

# 健康优先战略下的价值转型：以乙肝功能性治愈为突破口，从“被动治疗”迈向“主动健康”

葛兰素史克<sup>1</sup>

## 执行摘要

当前，中国正处在“十五五”开局、加紧推进健康中国建设的关键时期<sup>2</sup>。一方面，老龄化加速，慢性疾病与重大传染病挑战叠加，医疗需求持续增长，医保基金收支平衡压力不断加大。另一方面，《中共中央关于制定国民经济和社会发展第十五个五年规划的建议》<sup>3</sup>明确提出“投资于人”，以“健康与人口根基支撑高质量发展”<sup>4</sup>，强调将健康融入经济社会发展全局，把提升人口质量作为国家长期竞争力的基础性工程。

在此背景下，卫生健康体系亟须完成从以治病为中心向预防为主、以健康为中心的转变。人口老龄化以及慢性病和传染病的长期负担，使传统严重依赖被动疾病治疗、费用控制的模式难以为继，必须将干预关口大幅前移，从被动治病转向主动健康管理，从根本上提升卫生健康体系的整体效率。

实现这一战略转型，需要协同推进医防融合改革、科技创新和医疗服务模式优化，加快构建覆盖全人群、贯穿全生命周期的现代化三级预防体系。通过健康资本保护、疾病早期阻断与功能恢复，使卫生资源从疾病发生后的

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<sup>1</sup> 本报告仅代表企业相关研究观点，不代表论坛主办单位和承办单位立场和观点。

<sup>2</sup> 胡浩, 严赋憬. 两会第一观察 | 总书记指引加紧推进健康中国建设[EB/OL]. (2026-03-07) [2026-03-12]. <https://new.chinareports.org.cn/index/news/82093.html>.

<sup>3</sup> 中共中央. 中共中央关于制定国民经济和社会发展第十五个五年规划的建议[EB/OL]. (2025-10) [2026-03-12]. [https://www.gov.cn/zhengce/202510/content\\_7046050.htm](https://www.gov.cn/zhengce/202510/content_7046050.htm)

<sup>4</sup> 雷海潮. 推动卫生健康和人口高质量发展——访国家卫生健康委党组书记、主任雷海潮[N]. 人民日报, 2025.

被动治疗，聚焦至风险识别、主动筛查和长期管理，实现从预防疾病迈向全面促进健康的体系升级。

这一转型不仅可缓解未来医疗支出的结构性增长，还将延长健康预期寿命、提升劳动力供给、减轻家庭经济和照护负担，并为发展新质生产力奠定健康与人口根基。其本质是推动卫生健康投入理念的深刻转型：不再将其视为一种必须控制的“成本”，而是将其重新定义为面向人民健康、人口素质和长期社会回报的战略性、基础性投资。

重大疾病领域的创新突破，可为健康优先战略下的价值投资新理念提供关键验证。以慢性乙型肝炎为例，慢性乙型肝炎兼具重大传染病和慢性疾病特征，中国约有 7500 万乙肝病毒感染者，多为 30~55 岁<sup>5</sup>，71%肝硬化和 84%的肝癌患者与感染乙肝病毒有关<sup>6</sup>，相关疾病负担沉重，是医保和家庭的重要支出压力<sup>7 8</sup>。现有核苷（酸）类药物标准治疗通常需要终身服药，功能性治愈（指通过有限疗程停药后实现 HBsAg 和乙肝病毒 DNA 持续检测不到）率仅 1%<sup>9 10</sup>。随着创新技术突破，乙肝从“长期抑制”迈向“功能性治愈”已具备临床可行性，提供了一个具有政策示范意义的高价值应用场景。

功能性治愈不仅能够显著降低肝硬化、肝癌等末期疾病风险，减少患者全生命周期的高额治疗成本、提升劳动力、降低家庭负担并促进社会公平，

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<sup>5</sup> The Lancet Regional Health - Western Pacific. [J]. 2024, 51: 101193. DOI: 10.1016/j.lanwpc.2024.101193.

<sup>6</sup> Chinese Society of Gastroenterology. Consensus Opinions on the Clinical Diagnosis and Treatment of Liver Cirrhosis in China[J]. Chinese Journal of Digestion, 2023, 43(4): 227-247.

<sup>7</sup> YAN R, et al. 2024 latest report on hepatitis B virus epidemiology in China: Current status, changing trajectory, and challenges[J]. Hepatobiliary Surgery and Nutrition, 2025, 14(1): 66-77. DOI: 10.21037/hbsn-2024-754

<sup>8</sup> Assessment of Total Economic Burden of Chronic Hepatitis B (CHB)-Related Diseases in Beijing and Guangzhou, China[J].[2026-03-12]. <https://www.sciencedirect.com/science/article/pii/S109830151060349X>

<sup>9</sup> WANG W J, XIE Q. Challenges and Strategies in Antiviral Treatment for Chronic Hepatitis B - How to Maximize Clinical Cure[J]. Clinical Journal of Hepatology and Biliary Diseases, 2017, 33(8): 1415-1418.

<sup>10</sup> SLAETS L, et al. Systematic review with meta-analysis: hepatitis B surface antigen decline and seroclearance in chronic hepatitis B patients on nucleos(t)ide analogues or pegylated interferon therapy[J]. GastroHep, 2020, 2: 106-116.

还可以带动诊疗标准提升和产业创新，为卫生体系价值导向转型提供可验证、可复制的案例。

《中国防治病毒性肝炎行动计划（2025—2030年）》<sup>11</sup>已在国家专项防治规划中首次明确提出积极研发乙肝功能性治愈的创新方案。在此基础上，本文提出从医防融合、加速审批、医保覆盖、创新支付到认知转变等环节系统发力，通过政策链条打通预防、治疗和支付机制之间的衔接，加速创新药物更快、更规范、更可持续地惠及患者，并支撑以健康资本积累推动中国人口质量与经济社会高质量发展。

## **第一部分：医疗卫生系统战略转型—应对人口结构与疾病双重挑战的必然选择**

综合来看，中国卫生健康体系正面临由老龄化、慢性非传染性疾病积累与慢性传染病长期进展共同形成的压力，同时国家的治理理念和战略部署正从“以治病为中心”，加速迈向以“预防为主”、“以健康为中心”的现代化卫生治理模式。

“十五五”规划建议及一系列国家层面的顶层设计，已为这一时代转变明确了战略方向：推动资源配置前移、强化早期干预、提升人民健康水平。这为引导卫生投入从被动控制成本转向主动创造健康价值奠定了政策基础，也为探索综合价值评价体系等创新机制提供了重要空间。

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<sup>11</sup> 国家疾病预防控制中心传染病防控司. 关于印发《中国防治病毒性肝炎行动计划（2025—2030年）》的通知[EB/OL]. (2025) [2026-03-12]. [https://www.ndcpa.gov.cn/jbkzzx/c100014/common/content/content\\_1966406073307271168.html](https://www.ndcpa.gov.cn/jbkzzx/c100014/common/content/content_1966406073307271168.html)

## 一、宏观挑战：老龄化、慢性病与传染病叠加引发的结构性健康压力

### （一）深度老龄化推动医疗需求持续攀升，医保结构性承压

中国已进入深度老龄化阶段，截至 2024 年末，全国 60 周岁及以上老年人口 3.1 亿，占总人口的 22.0%<sup>12</sup>；预计 2035 年将突破 4 亿，在总人口中的占比将超过 30%<sup>13</sup>。老龄化直接带来疾病负担的快速累积。目前，中国约有 1.9 亿老年人患有慢性病，其中，75% 的 60 岁及以上老年人至少患有一种慢性病<sup>14</sup>。

老年人医疗需求更为复杂且成本显著更高——65 岁及以上老年人的年度人均医疗支出约为全人群平均水平的两倍<sup>15 16</sup>。此外，2016—2018 年间，人口老龄化对全国医疗费用增长的贡献率为 23.26%，其中 65~79 岁老年患者住院费用的增长，有 37.47% 可归因于老龄化加深<sup>17</sup>。随着年龄结构持续变化，中国医疗费用面临结构性、持续性的上行压力。

与此同时，2024 年基本医疗保险基金总收入为 3.48 万亿元，同比增长 4.4%；同期支出为 2.97 万亿元，同比增长 5.5%<sup>18</sup>。国家医保局在多次新闻发布会上明确指出，基金运行虽总体平稳，但“结构性矛盾”较为突出<sup>19 20</sup>，

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<sup>12</sup> 民政部和全国老龄办. 2024 年度国家老龄事业发展公报[R]. 北京: 民政部, 2025.

<https://www.mca.gov.cn/n152/n165/c1662004999980006089/part/21508.pdf>

<sup>13</sup> 国家卫生健康委员会. “2035 年左右 60 岁及以上老年人口将破 4 亿，占比将超 30%”[EB/OL]. (2022-09-20) [2026-03-12]. <https://news.cctv.com/2022/09/20/ARTInjejqDvmMaZi5jzTPHYT220920.shtml>

<sup>14</sup> 人民政协网. 60 岁以上患慢性病的老人占比 75% 需关注慢性病和感染性疾病“双重威胁”[EB/OL]. (2023-07-24) [2026-03-12]. <https://www.rmzxw.com.cn/c/2023-07-24/3382869.shtml>

<sup>15</sup> 前瞻产业研究院. 2020 年-2025 年 65 岁及以上人群每年医疗支出规模[R]. 北京: 前瞻产业研究院, 2024.

<sup>16</sup> 国家统计局. 2020 年居民收入和消费支出情况[R]. 北京: 国家统计局, 2020.

<sup>17</sup> 健闻咨询. 我国“中度老龄化”加速，老年抚养比升至 22.5%，养老出路何在？[EB/OL]. (2024) [2026-03-12]. <https://www.yicai.com/news/102387675.html>

<sup>18</sup> 国家医疗保障局. 2024 年医疗保障事业发展统计快报[R]. 北京: 国家医疗保障局, 2025.

[https://www.nhsa.gov.cn/art/2025/1/17/art\\_14\\_11063.html](https://www.nhsa.gov.cn/art/2025/1/17/art_14_11063.html)

<sup>19</sup> 国家医疗保障局. 新闻发布会：介绍 2023 年医疗保障工作情况[EB/OL]. (2024) [2026-03-12].

[http://www.nhsa.gov.cn/art/2024/1/18/art\\_14\\_10833.html](http://www.nhsa.gov.cn/art/2024/1/18/art_14_10833.html)

<sup>20</sup> 国家医疗保障局. 新闻发布会：介绍医保改革与基金运行情况[EB/OL]. (2023) [2026-03-12].

[http://www.nhsa.gov.cn/art/2023/4/20/art\\_14\\_10523.html](http://www.nhsa.gov.cn/art/2023/4/20/art_14_10523.html)

部分地区居民医保基金出现当期收不抵支或结余下降<sup>21</sup>。在基金收入增长空间受宏观经济与就业形势制约的背景下，若缺乏有效的预防为主策略与支付方式改革，支出端压力可能进一步扩大，影响医保基金的跨周期平衡能力。

## （二）慢性非传染性疾病成为主导负担，传统治疗模式难以应对存量挑战

慢性非传染性疾病（慢性病）已在中国形成庞大的患者群体。目前，全国心血管疾病患者约 3.3 亿人，糖尿病患者约 1.4 亿人，以慢阻肺、哮喘为代表的慢性呼吸系统疾病患者约 1 亿人。四大慢性病（慢性呼吸系统疾病、糖尿病、心脑血管疾病、癌症）导致的死亡人数占比超过 80%<sup>22</sup>。1.9 亿老年慢性病患者中，大多数需长期随访和持续药物治疗，导致医保支出结构长期偏向治疗端，用于预防领域投入相对不足，难以实现健康产出最大化。

## （三）重大传染疾病的长期累计负担凸显干预前移必要性——以乙肝为例

在对突发传染病防控能力不断增强的同时，中国仍面对乙肝、结核病、艾滋病等高负担传染疾病的持续挑战。

其中，乙型肝炎是中国具有代表性的重大慢性传染疾病。中国约 7500 万乙肝病毒感染者，占全球近四分之一<sup>23</sup>。尽管通过新生儿乙肝疫苗免疫等一级预防措施，新发感染率已大幅下降，但历史形成的、庞大的成人慢性感染者群体，依然是悬在我们头顶的一座“冰山”。约 15%~25% 的慢性乙肝病毒感染者存在疾病进展风险，可能发展为肝硬化、肝功能衰竭或肝癌<sup>24</sup>，

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<sup>21</sup> 吴斯旻. 部分城市居民医保收支平衡压力加大，筹资机制如何完善[N]. 第一财经, 2025. <https://www.yicai.com/news/102468923.html>

<sup>22</sup> YIN J H, ZHANG W Q, YOU J L, et al. Analysis of the mortality levels and trends of four major chronic non-communicable diseases among Chinese residents, 2013—2021[J]. Journal of Environmental Hygiene, 2025, 15(9): 826-831. DOI: 10.13421/j.cnki.hjwsxzz.2025.09.010.

