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Making Metabolic Dysfunction-Associated Steatotic Liver Disease Medicines Affordable: Lessons from Hepatitis C

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1. Abstract

Metabolic dysfunction-associated steatotic liver disease (MASLD) and its progressive form metabolic dysfunction associated steatohepatitis (MASH) are among the most common causes of chronic liver disease worldwide, affecting an estimated 38% and 5-7% of the global adult population [1]. Its prevalence parallels the rising epidemics of obesity and type 2 diabetes, with particularly high burdens in Latin America, North America, the Middle East, and parts of South America and Asia. Although often clinically silent in early stages, MASLD is a leading cause of advanced fibrosis, cirrhosis, hepatocellular carcinoma (HCC), and liver transplantation, and is increasingly recognized as a multisystem disease associated with cardiovascular and metabolic mortality. Two regulatory milestones have changed the treatment landscape for MASLD. In March 2024, the United States Food and Drug Administration (FDA) approved resmetirom for adults with noncirrhotic metabolic dysfunction associated steatohepatitis (MASH) and moderate to advanced fibrosis (F2 to F3) [2]. In August 2025, the FDA approved semaglutide injection for MASH with F2 to F3 fibrosis under an accelerated approval pathway based on histologic endpoints [3].

These approvals mark a turning point. However, the public health impact of this new era will depend on pricing and access at least as much as on trial results. For a highly prevalent disease that may be silent until advanced stages and closely linked to diabetes and obesity, affordability will determine whether regulatory success translates into population benefit or widening inequity. In this viewpoint, we outline why affordability is the pivotal implementation barrier for MASLD pharmacotherapy and propose access levers, informed by the hepatitis C experience

2. Why Affordability Matters

Resmetirom illustrates the pricing challenge for lowor middle-income countries. In the United States, manufacturer materials report a wholesale acquisition cost of approximately US$3,950 per 30 day supply, corresponding to an annual list price of about US$47,400 [4]. A cost-effectiveness analysis suggested that resmetirom increased costs by $66,764 per patient while gaining 1.24 QALYs (ICER $53,929/QALY), reduced major liver outcomes, and remained cost-effective at a $100,000 WTP threshold up to a daily price of $72 [5]. Nevertheless, higher per-unit pricing could exceed conventional cost-effectiveness thresholds. Beyond cost effectiveness, payers will also evaluate near term budget impact as uptake expands.

A recent three year budget impact model from the United States, using March 2024 wholesale acquisition costs, estimated a net payer impact of US$2.2 to 9.5 million and US$0.19 to 0.80 per member per month in a hypothetical one million member health plan, with results highly sensitive to diagnostic uptake and epidemiologic assumptions [6]. Although described as a moderate budget increase, these costs scale substantially in a high prevalence condition such as MASH.

Semaglutide raises an even broader access question because its indications overlap with other common chronic metabolic conditions, expanding the treated population beyond liver clinics [7]. Even after recent cash pay initiatives in the United States that set a monthly price around US$349, annual costs remain substantial, and many patients will require treatment for years. Long term therapy magnifies affordability challenges because, unlike a short curative course, the budget impact accumulates year after year.

Treatment duration matters as much as unit price. Health systems can sometimes absorb high one time costs for curative therapy if downstream complications are avoided. By contrast, chronic metabolic medicines can create recurring budget commitments for payers. In countries with millions of people at risk and rising diabetes and obesity prevalence, even modest monthly per patient costs can translate into unsustainable national expenditure unless pricing aligns with public health goals.

Affordability is not a theoretical concern. The Middle East and North Africa (MENA) region is experiencing demographic and metabolic shifts that are increasing MASLD and its complications, yet healthcare system preparedness remains limited. A survey of 130 experts from 17 countries revealed major gaps in national strategies, referral pathways, multidisciplinary care, and access to diagnostics and patient education [8].A Global Burden of Disease analysis across 21 countries reported rising prevalence and increasing cirrhosis and HCC burden between 2010 and 2021, with marked variation by country [9,10].

In countries with high prevalence and constrained specialist capacity, expensive medicines can paradoxically weaken care pathways. Clinicians may hesitate to diagnose or stage disease when treatment is inaccessible, and health systems may shift resources toward a small treated minority rather than building scalable case finding and prevention programs. If the goal is to reduce cirrhosis, transplantation, and HCC, pricing should be treated as part of the clinical strategy. This is not unprecedented. The hepatitis C virus (HCV) era offers a recent example of how initial pricing threatened population level benefit, and how policy tools and program design reshaped access.

