty liver disease, to enable comparisons across different groups, populations, and settings. (1)
2. Develop national and international investment cases to inform evidence-based action and advocacy on fatty liver disease. (2)

Treatment and Care

1. Develop tools to support the uptake of non-pharmacological interventions to improve outcomes in people with fatty liver disease. (1)
2. Engage all relevant stakeholders (e.g., providers, patients) for focused discussions with regulatory bodies on suggested endpoints for drug approval. (2)

Patient and Community Perspectives

1. Grow the networks of support for people with fatty liver disease, including through collaboration with existing patient groups (e.g., liver, obesity, diabetes, heart disease, cancer). (1)
2. Co-create, with affected communities and patient advocates, non-stigmatizing communication guides for healthcare professionals to use when engaging with fatty liver disease patients. (2)

Source: Lazarus, JV *et al.* A global action agenda for turning the tide on fatty liver disease. *Hepatology* 2023.

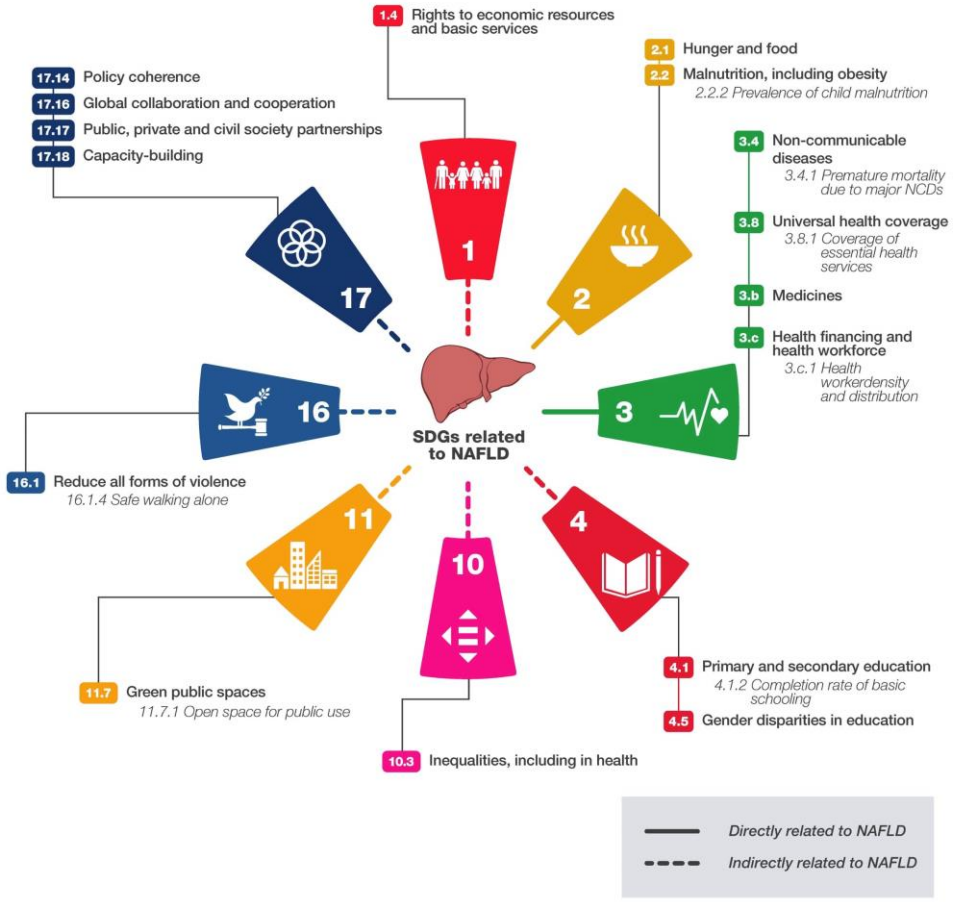
The global fatty liver disease Sustainable Development Goal country score for 195 countries and territories

What:
We developed a fatty liver disease Sustainable Development Goal (SDG) country score to provide insights into country-level preparedness to address fatty liver disease through a whole-of-society approach.

How:
We combined selected SDG indicators (categorised them as "positive" or "negative" and scaled them from 0–100) to develop a metric of preparedness. Higher scores indicate better preparedness levels.