<sup>23</sup> HUI Z, et al. New progress in HBV control and the cascade of health care for people living with HBV in China: evidence from the fourth national serological survey, 2020[J]. The Lancet Regional Health – Western Pacific, 2024, 51: 101193.

<sup>24</sup> Centers for Disease Control and Prevention. Clinical Overview of Hepatitis B[EB/OL]. (2025) [2026-03-12]. <https://www.cdc.gov/hepatitis-b/hcp/clinical-overview/index.html>

对经济发展和医疗体系造成长期负担。肝癌是中国第四大常见恶性肿瘤，也是癌症引发死亡的第二大原因，患者的五年生存率仅为 10%~14%<sup>25</sup>。

同时，据世界卫生组织报告，2022年中国乙肝病毒感染者的诊断率仅为 24%，治疗率仅为 6.4%<sup>26</sup>（注：该数据基于 HBsAg 阳性的慢性乙肝病毒感染者。HBsAg 即乙肝表面抗原，其阳性表明存在持续感染。），另有基于全国流行病学调查及临床大样本推算的研究认为，中国慢性乙肝患者的诊断率集中在 20%~30%区间，治疗率普遍低于 10%<sup>27 28</sup>。大量患者处于未发现、未管理、未治疗的状态，形成未来十年乙肝相关肝硬化和肝癌的隐性负担。总体而言，当前的防治能力仍偏向被动治疗补救，远未形成有效的干预前移链条。

## 二、国家导向：健康与人口质量上升为国家发展重要基础，治理体系向健康导向转型

在国家层面，健康与人口问题正从传统意义上的民生议题上升为支撑经济社会高质量发展的战略基础。“十五五”规划建议指出，以人口高质量发展支撑中国式现代化，将健康与人口质量确立为国家长期竞争力的重要组成部分，以更高站位统筹人口健康、科技创新与经济社会发展，提升国家整体发展韧性和可持续性。

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<sup>25</sup> Hepatitis B Foundation. Survival Rates[EB/OL]. [2026-03-12]. <https://www.hepb.org/research-and-programs/liver/staging-of-liver-cancer/survival-rates/>

<sup>26</sup> World Health Organization. Global hepatitis report 2024: action for access in low- and middle-income countries[R]. Geneva: WHO, 2024: ISBN 978-92-4-009167-2.

<sup>27</sup> HE J M, ZHUANG H. Status of diagnosis and antiviral treatment of chronic hepatitis B in China[J]. Chinese Journal of Hepatology, 2023, 29(3): 169-177.

<sup>28</sup> Chinese Academy of Medical Sciences. National HBV Diagnosis and Treatment Assessment Report[R]. Beijing: CAMS, 2024.

## （一）十五五规划建议：健康与人口质量为战略基础，创新与生物医药产业成为驱动力

“十五五”规划建议将“实施健康优先发展战略”和“促进人口高质量发展”作为关系国家现代化进程的基础性工程，明确提出要为经济社会高质量发展夯实健康根基和人口根基。

在健康领域，规划提出要推进健康中国建设，把维护和促进人民健康贯穿经济社会发展的全过程，坚持预防为主，健全疾病预防控制体系，强化全生命周期健康管理，从战略上推动健康服务的重心前移，强化重大慢性病与重大传染病防控体系建设。

在产业与创新方面，规划强调要前瞻布局生物制造、生物医药等战略性新兴产业，将其作为带动未来增长和推动新质生产力形成的重要方向；并提出通过健全新型举国体制，集中力量突破关键核心技术，推动生命科学与医疗健康领域创新成果加速转化。

规划建议将健康与人口质量提升到战略基础地位，并把科技创新与生物医药发展确立为未来增长的重要引擎，为推动卫生投入从成本性支出转向战略性价值投资提供了权威政策依据。

## （二）卫生健康领域改革：构建全生命周期、整合式健康服务体系

在对党的二十届四中全会精神的官方解读中，国家卫生健康委进一步给出了新时期卫生健康体系改革的主要方向<sup>29</sup>：

- **健康优先：**从民生指标上升为发展指标将健康指标纳入政府绩效考核，推动从“以治病为中心”转向“以健康为中心”。

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<sup>29</sup> 雷海潮. 在中共中央举行新闻发布会上介绍和解读党的二十届四中全会精神的发言[EB/OL]. (2025) [2026-03-12]. <http://www.scio.gov.cn/live/2025/37599/index.html>

- **全生命周期服务**：推动预防、诊疗、康复、照护一体化衔接，依托数字化和标准化建设提升全程健康管理能力，让卫生服务连续、可追踪、可评估。
- **预防为主的制度化落实**：深化医防融合改革，推动疾控机构、医院、基层医疗机构协同，建立从健康风险监测到长期管理的闭环机制，从制度安排上落实预防为主。
- **科技创新驱动**：以重点领域突破带动体系升级—围绕重大慢性病与重点传染病，加快创新药、疫苗、诊断技术布局。

与此同时，国家围绕创新药高质量发展、支付方式改革和真实世界证据应用进行了系统部署。例如，通过“多维度价值评估”方式加强对创新药安全性、有效性、经济性、公平性、可及性、创新性等方面的综合考量<sup>30</sup>，以及通过真实世界医保综合价值评价试点探索在真实临床情境下评价干预效果等。

这些政策正在共同推动建设以全生命周期综合价值为导向的卫生治理体系，为具备显著健康效益的创新药物和治疗方案创造制度环境。

## 第二部分：以三级预防体系重构推动卫生治理从治疗为中心走向以健康为中心

实现从以治病为中心向以健康为中心的转变，关键在于推动卫生健康治理模式从被动应对转向主动预防。

借鉴国际知名咨询机构安博思（Ambrosetti）<sup>31</sup>提出的“从补偿损失到创造健康价值”的路径，体系必须摆脱传统依赖末端治疗的被动模式，其核

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<sup>30</sup> 国家医疗保障局. 2025 年全国医疗保障工作年中座谈会在陕西召开[EB/OL]. (2025-08-18) [2026-03-12]. [https://www.nhsa.gov.cn/art/2025/8/18/art\\_14\\_17585.html](https://www.nhsa.gov.cn/art/2025/8/18/art_14_17585.html)

<sup>31</sup> The European House–Ambrosetti. The Value of Prevention for Economic Growth and the Sustainability of Healthcare, Social Care and Welfare Systems[R]. Milan: Ambrosetti, 2024.

心不在于简单增加投入，而在于重构卫生体系的运行逻辑，使资源配置从末端治疗合理前移至风险识别、主动预防、早期干预与连续性管理。

在这一框架下，本部分将在国家战略导向基础上，提出以三级预防创新为主线的战略路径。其中乙肝功能性治愈凭借其显著的临床价值、社会经济效益与政策契合度，成为推动这一转型的核心突破口与最佳实践样本。

### 一、核心思路：从成本控制到价值投资的模式跃迁

安博思提出的“成本——价值四象限模型”（图 1），从服务响应方式（被动/主动）与健康产出水平（低/高）两个维度，将卫生投入方式分为四类，如下图所示，整体划分为四个象限：

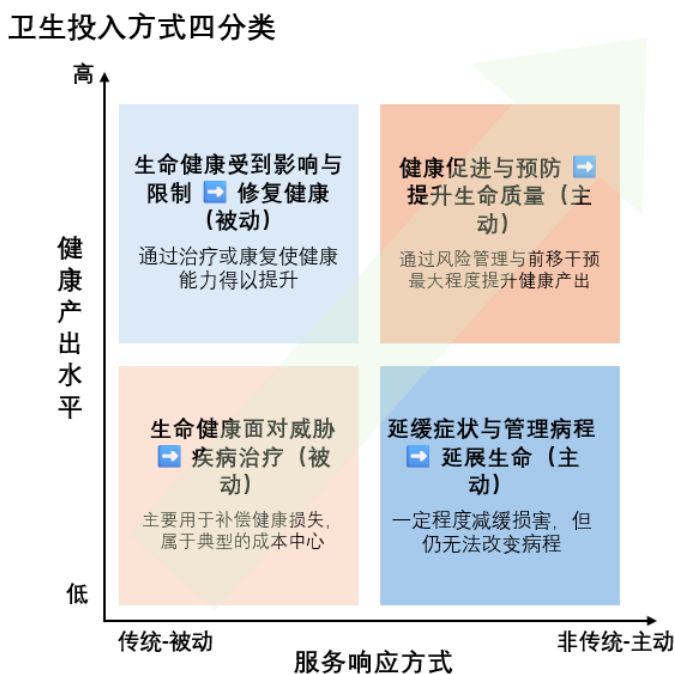


图 1：成本——价值四象限模型

- 横向从左侧的被动治疗到右侧的主动预防——左侧对应疾病发生后的治疗与补救，资源主要用于抵消损失，形成成本中心；
- 右侧则强调将资源前置投入预防、筛查与健康管理的健康管理，实现健康资本的积累与增值，是一种面向长期产出的价值投资。

这一模型为中国卫生体系的转型提供了结构化的框架：从支付方和服务提供方关注的年度费用和局部控费，转向关注全社会视角下的健康产出的提升、人群风险下降和整体长期成本的改善——主动健康投资不仅减少未来的高额疾病支出，还能带来劳动生产率提升、家庭照护负担减轻、社会公平改善、生物医药创新驱动等多维价值（将在本文第三部分详细论述）。

## 二、实现路径：以三级预防体系承载价值投资理念落地

实现从成本控制向价值投资的模式跃迁，需要卫生体系具备一套可操作、可衡量、能持续产出健康价值的实践路径。以创新为驱动重构经典的“三级预防”<sup>32</sup>体系（图 2），正是承载这一战略转型的有效路径。

三级预防天然具有资源前移、风险前移和高价值投入回报的结构特点，与“十五五”规划建议提出的推进健康中国建设、坚持预防为主、强化全生命周期健康服务体系建设的战略方向高度契合：

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<sup>32</sup> 国家卫健委. 国家卫生健康委疾控局关于开展 2019 年全国肿瘤防治宣传周活动的通知[EB/OL]. (2019) [2026-03-12]. <https://www.nhc.gov.cn/jkj/c100063/201903/6bc4c0bc83b54e808b5d93b86068b901.shtml>

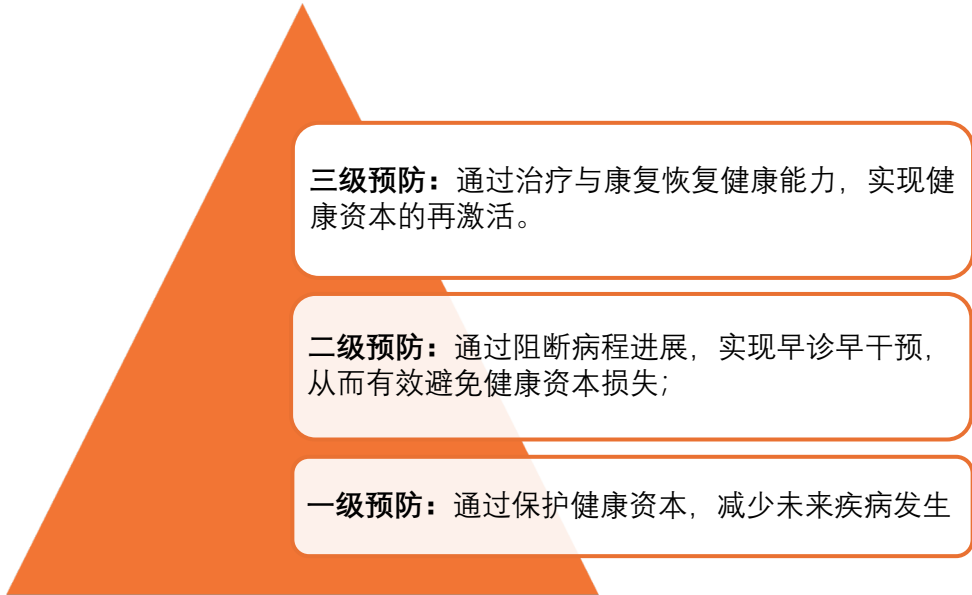


图 2：创新驱动的三级预防体系

- 一级预防：病因预防，减少外界不良因素的损害——通过筑牢人群健康基础，从源头上减少未来疾病发生；
- 二级预防：早期发现、早期诊断、早期治疗——通过阻断病程进展，有效避免健康损失；
- 三级预防：改善生活质量，延长生存时间——通过治疗与康复恢复健康能力，实现人力资本的再激活。