Lessons from HCV treatment expecience

The experience of managing HCV offers both caution and hope. The first generation of direct acting antiviral medications launched at prices that placed cure beyond the reach of many health systems, despite being curative and time limited. Sofosbuvir entered the United States market at approximately US$84,000 for a 12 week course, a price widely discussed in the medical literature and policy debates [11].

Access expanded through a sequence of aligned mechanisms rather than a single intervention: political commitment enabled negotiation; negotiation and licensing enabled generic supply; and procurement plus program design enabled scale. Egypt negotiated steep reductions and, together with generic availability, implemented one of the most ambitious screening and treatment efforts in public health [12]. Program analyses describe major declines in treatment cost over time, supported by country led procurement and quality assured generics, enabling treatment at scale.

Voluntary licensing was a key strategy. In 2014, Gilead Sciences announced non exclusive licensing agreements with multiple manufacturers, enabling technology transfer and large scale generic production for many countries [13]. These arrangements were imperfect and excluded some middle income countries, but they accelerated access and demonstrated that intellectual property and public health access can coexist under sustained political and public pressure.

HCV experience also shows that generics do not simply appear. They require regulatory pathways, quality assurance, predictable procurement, and clinical guidance that enables rapid scale up. Advocacy and transparency were not optional; they were central to reaching prices that made elimination programs feasible.

The lesson for MASLD is straightforward. When clinical need is large and potential population benefit is substantial, a market only approach can produce an access gap. That gap can be narrowed through deliberate access design, but it requires early negotiation and an explicit expectation that affordability is part of success.

3. A Roadmap for Fair Access

First, access agreements should be discussed early, not after health systems are overwhelmed by demand. Implementation readiness (case finding and risk stratification) and affordability must progress in parallel; either one alone will underdeliver. For resmetirom, semaglutide and other MASH therapies, companies and regulators could pursue income adjusted pricing that is transparent and proportionate to ability to pay, including for middle income countries with large disease burdens. Voluntary licensing should be considered from the outset, ideally with broad geographic scope and rapid registration support.

Second, pooled procurement and regional purchasing can strengthen negotiating power. Countries with similar epidemiology can define shared eligibility criteria, prioritise those at greatest risk of progression, and negotiate jointly for lower prices. This is particularly relevant for MASLD medicines that may be taken for years, where predictable volume can be exchanged for affordability [14].

Third, generic entry should be enabled rather than resisted. When voluntary licences do not include high burden settings, governments and global partners should be prepared to use legally available public health flexibilities, alongside strict quality assurance and post marketing surveillance, so that affordability does not compromise quality and safety.

Fourth, the clinical pathway should protect equity. If expensive therapy is accessible only through out of pocket payment, the burden of cirrhosis and HCC will increasingly concentrate among those with the least access to specialist care. A fair approach prioritises patients with moderate to advanced fibrosis and integrates treatment within primary care and diabetes services using noninvasive staging, while expanding preventive services that reduce progression risk. Recent guidance emphasises MASLD risk stratification within diabetes and cardiometabolic care settings [15].

Finally, health systems should separate scientific momentum from marketing momentum. Semaglutide is widely used for obesity and diabetes and now has an approved indication for MASH with F2 to F3 fibrosis in the United States. However, policy should avoid assuming that efficacy automatically implies scalability. Cost, supply, monitoring capacity, and opportunity cost should be assessed together.

4. A Call to Action for Global Access

Countries at all income levels can still act before MASLD/MASH becomes a dominant driver of cirrhosis, HCC, and liver transplantation. The first priority is to quantify burden and embed simple noninvasive risk stratification within diabetes and cardiometabolic care, so that individuals at high risk of advanced fibrosis are identified early (16). The second priority is to make affordability a core implementation requirement: access should be secured through national strategies, predictable budgets, and pooled procurement, rather than ad hoc purchasing or out of pocket payment.

At the global level, effective therapies should trigger a coordinated access agenda built on price transparency, voluntary licensing with broad geographic scope, pooled procurement, and support for quality assured manufacturing where feasible. The HCV era showed that when civil society, clinicians, governments, and industry align behind a public health objective, access can shift from exceptional to routine. MASLD now requires similar ambition, or medicines will exist while remaining out of reach for most patients.

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