Results:
Fatty liver disease-SDG scores varied between countries and territories (18 scored >85), from 14.6 in Niger to 93.5 in Japan. Regionally, the **high-income super-region had the highest score at 88.8,** while south Asia had the lowest score at 44.1. Between 1990-2017, the fatty liver disease-SDG score increased in all super-regions, with the greatest increase in south Asia, but decreased in eight countries and territories.

Why:
This novel score **provides a strategic advocacy tool for the liver health field and non-communicable disease (NCD) advocates**, highlighting the multi-sectoral collaborations needed to address fatty liver disease and NCDs overall. It is relevant for policymakers, public health professionals, and advocates.



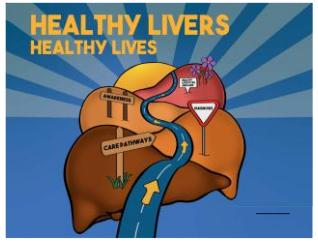
Source: Lazarus, JV *et al.* The global Fatty Liver Disease-Sustainable Development Goal country score for 195 countries and territories. *Hepatology* 2023.

HEPATOLOGY

@JVLazarus

Healthy Livers, Healthy Lives

HEALTHY LIVERS
HEALTHY LIVES



A side-event at World Health Assembly 76, May 2023

Our vision:

To end steatotic liver disease as a global public health threat.

Our mission:

To mobilise action for steatotic liver disease.

AASLD American Association for the Study of Liver Diseases
ALEH Asociación Latinoamericana para el Estudio del Hígado | Associação Latino-Americana para o Estudo do Fígado
EASL The Home of Hepatology
EASO European Association for the Study of Obesity
ESPGHAN
CLDF Chronic Liver Disease Foundation
GLI Global Liver Institute
THE FORUM For Collaborative Research℠
SOLDA Society on Liver Disease in Africa
GNC THE GLOBAL NASH COUNCIL
Indian National Association for Study of the Liver INASL
Ministry of Health & Population
South Asian Association for the Study of the Liver SAASL
WORLD HEART FEDERATION
EASD European Association for the Study of Diabetes
Hepatology

Boehringer Ingelheim and Novo Nordisk provided support to EASL for the event. The supporters have had no input or influence on the content, speakers, guests, or outcomes.

@JVLazarus

Building on past successes

"I believe the main achievements [on viral hepatitis] happened because of three things: planning , preparedness, and political will"

Khaled Abdel Ghaffar, Honourable Minister of Health and Population Egypt

HEALTHY LIVERS
HEALTHY LIVES

Join HLHL efforts towards the Fourth High-level Meeting of the UN General Assembly on the prevention and control of NCDs (September 2025)

United Nations General Assembly – MASH Side-event

MASLD and MASH: prioritising a global public health threat

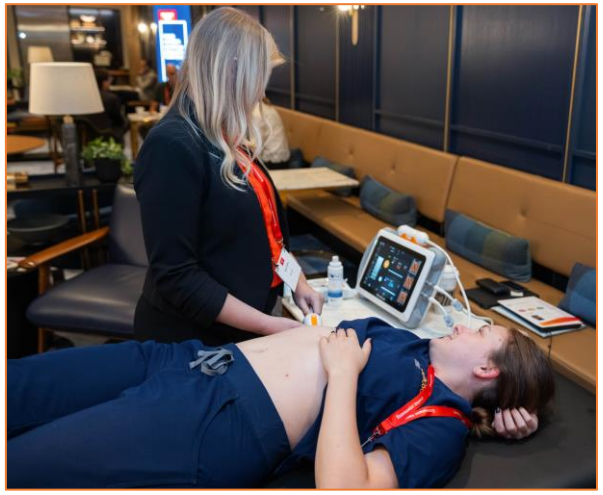
What?

- The event* will assess the status of MASLD and MASH compared to other NCDs and examine its clinical and social implications.
- Topics include:
  - Exploring the social and economic impacts of untreated MASLD and MASH.
  - Improving awareness of MASLD and MASH to spur action from stakeholders.
  - Developing and supporting a cohesive community of practice around MASLD and MASH.
  - Implementing policies to reduce contributors to MASLD.

**Led by the Barcelona Institute for Global Health* (ISGlobal), along with other sponsors from industry and academia.*

United Nations General Assembly – MASH Side-event

MASLD and MASH: prioritising a global public health threat



@JVLazarus

NCD BEST BUYS

AND OTHER EFFECTIVE INTERVENTIONS

Why do we need best-buys for MASLD and MASH?