通过创新技术与产品、诊疗模式和管理体系对三级预防进行系统升级，既实现了“预防—治疗—康复”的前移与衔接，也强化了健康管理及制度保障，从而形成一个动态的健康投资组合，使卫生投入从一次性的成本支出转化为可持续的健康资本持续累积。

## （一）一级预防：以最低成本实现最高健康回报的战略起点

一级预防通过健康教育、疫苗接种和风险因素控制在疾病发生前进行干预，是投入产出比最高的健康投资方式。随着多价和长效疫苗、精准人群分层、数字化健康管理等技术的发展，一级预防的覆盖能力与精准性显著提升，使得以较低成本减少疾病发生、保护健康资本成为可能。

在中国人口老龄化与慢性病负担持续攀升的背景下，一级预防是实现卫生体系从费用控制转向健康价值创造的战略起点，它可以有效降低未来疾病负担，并为二级预防和三级预防奠定基础。

以乙肝防控为例，中国已建立以新生儿免费接种为核心的乙肝疫苗免疫规划体系，疫苗全程接种率长期保持在 95% 以上，5 岁以下儿童 HBsAg 流行率已降至 0.3%，乙肝防控取得显著成效<sup>33</sup>。与此同时，还针对乙肝孕妇建立了母婴阻断措施，显著降低母婴传播风险。此外，基于国家政策，海南<sup>34</sup>、广东<sup>35</sup>等地区也已向高危成人人群体开放免费接种，进一步扩大了一级预防的覆盖范围。

## （二）二级预防：以高回报率阻断疾病进展的关键投资环节

二级预防通过早筛、早诊和早治在疾病仍可逆阶段进行干预。相较疾病进入中晚期后的治疗，早期阻断不仅能够显著减少疾病进展风险，还能避免未来高额住院费用与劳动损失，使有限资源获得最大健康产出。

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<sup>33</sup> YAN R Y, SUN M H, YANG H Y, et al. 2024 latest report on hepatitis B virus epidemiology in China: current status, changing trajectory, and challenges[J]. *Hepatobiliary Surgery and Nutrition*, 2025, 14(1): 66-77. DOI: 10.21037/hbsn-2024-754.

<sup>34</sup> 海南省人民政府办公厅. 海南省“2+3”健康服务包实施方案[EB/OL]. (2022) [2026-03-12]. <https://www.hainan.gov.cn/hainan/szfbgtwj/202204/ef8d6104a0e64a78a08db835857ef4d8.shtml>

<sup>35</sup> 广东省人民政府门户网站. 病毒性肝炎早防早治行动启动 广东力争到 2026 年目标人群乙肝累计筛查率不低于 70%[EB/OL]. (2024-08-02) [2026-03-12]. [https://www.gd.gov.cn/zwgk/zdlyxxgkzl/zhsgjy/yljh/content/post\\_4467792.html](https://www.gd.gov.cn/zwgk/zdlyxxgkzl/zhsgjy/yljh/content/post_4467792.html)

以乙肝为例，早筛早治可显著降低肝硬化和肝癌发生率，是性价比极高的干预路径<sup>36</sup>。然而现实是，2022 年中国乙肝诊断率仅 24%、治疗率仅 6.4%<sup>25</sup>，与 WHO 2030 年“诊断率 90%、治疗率 80%”<sup>26</sup>的消除肝炎目标相距甚远。要筑牢二级预防基础，必须将干预关口前移至主动筛查和规范治疗——这正是一些疾病高负担地区探索的方向。目前，海南<sup>34</sup>、广东<sup>35</sup>等省份已率先将乙肝筛查纳入省级公共卫生制度体系，构建“筛查—诊断—治疗—管理”一体化网络。

此外，乙肝功能性治愈，特别是创新型疗法，有望成为乙肝防治在二级预防阶段最重要的突破口和里程碑。

### 功能性治愈：从“长期带病”到“健康清零”的范式突破

现有核苷（酸）类似物标准治疗通常需要终身服药，功能性治愈率极低，通常仅为 1%<sup>10</sup>。慢性乙型肝炎的功能性治愈是指在完成有限疗程并停药后，患者血清中 HBsAg 和乙肝病毒 DNA 持续检测不到（至少维持 24 周），肝功能恢复正常。这一状态标志着机体在无需继续用药的情况下，实现对病毒的持久免疫控制。研究表明，功能性治愈与长期肝脏并发症风险的显著降低相关，包括肝癌以及全因死亡率<sup>37 38</sup>。

- 研究显示，在实现 HBsAg 清除的患者中，肝癌发生风险较持续阳性者下降 76%<sup>39</sup>，对改善长期预后具有重要临床和经济价值。

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<sup>36</sup> YANG D H, WANG W P, ZHANG Q, et al. Hepatocellular carcinoma progression in hepatitis B virus-related cirrhosis patients receiving nucleoside (acid) analogs therapy: A retrospective cross-sectional study[J]. World Journal of Gastroenterology, 2021, 27(17): 2025-2038. DOI: 10.3748/wjg.v27.i17.2025.

<sup>37</sup> Drysdale M et al. GHS 2025. Oral presentation. Slides available upon request.

<sup>38</sup> European Association for the Study of the Liver (EASL). Clinical Practice Guidelines on the management of hepatitis B virus infection[J]. Journal of Hepatology, 2025, 83(2): 502-583. Available at: <https://www.sciencedirect.com/science/article/pii/S0168827825001746>

<sup>39</sup> YIP T C F, et al. HBsAg seroclearance further reduces hepatocellular carcinoma risk after complete viral suppression with nucleos(t)ide analogues[J]. Journal of Hepatology, 2019, 70(3): 361-370.

- 世界卫生组织《2024 年全球肝炎报告》指出，每投入 1 美元用于预防肝癌死亡及遏制未来癌症治疗和护理成本的增加，可带来 2 至 3 美元的投资回报<sup>26</sup>。

中国最新乙型肝炎防治指南已提出符合条件患者应追求功能性治愈<sup>40</sup>；药监局发布的技术指导意见明确提出应以有效疗程为基础，追求功能性治愈<sup>41</sup>。这些举措显示国家层面已着手推动功能性治愈的临床实践与政策导向。

作为中国探索乙肝治疗新路径的先行实践，“珠峰项目”通过优化传统治疗药物组合方案，纳入超过 3 万例患者，建立专门门诊逾 1000 家<sup>42</sup>。然而，项目数据揭示了一个客观事实：当前治疗手段的 HBsAg 清除率（注：*HBsAg 清除是功能性治愈的一项临床替代终点*）存在明显瓶颈。即使在经严格筛选的优势患者群体中，相当高比例的患者仍无法通过现有方案达到治疗终点<sup>43</sup>。这一巨大临床未满足需要，正是对以功能性治愈为设计终点的创新药物的迫切呼唤。

2025 年发布的《中国防治病毒性肝炎行动计划（2025—2030 年）》，首次明确提出“积极研发乙肝功能性治愈创新方案”，将功能性治愈纳入战略方向，成为防治体系转型的重要支撑。专家指出，研发与政策的衔接正在构筑乙肝治疗范式转型的制度基石<sup>44</sup>。

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<sup>40</sup> 中华医学会. 慢性乙型肝炎防治指南[S]. 北京: 中华医学会, 2022.

<sup>41</sup> 国家药监局药审中心. 慢性乙型肝炎病毒感染治疗药物临床试验技术指导原则[EB/OL]. (2023-04-27) [2026-03-12].

<https://www.cde.org.cn/main/news/viewInfoCommon/5bebddb98aae85a980181683a910788e>

<sup>42</sup> 新华社. 中国慢性乙型肝炎临床治愈（珠峰）工程项目总结会召开[EB/OL]. (2025-06-30) [2026-03-12]. <http://www.xinhuanet.com/video/20250630/5d729477e0ab4511b2d7b603505172ce/c.html>

<sup>43</sup> WU D, YAN X, WANG Z, et al. Peginterferon  $\alpha$ -2b Enhances Hepatitis B Surface Antigen Loss in Nucleos(t)ide Analogue-suppressed Low Hepatitis B Surface Antigen Chronic Hepatitis B Patients: Everest Study in China[J]. *Clinical Gastroenterology and Hepatology*, 2026. DOI: 10.1016/j.cgh.2026.01.028.

<sup>44</sup> 季媛媛, 韩利明. 进博盛宴: 跨国药械创新出击, 本土合作全面开花[N]. 21 世纪经济报道, 2025-11-07. <https://www.21jingji.com/article/20251107/herald/8b1f97542db2a8225aa273eeb218b60f.html>

目前，全球首个乙肝功能性治愈创新药物的两项 III 期临床试验已全部完成，均达到主要终点，显示出具有统计学意义和临床意义的功能性治愈率，该创新药物有望将终身服药转变为 24 周有限疗程治疗选择，并成为未来序贯治疗的基石药物<sup>45</sup>。其作用机制是通过靶向乙型肝炎病毒核糖核酸（HBV RNA），抑制包括 HBsAg 在内的病毒蛋白表达，降低整体病毒 DNA 水平并刺激机体免疫系统，从而实现功能性治愈<sup>46</sup>。

未来要实现功能性治愈创新药物的快速规模化普及，配套的诊疗规范和医保准入等政策也需同步跟进，同时还需强化基层诊疗能力与患者认知普及，形成全链条支持体系。

### （三）三级预防：恢复健康能力，释放人力资本

三级预防通过有效治疗、康复和长期管理减少并发症发生，使患者恢复生活质量和劳动能力，是健康投资在后端实现人力资本的再释放的关键环节。传统上，三级预防被视为被动的治疗过程，但在创新药物、规范化管理和整合照护模式的推动下，其意义已从控制损失转向重建健康资本—随着创新疗法和系统的慢性病管理的出现，部分疾病在三级预防阶段已能够实现病程扭转，使患者重新具备劳动能力，减少家庭照护负担，并降低未来医疗资源消耗。

#### 小结：乙肝全链条防控实践为体系价值转型提供典型样本

以三级预防为主线的健康投资框架，在乙肝防控领域已经形成了较为完整的实践路径：一级预防通过疫苗接种和高危人群主动管理，筑牢源头防线；二级预防以功能性治愈实现从疾病控制迈向肝硬化、肝癌进展风险早期阻断

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<sup>45</sup> 葛兰素史克公司. 葛兰素史克公布潜在慢性乙型肝炎同类首创疗法 bepirovirsen 的 B-Well 1 和 B-Well 2 三期临床试验积极结果[EB/OL]. (2026-01-12) [2026-03-12]. <https://www.gsk-china.com/zh-cn/media/press-releases/bepirovirsen-phase-iii-results/>

<sup>46</sup> YUEN M F, et al. Efficacy and safety of bepirovirsen in chronic hepatitis B infection[J]. *New England Journal of Medicine*, 2022, 387(21): 1957-1968. DOI: 10.1056/NEJMoa2210027.

与长期获益的关键突破；三级预防通过规范治疗与健康能力恢复，支撑患者回归正常生活、恢复劳动生产。

其中，对乙肝功能性治愈的短期投入、长期多维价值回报，不仅是干预前移在临床、重大传染病防控、公共卫生和社会经济层面的综合效益的有效例证，也突显出仅以单纯成本耗费维度指标评估医疗价值的局限性。

### **第三部分：从全社会视角重塑创新药价值认定体系，从单一成本衡量迈向多维战略价值评估**

#### **一、突破传统评估范式：将卫生投入重新定位为战略性价值投资**

承接前文乙肝全链条防控的实践探索，尤其是功能性治愈所展现的多元价值潜力，要推动卫生健康体系真正实现从“成本控制”向“价值投资”的深层转型，关键在于突破传统价值评估的框架束缚，构建能够反映长期健康收益、社会效益和创新外溢效应的综合评价体系。

长期以来，中国卫生领域主要采用成本—效果（CEA）和成本—效用（CUA）评估模式，这些方法在资源约束条件下发挥了一定作用，但难以全面衡量乙肝这类慢性传染病创新药物和疗法的长期综合价值，主要体现在以下三个方面：

- **评估视角局限于个体临床的直接成本与收益。**传统评估通常聚焦于单个患者的生命年、质量调整生命年（QALY）或治疗成本差异，却难以捕捉健康恢复后对家庭、劳动力市场与社会系统的综合价值。例如，乙肝功能性治愈带来的劳动收入恢复、家庭照护负担减少与劳动力释放、避免家庭其他成员潜在的传染可能等重要效益在传统模型中往往被忽略。

- 评估时间受限，难以反映长期价值。CEA/CUA 的评价周期多为 3 - 5 年，而如乙肝等慢性疾病往往跨越数十年，功能性治愈在肝硬化、肝癌预防中的最大价值恰恰发生在中长期。短周期评估必然低估干预前移的长期回报，也难以反映医保基金的跨周期战略性购买和对基金长期的节约效应。
- 评估维度单一，难以覆盖创新药物与疗法的社会与产业效益。劳动生产率提升、社会公平改善、患者体验改善、创新药产业外溢、科学与技术溢出效应等难以直接货币化的价值，常被弱化或不纳入评估，而这些卫生体系向价值投资转型的重要收益。
- 简而言之，传统的评估方式像是在用“后视镜”开车一只看到已花掉的钱和眼前的病人，却看不到前方的“大图景”：一个健康的劳动者对家庭、社会创造的长期价值。

在“十五五”规划建议提出“创新驱动”“新质生产力”等发展目标背景下，卫生健康投入已不能局限于传统医疗支出的范畴，而是为促进人口质量提升、推动经济发展、增强社会韧性、驱动科技创新的战略性投资。这一转型要求我们突破单一维度的价值衡量，构建能全面反映健康、经济、社会与产业多维效益的评估体系<sup>47</sup>。

从国际实践来看，多维价值评估已成为全球卫生体系转型的重要趋势。世界卫生组织（WHO）提出的“3D 优先级设置框架”（Data - Dialogue - Decision）通过数据、对话、决策的协同，推动价值评估的系统性与科学性<sup>48</sup>；

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<sup>47</sup> McKinsey Global Institute. Dependency and depopulation? Confronting the consequences of a new demographic reality[R]. New York: McKinsey & Company, 2025. <https://www.mckinsey.com/mgi/our-research/dependency-and-depopulation-confronting-the-consequences-of-a-new-demographic-reality>

<sup>48</sup> World Health Organization. The 3-D priority-setting and decision-making framework[EB/OL]. (2023)[2026-03-12]. <https://www.who.int/teams/health-financing-and-economics/economic-analysis/health-technology-assessment-and-benefit-package-design/resource-guide-for-the-use-of-hta-and-hbp-design-processes/what-are-the-overall-principles-of-hbp-design/the-3-d-priority-setting-and-decision-making-framework>

国际药物经济学与结果研究学会（ISPOR）构建的“价值之花模型”<sup>49</sup>（Value Flower）则已成为全球多维价值评估领域的主流参考框架，该模型涵盖 12 个价值维度，既覆盖核心价值要素（包括净成本、QALY、生产率、依从性改善），也纳入公平性、安全性边际、患者选择与偏好、创新属性等社会价值，以及科学外溢、希望价值、保险价值等潜在价值，实现了对创新干预价值的全景式衡量，已被多国卫生技术评估（HTA）机构纳入决策参考。

国内的创新药价值评估体系也在升级，2025 年国家医保局和国家卫生健康委联合发布《支持创新药高质量发展的若干措施》，提出多维度综合研判药品价值；随后，国家医保局启动的真实世界医保综合价值评价试点工作，核心是依托真实世界数据，在传统安全性、有效性、经济性基础上，新增创新性、公平性、可及性、患者体验维度，标志着中国医保价值评估正从有限维度走向多维度、全周期、基于真实世界证据的新方向。

乙肝功能性治愈正是检验这一演进方向上的典型场景，其多层价值反映了现行评估体系的局限，并为价值评估模式的系统性重构提供现实依据。

## 二、乙肝功能性治愈全面价值评估：从个体健康到国家发展

### （一）健康与社会经济回报：从健康资本到社会公平

- **个体健康价值：显著降低肝癌风险，实现从“病有所医”向“病有良医”的跨越。**功能性治愈显著降低肝硬化和肝细胞癌发生风险<sup>50</sup>，能够在更长周期内减少终末期肝病负担，提升健康预期寿命。
- **家庭经济价值：减轻“因病致贫”风险，提升家庭的获得感和幸福感。**乙肝患者家庭中卫生支出高，长期药物、住院治疗 and 疾病

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<sup>49</sup> LAKDAWALLA D N, DOSHI J A, GARRISON L P, et al. Elements of value in health care: A health economics approach[J]. Value in Health, 2018, 21(2): 131-139. DOI: 10.1016/j.jval.2017.12.007.

<sup>50</sup> 新华社. 乙肝表面抗原清除显著降低肝癌风险——访华山医院张文宏教授[EB/OL]. (2025-12-02) [2025-12-25]. <http://www.xinhuanet.com/info/20251202/1a5b32d24610478680a7df2de155b745/c.html>

相关事件会导致家庭经济脆弱性显著上升<sup>51</sup>。功能性治愈通过有限疗程治疗降低未来疾病进展概率，使长期医疗支出下降，提高家庭对经济冲击的承受能力，从更广泛层面提升社会公平与经济稳定性。

- **社会生产力价值：释放数百万劳动力，为应对人口老龄化注入“健康红利”。**慢性乙肝患者普遍存在工作缺勤与生产率下降问题，经过有限疗程实现功能性治愈后，可大幅减少门诊随访、住院治疗等对工作时间的挤占，恢复劳动供给与职业发展连续性<sup>52</sup>。在劳动年龄人口下降的背景下，这种健康资本的再激活具有显著的宏观意义。
- **性别平等价值：解放女性照护者，促进女性劳动力市场参与。**癌症对家庭照护资源占用显著，其中女性承担了大多数日常照护工作<sup>53</sup>。随着乙肝功能性治愈的实现，阻断慢乙肝进展肝硬化乃至肝癌的发生，使慢乙肝患者的长期照护需求得以减少，实质上释放家庭无偿照护劳动，提高女性劳动参与率，增强家庭经济韧性，促进社会性别平等。

## (二) 国家战略与创新生态回报：从人口质量到产业动能

- **提升人口健康质量，强化国家人力资本基础。**慢性乙肝和肝硬化病人发生失能的年龄主要集中在劳动力年龄<sup>54</sup>，对劳动供给、预

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<sup>51</sup> NAYAGAM S, CHAN P, ZHAO K, et al. Investment case for a comprehensive package of interventions against hepatitis B in China: Applied modeling to help national strategy planning[J]. *Clinical Infectious Diseases*, 2020, 71(5): 743-752. DOI: 10.1093/cid/ciaa134.

<sup>52</sup> HSU Y C, et al. Extrahepatic manifestations and socioeconomic burden of chronic hepatitis B[J]. *Journal of Viral Hepatitis*, 2021. DOI: 10.1111/jvh.13494.

<sup>53</sup> KENT E E, MOLLICA M A, BUCKENMAIER S, et al. The characteristics of informal cancer caregivers in the United States[J]. *Seminars in Oncology Nursing*, 2019, 35(3): 223-229. DOI: 10.1016/j.soncn.2019.06.002.

<sup>54</sup> Yu, S.L., Gong, Y.L., Shao, R.T., & Wu, G.Y. (2003). Study on burden of diseases of chronic hepatitis B, cirrhosis, and liver cancer caused by hepatitis B virus. *Chinese Journal of Public Health*, 19(3), 280-282.

期寿命、社会保障缴费能力产生长期影响。功能性治愈通过减少未来终末期疾病及相关死亡，有助于提升总体人口健康水平，改善长期抚养比，增强社会保障体系的可持续性，构成国家人力资本提升的重要组成部分。

- **对创新形成正向激励，推动生物医药新质生产力发展。** 未来上市的乙肝功能性治愈药物集中于靶向病毒的小核酸药物（如 siRNA、ASO 反义寡核苷酸）和免疫调节药物等前沿技术路线，研发周期长、投入高、风险显著，对产业创新生态提出更高要求。经济学中，创新通过承担高不确定性投入带来技术突破和治疗模式重塑，是产业演进与增长的核心动力<sup>38</sup>。“创造性破坏”及由此产生的利润，是对企业高风险创新的补偿。因此，建立合理的价值认定与支付机制，为企业提供稳定预期，相当于制度性激励。随着真实世界证据和多维价值评估工具的完善，有望进一步强化价值驱动的创新氛围，推动生物医药产业实现突破。
- **强化疾病治理与创新方案输出能力，提升中国在全球健康治理中的话语权。** 慢性乙肝是全球主要传染病负担之一。若中国在功能性治愈药物研发、临床路径规范、真实世界证据积累等方面形成系统优势，将有助于提升中国在全球肝病防治中的经验输出能力。功能性治愈的规范化推广也将增强中国在重大疾病治理、技术标准制定以及全球公共卫生议题中的专业话语权，对国家卫生治理能力和国际形象均具有积极作用。

## 第四部分：从多维价值认知到政策落地——以乙肝功能性治愈为突破口的体系化推进路径

为使这一理念落实到制度实践，需要在价值认知升级、审批准入优化、支付改革探索和医防融合落实等方面形成系统推进路径，并在此框架下，将乙肝功能性治愈作为优先实践场景稳妥推进。

### 一、提升对创新药的多维价值认知，完善国家层面的评价与政策衔接体系

在新的发展阶段，健康与创新已被明确纳入国家竞争力和可持续发展能力的重要组成部分，国家层面正在通过推进健康中国建设、强化科技创新驱动和构建新发展格局，推动卫生健康体系的价值取向逐步转向更加注重长期健康产出、人力资本质量与社会经济韧性。

在这一背景下，对创新的支持不应仅局限于支付方（医疗保障部门）或服务提供方（卫生健康系统），而应从国家和全社会层面出发，形成协同一致的支持机制。基于这一认识，提升创新干预的价值认知与评价体系，具体可从以下方面推进：

- **推动价值评估标准升级。**在创新药价值评价中更全面反映干预措施在全社会视角下对人口健康、劳动供给与社会经济韧性的长期贡献，使卫生投入逐步从关注年度支出转向关注国家可持续发展能力的战略性考量。
- **建立创新疗法“价值验证”的数据闭环。**依托国家医保局正在开展的真实世界医保综合价值评价试点工作，在创新疗法获批应用后，系统积累其长期疗效、安全性及资源利用变化，为国家层面的政策制定、基金管理和公共卫生部署提供可靠的中国本土证据基础。

- **强化跨部门政策协同。**在科技创新、医疗保障与医防融合等政策环节中，鼓励以综合价值为导向的创新投资，引导资源向具有显著健康和社会回报的技术与服务模式集中。

通过在国家治理体系中强化这一价值导向，可为包括乙肝功能性治愈在内的创新方案创造更清晰、更稳定的政策环境，使其成为推动卫生健康体系现代化和提升国家发展能力的重要动力。

## **二、加速推进乙肝功能性治愈创新药物的审批与应用**

随着全球首个功能性治愈创新药物进入上市申请阶段，中国作为乙肝疾病负担最重的国家之一，需推动从“技术突破”到“可及应用”的全链条加速。在国家提出的健康优先、创新驱动战略方向以及国家行动方案明确的“积极研发乙肝功能性治愈创新方案”要求的基础上，应从加速审评审批、临床使用与扩散机制、支付与保障体系多方面形成系统推进路径，使其能够在中国尽早落地、规范应用并实现可持续可及。

### **（一）加快审评审批进程，推动创新药物及时进入中国**

中国现行审评审批制度已为重大疾病创新药提供了多项加速路径。如，当候选药物在早期研究中显示可能提供显著临床获益时，可申请进入加速通道，通过缩短审评周期、推行滚动提交与即时沟通，为研发开辟更高效、低风险的“快车道”<sup>55</sup>。

基于此，建议对于乙肝功能性治愈创新药物，纳入优先审评与突破性治疗工作程序，进一步提高审评效率，让广大符合条件的中国患者尽早获益，此外，在审批过程中尤其应考虑乙肝作为重点传染病的公共卫生属性，特别

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<sup>55</sup> 国家药监局. 优化创新药临床试验审评审批试点工作方案[EB/OL]. (2024) [2026-03-12]. <https://www.nmpa.gov.cn/xxgk/fgwj/gzwj/gzwjyp/20240731184417109.html>

是其在降低终末期肝病和肝癌风险方面的潜在作用，将其作为加速审批的重要考量。

## （二）加快临床使用与技术扩散，促进创新药物规范化落地

功能性治愈创新药物要从科学突破转化为实际健康收益，必须形成可执行的临床路径和可持续的技术扩散体系。然而，患者对治愈概念的知晓率仅约 30%，基层医生对治愈导向治疗的理解有限<sup>56</sup>。为提升临床吸收能力并促进创新技术扩散，可重点推进以下方面：

- **尽快完善、统一乙肝功能性治愈创新药物应用的专家共识。**应在乙肝防治指南既有指南框架基础上，结合创新药物的最新证据，补充患者选择标准、治疗流程、停药监测要求和随访管理办法，使临床医师能够在不同场景下规范使用治愈导向治疗。条件成熟时，推动将相关内容纳入最新版乙肝诊疗指南、明确目标患者识别标准。
- **强化医生培训与患者教育，提升对功能性治愈创新药物的理解与接受度。**针对基层医生和非专科医生对治愈导向治疗认知不足问题，通过继续医学教育、病例分享和规范化培训，提升其对创新药物适应证、风险评估和随访管理的判断能力。同时，通过权威科普、患者管理工具等方式提高患者对治愈机会的认知和接受度，
- **以国家级和区域卫生中心为枢纽，推动技术分级扩散。**将创新治疗的技术要求、用药规范和随访模式在三级医院率先建立示范，并逐步向更广泛的医疗服务体系推广，提高不同区域的临床服务能力。同时，结合乙肝患者分布广、基层管理需求大的特点，应通过继续医学教育、远程医疗、分级诊疗和多学科合作。

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<sup>56</sup> 中国健康促进基金会, 中国疾病预防控制中心艾防中心. 乙肝综合防治现状研究报告[R]. 北京: 中国健康促进基金会, 2025.