The **WHO NCD Best Buys** are a flagship initiative but do not explicitly address MASLD and MASH.

We need a clear set of policy options for countries to address the growing unmet needs, from prevention and diagnostics to linkage to care, treatment and management.

Source: Lazarus, JV *et al.* Best buy interventions to address the burden of steatotic liver disease. *The Lancet GastroHep,* 2024.

The MASH Cities Series

MASH CITIES

"Local leadership for action on a hidden public health threat"

The City University of New York Graduate School of Public Health and Health Policy (CUNY SPH) hosted the first-ever MASH Cities event on 16 May 2024.

NYCMASH was led by Professor Jeffrey Lazarus and co-chaired by Dr. Meena Bansal, Head of the Mt. Sinai New York Liver Unit.

A 4-city MASH awareness study underway in NYC, LA, Chicago and Houston (Oct 2024).

GLOBAL THINK-TANK ON STEATOTIC LIVER DISEASE 2025

SAVE THE DATE

5-6 JUNE 2025 | BARCELONA - SPAIN

JOIN INDUSTRY EXPERTS, PRACTITIONER AND PATIENT ADVOCATES FOR THE GLOBAL THINK-TANK ON STEATOTIC LIVER DISEASE TO **CREATE POLICY-ORIENTED RECOMMENDATIONS & NECESSARY OPERATIONAL ACTIONS.**

CONTENT THEMES WILL BE **ALIGNED WITH THE GLOBAL RESEARCH AND ACTION PRIORITY AGENDAS** TO ADVANCE PUBLIC HEALTH RESPONSES TO STEATOTIC LIVER DISEASE.

CONNECT.
COLLABORATE.
INNOVATE.

25 GLOBAL KEY OPINION LEADERS IN THE FIELD OF SLD

50 INVITE-ONLY ATTENDEES

1 OPPORTUNITY TO TRANSLATE SCIENCE INTO DIAGNOSES, PREVENTION, TREATMENTS, AND POLICY

LET'S END THE MASLD/MASH PUBLIC HEALTH THREAT BY 2030

@JVLazarus

Where do we go from here?

- We have a strong body of work from which to build: now is the time to accelerate our efforts!
- The growing burden of liver disease around the world requires policy changes that address not only social determinants, but also structural and commercial determinants along with improved primary and secondary prevention + treatment and care.
- We need to grow our community to engage policy-makers, policy influencers, and patients as stewards of change.
- We also need to think globally, and bring a common voice for more awareness and action on advanced liver disease – *engaging WHO and the UN*.

🎯 **Grow the global community of practice for steatotic liver disease**

🎯 **Bring a united voiced to city, national and global conversations**

#MASHcities
#HealthyLiversHealthyLives

@JVLazarus

Acknowledgements

The NAFLD nomenclature steering committee, chairs and all >250 panellists from around the world and the >300 panellists part of the SLD research and action priorities studies 2023.

A special thanks to the 218 experts who contributed to the NAFLD consensus statement (*NRGH* 2021) and the NAFLD survey country leads and team members of the global preparedness index (*JHEP* 2021).

Nancy Lee, Henry Mark and the team from Wilton Park and the thought leaders who participated in the Wilton Park care pathways meetings in 2020 (Models of Care in *NRGH* 2021) and the entire NAFLD Wilton Park thinktank steering committee. https://www.wiltonpark.org.uk/wp-content/uploads/2021/02/WP1736V3-Report.pdf

The Economist Intelligence Unit, including >50 participants and guest speakers from Asia, Latin America and the Middle East during the EASL International Liver Foundation engagement series in 2020-21. https://eiuperspectives.economist.com/healthcare/nafld-sounding-alarm-global-public-health-challenge and The Economist Impact for convening our first UN General Assembly MASH side-event (Sept 2024).

The ISGlobal Health Systems Research Team and Public Health Liver Group
https://www.isglobal.org/en/research-groups/-/asset_publisher/L9G3Mk3U9Okg/content/hepatitis-virales#masld-mash

Contact: Jeffrey.Lazarus@ISGlobal.org

Partner in the following multi-country EU-funded projects: **BOOST, META-Trial**