- **将乙肝功能性治愈路径纳入医防融合考核，推动临床与公共卫生协同落地。**在现有医防融合和基层绩效考核体系中，逐步引入与功能性治愈相关的过程性指标，在诊断率、规范治疗率等基础上逐步增加与治愈路径相关的考核要素，以推动临床实践与公共卫生管理在功能性治愈目标上的一致性落地。

通过上述措施，可逐步形成从临床路径制定、能力建设到认知提升和证据积累的全链条体系，使功能性治愈创新药物能够在中国各级医疗机构规范、稳妥地应用。

### **（三）完善支付政策衔接，建立与创新药物相适应的保障机制**

功能性治愈创新药物疗程有限、长期多维获益的特点。国家多项政策明确支持多维度综合价值评估体系、探索多层次和创新支付，为治愈型创新药物的支付衔接提供了制度基础。基于此，建议从以下方面推动支付体系对创新药物的适配：

- **在医保准入评估中系统体现创新药物的长期价值。**在现行综合价值评估框架下，应根据创新药物对疾病进展的阻断作用、未来医疗费用减少、患者生活质量改善等因素进行评价，使支付决策更能反映长期效益与社会价值。
- **推动多层次保障体系协同，提高患者可负担性。**基本医保承担核心治疗责任，商业保险、补充医疗保险和医疗救助根据不同人群特征提供分层支持，从而减少患者因经济压力而延迟或放弃治疗的情况。

- **结合地方财政条件开展适度补助，提升重点地区和重点人群可及性。**借鉴丙肝<sup>57</sup>、罕见病防治中地方财政专项补助的经验，可在具备条件的地区探索对治愈型创新药物实施阶段性财政支持，推动早期使用和规模化落地。
- **探索与乙肝功能性治愈创新药物特点相适应的支付方式。**近年来，国家层面已提出要在药品价值评估和支付机制中引入多维度考量，鼓励相关方共同探索按治疗周期付费、按治疗结果付费以及基金与企业风险共担等模式<sup>58</sup>。《医疗保障按病种付费管理暂行办法（2025）》同时指出，对流程清晰、疗效明确的治疗应推进按病种付费，并通过特例单议和动态分组为创新药物保留灵活空间。在此基础上，可优先探索按疗程付费、按疗效付费等创新支付方式，并结合特例单议机制，确保功能性治愈型创新药物稳妥纳入支付体系。

通过支付政策的衔接与创新，可为乙肝功能性治愈创新的可及性提供制度保障，使其临床和公共卫生效益得以充分实现。

## 结论

面对老龄化加速、慢性病与重大传染病并存、医保基金面临长期结构性压力的新阶段，中国卫生体系亟须从“成本控制”走向“价值投资”，以健康产出提升作为核心导向。本文在总结宏观挑战与国家战略定位的基础上，提出以多维价值评估体系支撑三级预防、前移干预和创新驱动的系统性改革路径。

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<sup>57</sup> 云南省疾病预防控制中心.(2024) 丙肝可治愈，医保能报销，困难患者还可享受政府救治费用减免 [EB/OL]. (2024) [2026-03-12]. [https://ynsjkj.yn.gov.cn/html/2024/jikongkepu\\_1121/235.html](https://ynsjkj.yn.gov.cn/html/2024/jikongkepu_1121/235.html)

<sup>58</sup> 国家医保局, 国家卫生健康委. 支持创新药高质量发展的若干措施[EB/OL]. (2025-06-30) [2026-03-12]. [https://www.nhsa.gov.cn/art/2025/7/1/art\\_104\\_17058.html](https://www.nhsa.gov.cn/art/2025/7/1/art_104_17058.html)

中国作为乙肝高疾病负担国家，乙肝功能性治愈创新药物通过有限疗程换取长期临床收益、家庭经济韧性提升、劳动能力恢复和产业创新激励的多层价值，并为支付方式改革、医防融合落实和真实世界证据决策提供实践载体。通过在理念、制度和实施层面协同推进，可促进创新成果惠及更大规模患者，增强公共卫生体系的整体效能，为提升人口质量和实现高质量发展奠定更加稳固的健康基础。

# From Passive Treatment to Active Health: How Functional Cure of Hepatitis B can Drive Health-First Value Transformation

By GSK<sup>1</sup>

## Executive Summary

China is now in the first year of the 15th Five-Year Plan—a critical period for accelerating the construction of a Healthy China<sup>2</sup>. On the one hand, accelerated ageing, compounded by challenges from chronic diseases and major infectious diseases, has led to sustained growth in healthcare demand and mounting pressure on medical insurance fund revenues and expenditures. Concurrently, the “Recommendations of the Central Committee of the Communist Party of China for Formulating the 15th Five-Year Plan for National Economic and Social Development”<sup>3</sup> explicitly advocates “investing in people,” emphasising that “health and population foundations underpin high-quality development”<sup>4</sup>. This highlights the integration of health within the broader socio-economic development agenda, positioning the enhancement of population quality as a cornerstone for sustaining national competitiveness in the long term.

Against this backdrop, the healthcare system urgently requires a transformation from a treatment-centric approach to one prioritising prevention and centred on health. Population ageing alongside the persistent burden of chronic and infectious

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<sup>1</sup> The views expressed in this report are those of the enterprise research and do not represent the official stance or opinions of the forum host and organiser.

<sup>2</sup> HU H, YAN F J. First Observation at the Two Sessions: General Secretary Guides Accelerated Progress in Building a Healthy China[EB/OL]. (2026-03-07)[2026-03-12]. <https://new.chinareports.org.cn/index/news/82093.html> [in Chinese].

<sup>3</sup> The Central Committee of the Communist Party of China. Recommendations of the Central Committee of the Communist Party of China for Formulating the 15th Five-Year Plan for National Economic and Social Development[EB/OL]. (2025-10)[2026-03-12]. [https://www.gov.cn/zhengce/202510/content\\_7046050.htm](https://www.gov.cn/zhengce/202510/content_7046050.htm). [in Chinese].

<sup>4</sup> LEI H C. Advancing High-Quality Development in Health and Population: Interview with Lei Haichao, Secretary of the Party Leadership Group and Director of the National Health Commission[N]. People’s Daily, 2025. [in Chinese]. <https://www.msweekly.com/show.html?id=178176>

diseases renders the traditional model—heavily reliant on reactive disease management and cost containment—unsustainable. The imperative is clear: intervention must be moved upstream—shifting from reactive treatment to proactive health management.

Achieving this strategic transformation requires accelerating the establishment of a modern three-tier prevention system covering all populations throughout their entire lifespans. This will be underpinned by reforms integrating medical and preventive services, technological innovation, and optimised healthcare delivery models. By protecting health capital, interrupting disease progression at an early stage, and restoring functional capacity, healthcare resources will shift focus from reactive treatment following disease onset towards risk identification, proactive screening, and long-term management. This marks a systemic upgrade from disease prevention towards comprehensive health promotion.

This transformation will not only mitigate the structural growth of future healthcare expenditure but also extend healthy life expectancy, enhance labour supply, alleviate household economic and care burdens, and lay the health and demographic foundations for developing new productive forces. At its core, this means redefining healthcare spending: no longer as a cost to be contained, but as a strategic, foundational investment in people’s health, population quality, and long-term societal returns.

Breakthroughs in major disease areas can provide critical validation for the value-based investment paradigm under the Health-First Strategy. Chronic hepatitis B (CHB) exemplifies this profile. It bears the dual characteristics of a major infectious disease and a chronic condition. With an estimated 75 million HBV carriers in China—predominantly aged 30–55<sup>5</sup>—the disease burden is substantial: HBV accounts for 71% of cirrhosis cases and 84% of HCC cases<sup>6</sup>, imposing significant

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<sup>5</sup> The Lancet Regional Health - Western Pacific. [J]. 2024, 51: 101193. DOI: 10.1016/j.lanwpc.2024.101193.

<sup>6</sup> Chinese Society of Gastroenterology. Consensus Opinions on the Clinical Diagnosis and Treatment of Liver Cirrhosis in China[J]. Chinese Journal of Digestion, 2023, 43(4): 227-247.

fiscal pressure on both the healthcare system and affected households<sup>7 8</sup>. Current standard-of-care nucleos(t)ide analogues require lifelong treatment and achieve functional cure—defined as sustained undetectable HBsAg and HBV DNA after a finite course of treatment—in only ~1% of patients<sup>9 10</sup>. With recent scientific breakthroughs, moving hepatitis B from ‘long-term suppression’ to ‘functional cure’ is now clinically feasible, presenting a high-value application scenario with significant policy demonstration value.

Functional cure not only substantially reduces risks of end-stage diseases like cirrhosis and hepatocellular carcinoma (HCC), lowers patients’ lifetime treatment costs, enhances workforce productivity, alleviates household burdens, and promotes social equity, but also drives improvements in diagnostic standards and industrial innovation. It provides a verifiable, replicable model for value-based transformation within healthcare systems.

The China Action Plan for the Prevention and Control of Viral Hepatitis (2025–2030)<sup>11</sup> has, for the first time within a national special prevention and control plan, explicitly advocated for the active development of innovative approaches towards achieving functional cure for hepatitis B. Building upon this foundation, this paper proposes a systematic approach encompassing medical-preventive integration, accelerated regulatory approval, health insurance coverage, innovative payment models, and shifts in public perception. By establishing a policy chain that bridges

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<sup>7</sup> YAN R, et al. 2024 latest report on hepatitis B virus epidemiology in China: Current status, changing trajectory, and challenges[J]. *Hepatobiliary Surgery and Nutrition*, 2025, 14(1): 66-77. DOI: 10.21037/hbsn-2024-754.

<sup>8</sup> Assessment of Total Economic Burden of Chronic Hepatitis B (CHB)-Related Diseases in Beijing and Guangzhou, China[J]. [2026-03-12].  
<https://www.sciencedirect.com/science/article/pii/S109830151060349X>.

<sup>9</sup> WANG W J, XIE Q. Challenges and Strategies in Antiviral Treatment for Chronic Hepatitis B - How to Maximize Clinical Cure[J]. *Clinical Journal of Hepatology and Biliary Diseases*, 2017, 33(8): 1415-1418.

<sup>10</sup> SLAETS L, et al. Systematic review with meta-analysis: hepatitis B surface antigen decline and seroclearance in chronic hepatitis B patients on nucleos(t)ide analogues or pegylated interferon therapy[J]. *GastroHep*, 2020, 2: 106-116.

<sup>11</sup> Department of Infectious Disease Prevention and Control, National Disease Control and Prevention Administration. Notice on Issuing the Action Plan for the Prevention and Control of Viral Hepatitis in China (2025-2030)[EB/OL]. (2025)[2026-03-12].  
[https://www.ndcpa.gov.cn/jbkzxx/c100014/common/content/content\\_1966406073307271168.html](https://www.ndcpa.gov.cn/jbkzxx/c100014/common/content/content_1966406073307271168.html). [in Chinese].

prevention, treatment, and payment mechanisms, it aims to accelerate the faster, more standardised, and sustainable delivery of innovative medicines to patients. This initiative will support the accumulation of health capital, thereby driving improvements in population quality and fostering high-quality socioeconomic development in China.

## **Part One: Why the Healthcare System Must Transform** *Responding to Demographic Change and Rising Disease Burdens*

Comprehensively speaking, China’s healthcare system faces mounting pressures from population aging, the accumulation of chronic non-communicable diseases, and the long-term progression of chronic infectious diseases. Concurrently, national governance philosophies and strategic deployments are accelerating the shift from a “disease-treatment-centric” approach towards a modern health governance model that prioritises “prevention first” and is “centred on health.”

The 15th Five-Year Plan proposals and a series of supporting national strategic policies have charted a clear course for this transformation: advancing resource allocation upstream, strengthening early interventions, enhancing health outcomes, and steering healthcare investment from passive cost containment towards proactive health value creation through integrated value assessment systems and innovative payment mechanisms.

### **I. Macro-Level Challenges: Structural Pressures from Ageing, Chronic Disease, and Infectious Disease**

#### *(1) Accelerating Population Ageing Drives Rising Healthcare Demand and Exerts Structural Strain on Health Insurance Systems*

China has entered a phase of deep ageing. By the end of 2024, the national population aged 60 and above reached 310 million, accounting for 22.0% of the total population<sup>12</sup>. This figure is projected to exceed 400 million by 2035,

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<sup>12</sup> Ministry of Civil Affairs, National Office on Aging. 2024 National Report on Aging Development[R]. Beijing: Ministry of Civil Affairs, 2025.  
<https://www.mca.gov.cn/n152/n165/c1662004999980006089/part/21508.pdf>. [in Chinese].

representing over 30% of the total population<sup>13</sup>. This ageing directly results in a rapid accumulation of disease burden. Currently, approximately 190 million elderly individuals in China suffer from chronic diseases, with 75% of those aged 60 and above having at least one chronic condition<sup>14</sup>.

The healthcare needs of the elderly are more complex and incur significantly higher costs—annual per capita healthcare expenditure for those aged 65 and above is approximately double the average for the entire population<sup>1516</sup>. Moreover, between 2016 and 2018, population ageing contributed 23.26% to the growth of national healthcare expenditure. Specifically, 37.47% of the increase in hospitalisation costs for patients aged 65 to 79 was attributable to deepening ageing<sup>17</sup>. As the age structure continues to shift, China’s healthcare expenditure faces structural and persistent upward pressure.

Meanwhile, in 2024, total revenues for the basic medical insurance fund reached RMB 3.48 trillion, representing a year-on-year increase of 4.4%; expenditures during the same period amounted to RMB 2.97 trillion, rising by 5.5% year-on-year<sup>18</sup>. The National Healthcare Security Administration has explicitly stated at multiple press conferences that while fund operations remain generally stable,

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<sup>13</sup> National Health Commission. The Population Aged 60 and Above Will Exceed 400 Million by Around 2035, Accounting for Over 30% of the Total Population[EB/OL]. (2022-09-20)[2026-03-12]. <https://news.cctv.com/2022/09/20/ARTInjejqDvmMaZi5jzTPHYT220920.shtml>. [in Chinese].

<sup>14</sup> People’s Political Consultative Conference Network. 75% of the Elderly Aged 60 and Above Suffer from Chronic Diseases: Attention Required for the “Dual Threat” of Chronic and Infectious Diseases[EB/OL]. (2023-07-24)[2026-03-12]. <https://www.rmzxw.com.cn/c/2023-07-24/3382869.shtml>. [in Chinese].

<sup>15</sup> Forward Industry Research Institute. Annual Medical Expenditure Scale for People Aged 65 and Above, 2020-2025[R]. Beijing: Forward Industry Research Institute, 2024. [in Chinese].

<sup>16</sup> National Bureau of Statistics. Residents’ Income and Consumption Expenditure in 2020[R]. Beijing: National Bureau of Statistics, 2020. [in Chinese].

<sup>17</sup> Jianwen Consulting. China’s “Moderate Aging” Accelerates, Elderly Dependency Ratio Rises to 22.5%: Where Lies the Solution for Elderly Care?[EB/OL]. (2024)[2026-03-12]. <https://www.yicai.com/news/102387675.html>. [in Chinese].

<sup>18</sup> National Healthcare Security Administration. Statistical Bulletin on Healthcare Security Development in 2024[R]. Beijing: National Healthcare Security Administration, 2025. [https://www.nhsa.gov.cn/art/2025/1/17/art\\_14\\_11063.html](https://www.nhsa.gov.cn/art/2025/1/17/art_14_11063.html). [in Chinese].

“structural contradictions” are particularly pronounced<sup>19 20</sup>. In some regions, resident medical insurance funds have experienced current deficits or declining surpluses<sup>21</sup>. Amid constrained fund revenue growth driven by macroeconomic and employment conditions, the lack of effective prevention-focused strategies and payment reforms risks intensifying expenditure pressures, thereby eroding the medical insurance system’s capacity for cross-cycle balance.

*(2) Chronic Diseases as the Predominant Burden: Traditional Treatment Models Struggle to Meet Existing Challenges*

Chronic diseases, also known as chronic non-communicable diseases, have formed a substantial patient population in China. Currently, approximately 330 million people suffer from cardiovascular diseases, 140 million from diabetes, and around 100 million from chronic respiratory diseases such as chronic obstructive pulmonary disease (COPD) and asthma. The four major chronic diseases (chronic respiratory diseases, diabetes, cardiovascular and cerebrovascular diseases, and cancer) account for over 80% of all deaths<sup>22</sup>. Among the 190 million elderly chronic disease patients, the majority require long-term follow-up and sustained medication, leading to a persistent skew in medical insurance expenditure towards treatment rather than prevention. This imbalance hinders the maximisation of health outcomes.

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<sup>19</sup> National Healthcare Security Administration. Press Conference: Overview of Healthcare Security Work in 2023[EB/OL]. (2024)[2026-03-12]. [http://www.nhsa.gov.cn/art/2024/1/18/art\\_14\\_10833.html](http://www.nhsa.gov.cn/art/2024/1/18/art_14_10833.html). [in Chinese].

<sup>20</sup> National Healthcare Security Administration. Press Conference: Overview of Medical Insurance Reform and Fund Operations[EB/OL]. (2023)[2026-03-12]. [http://www.nhsa.gov.cn/art/2023/4/20/art\\_14\\_10523.html](http://www.nhsa.gov.cn/art/2023/4/20/art_14_10523.html). [in Chinese].

<sup>21</sup> WU S M. Pressure Mounts on Balancing Resident Medical Insurance Revenues and Expenditures in Some Cities: How to Improve Funding Mechanisms[N]. Yicai, 2025. <https://www.yicai.com/news/102468923.html>. [in Chinese].

<sup>22</sup> YIN J H, ZHANG W Q, YOU J L, et al. Analysis of the mortality levels and trends of four major chronic non-communicable diseases among Chinese residents, 2013—2021[J]. Journal of Environmental Hygiene, 2025, 15(9): 826-831. DOI: 10.13421/j.cnki.hjwsxzz.2025.09.010.

### *(3) The Cumulative Long-Term Burden of Major Infectious Diseases Highlights the Necessity of Earlier Interventions—Hepatitis B as an Example*

While continuously enhancing its capacity to prevent and control emerging infectious diseases, China still faces persistent challenges from high-burden infectious diseases such as hepatitis B, tuberculosis, and AIDS.

Among these, hepatitis B represents a major chronic infectious disease in China. The country hosts approximately 75 million individuals infected with the hepatitis B virus, accounting for nearly a quarter of the global total<sup>23</sup>. Thanks to primary prevention measures such as neonatal HBV vaccination, the incidence of new infections has declined sharply. However, the vast, historically accumulated cohort of adults already infected remains a “hidden iceberg”—a massive, largely invisible burden with the potential to drive future disease morbidity. Approximately 15–25% of chronic HBV carriers remain at risk of disease progression, potentially developing cirrhosis, liver failure, or hepatocellular carcinoma (HCC)<sup>24</sup>, imposing a long-term strain on both economic development and the healthcare system. HCC ranks as China’s fourth most common malignancy and the second leading cause of cancer-related mortality, with a five-year survival rate of merely 10%–14%<sup>25</sup>.

Meanwhile, according to a World Health Organisation report, the diagnosis rate for hepatitis B carriers in China stood at merely 24% in 2022, with a treatment rate of just 6.4%<sup>26</sup> (primarily based on chronic HBV carriers testing positive for HBsAg— hepatitis B surface antigen, a viral protein indicating persistent infection). Separate studies employing nationwide epidemiological surveys and large-scale clinical extrapolations suggest China’s chronic hepatitis B diagnosis rate clusters within the

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<sup>23</sup> HUI Z, et al. New progress in HBV control and the cascade of health care for people living with HBV in China: evidence from the fourth national serological survey, 2020[J]. *The Lancet Regional Health – Western Pacific*, 2024, 51: 101193.

<sup>24</sup> Centers for Disease Control and Prevention. Clinical Overview of Hepatitis B[EB/OL]. (2025)[2026-03-12]. <https://www.cdc.gov/hepatitis-b/hcp/clinical-overview/index.html>.

<sup>25</sup> Hepatitis B Foundation. Survival Rates[EB/OL]. [2026-03-12]. <https://www.hepb.org/research-and-programs/liver/staging-of-liver-cancer/survival-rates/>.

<sup>26</sup> World Health Organization. Global hepatitis report 2024: action for access in low- and middle-income countries[R]. Geneva: WHO, 2024.

20–30% range, whilst treatment rates consistently fall below 10%<sup>27</sup> <sup>28</sup>. This implies a substantial cohort of patients remain undiagnosed, unmanaged, and untreated, creating a latent burden of hepatitis B-related cirrhosis and HCC over the coming decade. Overall, current prevention and control capabilities remain skewed towards reactive treatment and remediation, falling far short of establishing an effective upstream intervention chain.

## **II. National Direction: Health and Population Quality as Pillars of Development** *Towards Health-Centred Governance*

At the national level, health and population issues are evolving from traditional livelihood concerns into strategic foundations underpinning high-quality economic and social development. The 15th Five-Year Plan recommendation points out that high-quality population development shall support Chinese-style modernization, establishing health and population quality as integral components of national long-term competitiveness. This elevates the coordination of population health, scientific innovation, and socio-economic development to a higher strategic level, thereby enhancing the nation’s overall resilience and sustainability.

### *(1) The 15th Five-Year Plan Recommendation: Health and Population Quality as Strategic Foundations, Innovation and Biopharmaceutical Industries as Drivers*

The 15th Five-Year Plan Recommendation identifies “implementing a health-first development strategy” and “promoting high-quality population development” as cornerstone initiatives for national modernization. It calls for strengthening the health and demographic foundations that support sustainable economic and social progress.

In the health sector, the plan proposes advancing the Healthy China initiative by integrating the maintenance and promotion of public health throughout all stages of economic and social development. It emphasises a prevention-first approach, improving disease prevention and control systems, strengthening whole-life-cycle

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<sup>27</sup> HE J M, ZHUANG H. Status of diagnosis and antiviral treatment of chronic hepatitis B in China[J]. Chinese Journal of Hepatology, 2023, 29(3): 169-177.

<sup>28</sup> Chinese Academy of Medical Sciences. National HBV Diagnosis and Treatment Assessment Report[R]. Beijing: CAMS, 2024.

health management, strategically shifting the focus of health services upstream, and enhancing prevention and control systems for major chronic diseases and infectious diseases.

Regarding industry and innovation, the plan emphasises the forward-looking development of strategic emerging industries such as biomanufacturing and biomedicine, positioning them as key drivers for future growth and the formation of new productive forces. It proposes accelerating the transformation of innovations in life sciences and healthcare by refining the new national system, concentrating efforts on breakthroughs in core technologies, and fostering innovation.

The plan elevates health and population quality to a foundational strategic position, establishing scientific innovation and biopharmaceutical development as vital engines for future growth. This provides authoritative policy guidance for shifting health investments from cost-driven expenditure towards strategic value-driven investment.

## *(2) Healthcare Reform: Building an Integrated Health Service System Across the Entire Life Course*

In its official interpretation of the spirit of the Fourth Plenary Session of the 20th CPC Central Committee, the National Health Commission further outlined the primary directions for healthcare system reform in the new era<sup>29</sup>:

- **Health Priority:** Elevating health indicators from livelihood metrics to development benchmarks by incorporating them into government performance assessments, thereby driving a shift from “disease-centred care” to “health-centred care.”
- **Whole-Life-Cycle Services:** Promoting seamless integration of prevention, diagnosis, treatment, rehabilitation, and care. Leveraging digitalisation and

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<sup>29</sup> LEI H C. Transcript of the Press Conference Introducing and Interpreting the Spirit of the Fourth Plenary Session of the 20th CPC Central Committee[EB/OL]. (2025)[2026-03-12]. <http://www.scio.gov.cn/live/2025/37599/index.html>. [in Chinese].

standardisation to enhance comprehensive health management capabilities, ensuring healthcare services are continuous, traceable, and evaluable.

- **Institutionalising Prevention-Oriented Approaches:** Deepening reforms to integrate medical treatment and disease prevention, fostering collaboration between disease control institutions, hospitals, and primary healthcare facilities. Establishing a closed-loop mechanism from health risk monitoring to long-term management, institutionalising prevention as the primary focus.
- **Technology innovation as a driver:** System upgrades through breakthroughs in key areas – Accelerate the development of innovative drugs, vaccines, and diagnostic technologies targeting major chronic diseases and key infectious diseases.

Meanwhile, the state has implemented systematic deployments concerning the high-quality development of innovative drugs, payment method reforms, and the application of real-world evidence. For instance, the “multi-dimensional value assessment” approach enhances comprehensive evaluation of innovative drugs’ safety, efficacy, cost-effectiveness, equity, accessibility, and innovation<sup>30</sup>. Additionally, pilot programmes for real-world health insurance value assessment explore evaluating intervention outcomes within authentic clinical contexts.

These policies are collectively advancing the development of a health governance system oriented towards comprehensive value across the entire lifecycle, thereby creating an institutional environment conducive to innovative medicines and treatment approaches demonstrating significant health benefits.

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<sup>30</sup> National Healthcare Security Administration. Mid-year Symposium on National Healthcare Security Work Convened in Shaanxi[EB/OL]. (2025-08-18)[2026-03-12]. [https://www.nhsa.gov.cn/art/2025/8/18/art\\_14\\_17585.html](https://www.nhsa.gov.cn/art/2025/8/18/art_14_17585.html). [in Chinese].

## **Part Two: From Treatment-Centred Care to Health-Centred Governance**

### *Rebuilding the Three-Tier Prevention System*

The pivotal shift from a treatment-centric approach to a health-centered model hinges upon transforming the health governance paradigm from reactive response to proactive prevention.

Drawing upon the model proposed by European consultancy Ambrosetti<sup>31</sup> “from compensating for losses to creating health value,” the system must shed its traditional reliance on end-stage treatment. The core lies not in merely increasing investment, but in restructuring the operational logic of the health system. This involves rationally shifting resource allocation from end-stage treatment towards risk identification, proactive prevention, early intervention, and continuous management.

Within this framework, this section proposes a strategic pathway centred on tiered prevention innovation, guided by national strategic priorities. Hepatitis B functional cure emerges as the pivotal breakthrough and exemplary model for this transformation, owing to its significant clinical value, socio-economic benefits, and policy alignment.

#### **I. Core Concept: Shifting from Cost Control to Value Investment**

The “Cost—Value Quadrant Model” (Chart 1) proposed by Ambrosetti categorises healthcare investment approaches into four types based on two dimensions: responsiveness of service (reactive/proactive) and health output level (low/high):

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<sup>31</sup> The European House—Ambrosetti. *The Value of Prevention for Economic Growth and the Sustainability of Healthcare, Social Care and Welfare Systems*[R]. Milan: Ambrosetti, 2024.

As illustrated, the framework divides approaches into four quadrants:



Chart 1: The “Cost—Value Quadrant Model”

- Horizontally, it spans from reactive treatment on the left to proactive prevention on the right—the left side corresponds to treatment and remediation after disease onset, where resources are primarily expended to mitigate losses, forming a cost centre;
- The right side emphasises front-loading resources into prevention, screening, and health management to accumulate and enhance health capital, representing a value investment geared towards long-term outcomes.

This model provides a structured framework for transforming China’s healthcare system: shifting focus from annual expenditure and localised cost control prioritised by payers and providers towards enhancing societal health outcomes, reducing population risks, and improving overall long-term costs. Proactive health

investment not only reduces future high disease expenditures but also delivers multidimensional value including increased labour productivity, reduced family caregiving burdens, enhanced social equity, and driving biomedical innovation (detailed in Part III of this paper).

## **II. Implementation Pathway: Embedding Value Investment Principles Through a Three-Tier Prevention System**

Transitioning from cost containment to value-based investment requires a healthcare system equipped with an operational, measurable pathway capable of sustaining health value generation. Reconstructing the classic “three-tier prevention” framework<sup>32</sup> (Chart 2) through innovation serves as the effective pathway for this strategic transformation.

The three-tier prevention model inherently features structural characteristics of resource allocation, risk prevention, and high-value investment returns. It aligns closely with the strategic direction outlined in the 15th Five-Year Plan recommendation to advance the Healthy China initiative, uphold prevention as the primary approach, and strengthen the development of a whole-life-cycle health service system:

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<sup>32</sup> National Health Commission. Notice from the Disease Control Bureau on Conducting the 2019 National Cancer Prevention and Control Awareness Week Activities[EB/OL]. (2019)[2026-03-12]. <https://www.nhc.gov.cn/jkj/c100063/201903/6bc4c0bc83b54e808b5d93b86068b901.shtml>. [in Chinese].

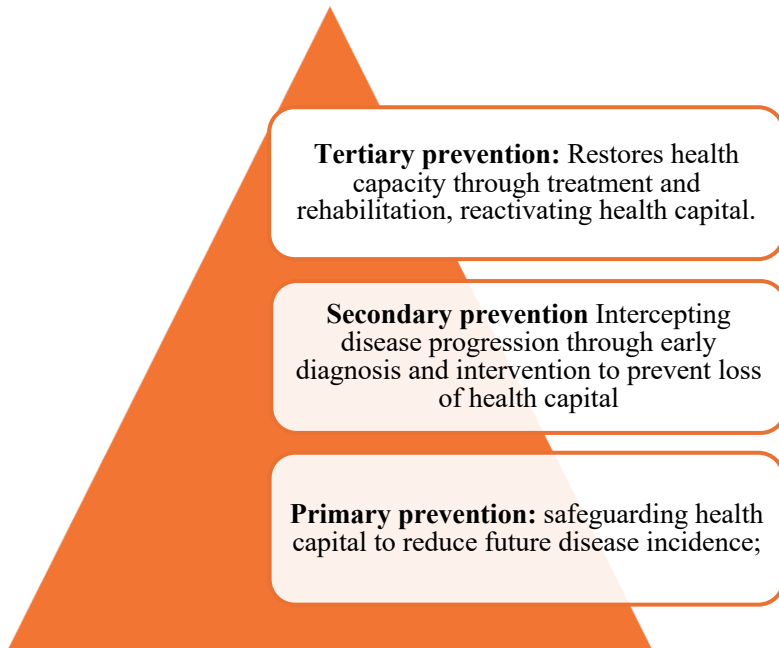


Chart 2: New “Three-Tier Prevention” Framework

- **Primary prevention:** Addressing causes of disease and reducing damage from adverse factors—by building a solid foundation for population health, reducing future disease incidence at the source.
- **Secondary prevention:** Early detection, early diagnosis, early treatment—by intercepting disease progression, effectively avoiding health loss.
- **Tertiary prevention:** Improving quality of life, extending survival—by restoring health capacity through treatment and rehabilitation, reactivating human capital.

Through systematic upgrades to tertiary prevention via innovative technologies, products, diagnostic models and management systems, we have achieved both the advancement and seamless integration of the “prevention-treatment-rehabilitation” continuum, while simultaneously strengthening health management and institutional safeguards. This forms a dynamic health investment portfolio,

transforming healthcare expenditure from a one-off cost outlay into the sustained accumulation of sustainable health capital.

*(1) Primary Prevention: The Strategic Starting Point for Maximising Health Returns at Minimum Cost*

Primary prevention intervenes before disease onset through health education, vaccination, and risk factor control, representing the health investment with the highest return on investment. Advances in multivalent and long-acting vaccines, precise population stratification, and digital health management have significantly enhanced the coverage and precision of primary prevention. This enables the reduction of disease incidence and protection of health capital at relatively low cost.

Against the backdrop of China's ageing population and rising chronic disease burden, primary prevention serves as the strategic starting point for shifting the healthcare system's focus from cost containment to health value creation. It effectively reduces future disease burden while laying the groundwork for secondary and tertiary prevention.

Taking hepatitis B prevention as an example, China has established an immunisation programme centred on free neonatal vaccination. The full vaccination coverage rate has consistently exceeded 95%, reducing the HBsAg prevalence among children under five to 0.3%, demonstrating remarkable success in hepatitis B prevention and control<sup>33</sup>. Concurrently, mother-to-child transmission prevention measures for pregnant women with hepatitis B have substantially lowered the risk of vertical transmission. Furthermore, in line with national policy, certain regions, such as Hainan<sup>34</sup> & Guangdong<sup>35</sup>, have extended free vaccination to high-risk adult populations, thereby broadening the scope of primary prevention.

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<sup>33</sup> YAN R Y, SUN M H, YANG H Y, et al. 2024 latest report on hepatitis B virus epidemiology in China: current status, changing trajectory, and challenges[J]. *Hepatobiliary Surgery and Nutrition*, 2025, 14(1): 66-77. DOI: 10.21037/hbsn-2024-754.

<sup>34</sup> General Office of Hainan Provincial People's Government. Hainan Province "2+3" Health Service Package Implementation Plan[EB/OL]. (2022)[2026-03-12]. <https://www.hainan.gov.cn/hainan/szfbgtwj/202204/ef8d6104a0e64a78a08db835857ef4d8.shtml>. [in Chinese].

<sup>35</sup> People's Government of Guangdong Province Portal Website. Early Prevention and Treatment Action for Viral Hepatitis Launched: Guangdong Aims for Cumulative Hepatitis B Screening Rate of No Less Than

## *(2) Secondary Prevention: A Critical Investment with High Returns in Halting Disease Progression*

Secondary prevention intervenes during the reversible stage of disease through early screening, diagnosis, and treatment. Compared to managing the disease in its mid-to-late stages, early intervention not only substantially reduces the risk of progression but also avoids future high hospitalisation costs and labour losses, maximising health outcomes from limited resources.

Taking hepatitis B as an example, early screening and treatment substantially lower the incidence of cirrhosis and HCC, representing a highly cost-effective intervention pathway<sup>36</sup>. As of 2022, China's hepatitis B diagnosis rate stood at only 24% and its treatment rate at merely 6.4%<sup>26</sup>—far from the WHO 2030 targets of 90% diagnosis and 80% treatment for hepatitis elimination. Expanding proactive hepatitis B screening coverage and increasing the standardised treatment rate among diagnosed patients are fundamental to strengthening secondary prevention—precisely the direction that some high-burden regions are now exploring. Several provinces, including Hainan<sup>34</sup> and Guangdong<sup>35,35</sup>, have taken the lead by integrating hepatitis B screening into their provincial public health systems, establishing integrated “screen-diagnose-treat-manage” networks.

Moreover, functional cure of hepatitis B, particularly through innovative therapies, holds promise as the most significant breakthrough and milestone in secondary prevention efforts.

### ***A Paradigm Shift to Accelerate HBV Elimination: From “Chronic Carrier” to “Functional Cure”***

Current standard-of-care treatment with nucleos(t)ide analogues requires lifelong medication in most patients and achieves functional cure in only approximately 1% of cases<sup>10</sup>. Functional cure offers a new pathway: Clinically, this involves sustained

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70% in Target Population by 2026[EB/OL]. (2024-08-02)[2026-03-12].

[https://www.gd.gov.cn/zwgk/zdlyxxgkzl/zhsjgy/yljh/content/post\\_4467792.html](https://www.gd.gov.cn/zwgk/zdlyxxgkzl/zhsjgy/yljh/content/post_4467792.html). [in Chinese].

<sup>36</sup> YANG D H, WANG W P, ZHANG Q, et al. Hepatocellular carcinoma progression in hepatitis B virus-related cirrhosis patients receiving nucleoside (acid) analogs therapy: A retrospective cross-sectional study[J]. *World Journal of Gastroenterology*, 2021, 27(17): 2025-2038. DOI: 10.3748/wjg.v27.i17.2025.

HBsAg negativity, undetectable HBV DNA for at least 24 weeks, and stable liver function following a limited course of therapy and subsequent discontinuation of medication. This state is associated with a marked reduction in long-term liver-related complications, including HCC and all-cause mortality.<sup>37 38</sup>

- Studies show that among patients who achieve HBsAg clearance, the risk of HCC is reduced by 76% compared to those who remain persistently positive<sup>39</sup>, offering substantial clinical and economic value by improving long-term prognosis.
- The World Health Organization’s 2024 Global Hepatitis Report states that every dollar invested in preventing liver cancer deaths and curbing future cancer treatment and care costs yields a return on investment of two to three dollars<sup>26</sup>.

China’s latest guideline for the prevention and treatment of hepatitis B recommends that eligible patients pursue functional cure<sup>40</sup>; technical guidance issued by the National Medical Products Administration explicitly advocates pursuing functional cure based on finite treatment courses<sup>41</sup>. These measures indicate that national-level efforts are underway to advance functional cure in clinical practice and policy orientation.

As a pioneering initiative exploring new therapeutic pathways for hepatitis B in China, the “Everest Project”—which employs multi-optimised combination therapy regimens based on traditional therapeutic agents, —has enrolled more than

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<sup>37</sup> Drysdale M et al. GHS 2025. Oral presentation. Slides available upon request.

<sup>38</sup> European Association for the Study of the Liver (EASL). Clinical Practice Guidelines on the management of hepatitis B virus infection[J]. *Journal of Hepatology*, 2025, 83(2): 502-583. Available at: <https://www.sciencedirect.com/science/article/pii/S0168827825001746>.

<sup>39</sup> YIP T C F, et al. HBsAg seroclearance further reduces hepatocellular carcinoma risk after complete viral suppression with nucleos(t)ide analogues[J]. *Journal of Hepatology*, 2019, 70(3): 361-370.

<sup>40</sup> Chinese Medical Association. Guidelines for the Prevention and Treatment of Chronic Hepatitis B[S]. Beijing: Chinese Medical Association, 2022. [in Chinese].

<sup>41</sup> Center for Drug Evaluation, National Medical Products Administration. Technical Guidance Principles for Clinical Trials of Therapeutic Drugs for Chronic Hepatitis B Virus Infection[EB/OL]. (2023-04-27)[2026-03-12]. <https://www.cde.org.cn/main/news/viewInfoCommon/5bebdb98aae85a980181683a910788e> [in Chinese].

30,000 patients through 1,000+ specialised clinics nationwide<sup>42</sup>. However, data from the project reveal a stark reality: the current treatment modalities exhibit a clear bottleneck in HBsAg clearance rate (a key clinical surrogate for functional cure). Even among rigorously selected “advantageous” subgroup patients, a substantial proportion still fail to reach the treatment endpoint with existing regimens<sup>43</sup>. This large unmet clinical need is a compelling call for innovative drugs specifically designed to achieve functional cure.

The China Action Plan for the Prevention and Control of Viral Hepatitis (2025–2030), issued in 2025, explicitly calls for “actively developing innovative approaches to achieve functional cure for hepatitis B” for the first time in a national special prevention and control plan, thereby establishing functional cure as a strategic direction and a cornerstone for transforming the prevention and treatment framework. Experts note that the alignment of research and policy is laying the institutional foundation for a paradigm shift in hepatitis B therapy<sup>44</sup>. Two Phase III clinical trials for the world’s first innovative drug aimed at functional cure for hepatitis B have both met their primary endpoints, demonstrating statistically and clinically meaningful functional cure rates. This innovative therapy has the potential to transform lifelong medication into a finite 24-week treatment option and to serve as a cornerstone for future sequential therapy<sup>45</sup>. Its mechanism of action—targeting HBV RNA to suppress the expression of viral proteins

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<sup>42</sup> Xinhua News Agency. Summary Meeting Convened for China’s Chronic Hepatitis B Clinical Cure (Mount Everest) Project[EB/OL]. (2025-06-30)[2026-03-12].

<http://www.xinhuanet.com/video/20250630/5d729477e0ab4511b2d7b603505172ce/c.html>. [in Chinese].

<sup>43</sup> WU D, YAN X, WANG Z, et al. Peginterferon  $\alpha$ -2b Enhances Hepatitis B Surface Antigen Loss in Nucleos(t)ide Analogue-suppressed Low Hepatitis B Surface Antigen Chronic Hepatitis B Patients: Everest Study in China[J]. *Clinical Gastroenterology and Hepatology*, 2026. DOI: 10.1016/j.cgh.2026.01.028.

<sup>44</sup> JI Y Y, HAN L M. CIIE Feast: Multinational Pharmaceutical and Medical Device Innovations Take Centre Stage, Local Collaborations Bloom Everywhere[N]. *21st Century Business Herald*, 2025-11-07. <https://www.21jingji.com/article/20251107/herald/8b1f97542db2a8225aa273eeb218b60f.html>. [in Chinese].

<sup>45</sup> GSK China. GSK announces positive results from B-Well 1 and B-Well 2 phase III trials for bupirovirsen, a potential first-in-class treatment for chronic hepatitis B[EB/OL]. (2026-01-12)[2026-03-12]. <https://www.gsk-china.com/zh-cn/media/press-releases/bepirovirsen-phase-iii-results/>

including HBsAg, reduce overall HBV DNA levels, and stimulate the immune system—enables the achievement of functional cure<sup>46</sup>.

To ensure rapid and widespread adoption of innovative functional cure therapies, supporting policies—such as standardised diagnostic and treatment protocols and health insurance reimbursement—must advance in parallel. Concurrently, primary care capacity and patient awareness must be strengthened to establish a comprehensive, end-to-end support system.

### *(3) Tertiary Prevention: Restoring Health Capacity to Unlock Human Capital*

Tertiary prevention reduces complications through effective treatment, rehabilitation, and long-term management, restoring patients' quality of life and work capacity. This represents a critical stage in health investments re-releasing human capital at the back end. Traditionally viewed as a passive therapeutic process, tertiary prevention has evolved beyond loss containment to rebuild health capital through innovative drugs, standardised management, and integrated care models. With novel therapies and systematic chronic disease management, certain conditions now permit disease reversal during this stage, restoring patients' working capacity, alleviating family caregiving burdens, and reducing future healthcare resource consumption.

### **Summary: Hepatitis B's comprehensive prevention and control framework offers a model for systemic value transformation**

A health investment framework centred on tertiary prevention has established a comprehensive pathway in hepatitis B control: primary prevention fortifies the frontline through vaccination and proactive management of high-risk populations; secondary prevention achieves a critical breakthrough from disease control to functional cure; tertiary prevention supports patients' return to normal life and productive work through standardised treatment and restoration of health capacity.

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<sup>46</sup> YUEN M F, et al. Efficacy and safety of bepirovirsen in chronic hepatitis B infection[J]. *New England Journal of Medicine*, 2022, 387(21): 1957-1968. DOI: 10.1056/NEJMoa2210027.

Notably, functional cure demonstrates short-term investment yielding long-term, multi-dimensional returns. This exemplifies the comprehensive benefits of advancing interventions across clinical practice, major infectious disease control, public health, and socio-economic dimensions. It also highlights the limitations of evaluating healthcare value solely through cost-expenditure metrics.

## **Part Three: Rethinking the Value of Innovative Medicines** *From Cost-Based Metrics to Multi-Dimensional Societal Value*

### **I. Beyond Traditional Evaluation: Healthcare Investment as Strategic Value Creation**

Building upon the practical explorations of comprehensive hepatitis B prevention and control, particularly the multifaceted value potential demonstrated by functional cure, the key to driving a profound transformation of the health system from “cost control” to “value investment” lies in breaking free from the constraints of traditional value assessment frameworks. This requires establishing a comprehensive evaluation system capable of reflecting long-term health benefits, societal gains, and the spillover effects of innovation.

Historically, China’s health sector has primarily employed cost-effectiveness analysis (CEA) and cost-utility analysis (CUA) models. While these methodologies have served a purpose under resource constraints, they prove inadequate for comprehensively measuring the long-term, multifaceted value of innovative drugs and therapies for chronic infectious diseases like hepatitis B. This limitation manifests in three principal aspects:

- **The evaluation perspective remains confined to the direct costs and benefits of individual clinical cases.** Conventional assessments typically focus on a single patient’s life years, quality-adjusted life years (QALYs), or incremental treatment costs, yet struggle to capture the comprehensive value to families, labour markets, and societal systems following health restoration. For instance, significant benefits arising from functional cure of hepatitis B—such as restored labour income, reduced family caregiving burdens and

labour force participation, and prevention of potential transmission to other household members—are often overlooked in traditional models.

- **Evaluation timeframes are constrained, failing to reflect long-term value.** CEA/CUA assessment cycles typically span 3–5 years, whereas chronic conditions like hepatitis B often extend over decades. The greatest value of functional cure in preventing cirrhosis and HCC manifests precisely in the medium to long term. Short-cycle assessments inevitably underestimate the long-term returns of earlier intervention and struggle to reflect the strategic cross-cycle purchasing of health insurance funds and their long-term cost-saving effects.
- **Insufficient evaluation dimensions fail to capture the societal and industrial benefits of innovative drugs and therapies.** Values such as enhanced labour productivity, improved social equity, better patient experiences, spillover effects in the innovative pharmaceutical industry, and scientific and technological spillover effects – which are difficult to monetise directly – are often downplayed or excluded from assessments. Yet these represent crucial gains in the healthcare system’s transition towards value-based investment.
- In short, **traditional evaluation is like driving while looking only in the rearview mirror: it sees the money already spent and the patient already in front of us but misses the bigger picture ahead—the long-term value a healthy individual creates for their family and society.**

Against the backdrop of the 15th Five-Year Plan Recommendation advocating development goals such as “innovation-driven development” and “new quality productive forces,” healthcare investment must transcend traditional medical expenditure. It represents strategic investment to enhance population quality, drive economic growth, strengthen societal resilience, and propel scientific innovation. This transformation demands moving beyond single-dimensional value

measurement to establish an evaluation system comprehensively reflecting health, economic, social, and industrial benefits<sup>47</sup>.

Internationally, multidimensional value assessment has emerged as a pivotal trend in global healthcare system transformation. The World Health Organisation's (WHO) "3D Prioritisation Framework" (Data–Dialogue–Decision) promotes systematic and scientific value assessment through the synergy of data, dialogue, and decision-making<sup>48</sup>; The "Value Flower Model"<sup>49</sup> developed by the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) has emerged as the mainstream reference framework for global multidimensional value assessment. This model encompasses 12 value dimensions, covering core value elements (including net cost, QALY, productivity, and improved adherence) while also incorporating social values such as equity, safety margins, patient choice and preferences, and innovation attributes, alongside scientific spillover effects, and aspirational value such as insurance value. This achieves a panoramic measurement of innovative interventions' value and has been incorporated into decision-making references by multiple countries' Health Technology Assessment (HTA) bodies.

Domestically, China's innovative drug value assessment system is also undergoing enhancement. In 2025, the National Healthcare Security Administration and the National Health Commission jointly issued the document "Several Measures to Support the High-Quality Development of Innovative Medicines," advocating for multi-dimensional comprehensive evaluation of drug value. Subsequently, the National Healthcare Security Administration launched a pilot programme for real-world comprehensive value assessment of health insurance. This initiative centres on leveraging real-world data to expand the traditional dimensions of safety,

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<sup>47</sup> McKinsey Global Institute. Dependency and depopulation? Confronting the consequences of a new demographic reality[R]. New York: McKinsey & Company, 2025. <https://www.mckinsey.com/mgi/our-research/dependency-and-depopulation-confronting-the-consequences-of-a-new-demographic-reality>

<sup>48</sup> World Health Organization. The 3-D priority-setting and decision-making framework[EB/OL]. (2023)[2026-03-12]. <https://www.who.int/teams/health-financing-and-economics/economic-analysis/health-technology-assessment-and-benefit-package-design/resource-guide-for-the-use-of-hta-and-hbp-design-processes/what-are-the-overall-principles-of-hbp-design/the-3-d-priority-setting-and-decision-making-framework>

<sup>49</sup> LAKDAWALLA D N, DOSHI J A, GARRISON L P, et al. Elements of value in health care: A health economics approach[J]. *Value in Health*, 2018, 21(2): 131-139. DOI: 10.1016/j.jval.2017.12.007.

efficacy, and cost-effectiveness with new criteria: innovation, equity, accessibility, and patient experience. This marks a shift in China’s healthcare value assessment towards a multi-dimensional, full-cycle approach grounded in real-world evidence.

The functional cure of hepatitis B serves as a quintessential case study for this evolutionary trajectory. Its multi-layered value highlights the limitations of the current assessment framework and provides tangible grounds for the systematic reconstruction of value evaluation models.

## **II. Comprehensive Value Assessment of Functional Cure for Hepatitis B** *From Individual Health to National Development*

### *(1) Health and Socioeconomic Returns: From Health Capital to Social Equity*

- **Individual Health Value: Drastically lowers liver cancer risk—a leap from “treatment access” to “Functional cure.”** Functional cure significantly lowers the risk of cirrhosis and HCC<sup>50</sup>, thereby reducing the burden of end-stage liver disease over extended periods and enhancing healthy life expectancy.
- **Household Economic Value: Alleviates catastrophic healthcare expenditure, enhancing household financial resilience and well-being.** Households with hepatitis B patients incur high healthcare costs, where prolonged medication, hospitalisation, and disease-related events significantly increase economic vulnerability<sup>51</sup>. Functional cure reduces future disease progression probability through limited treatment courses, lowering long-term medical expenditure and enhancing household resilience to economic shocks. This broadly improves social equity and economic stability.

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<sup>50</sup> Xinhua News Agency. Clearance of Hepatitis B Surface Antigen Significantly Reduces Liver Cancer Risk: Interview with Professor Zhang Wenhong of Huashan Hospital[EB/OL]. (2025-12-02)[2026-3-12]. <http://www.xinhuanet.com/info/20251202/1a5b32d24610478680a7df2de155b745/c.html> [in Chinese].

<sup>51</sup> NAYAGAM S, CHAN P, ZHAO K, et al. Investment case for a comprehensive package of interventions against hepatitis B in China: Applied modeling to help national strategy planning[J]. *Clinical Infectious Diseases*, 2020, 71(5): 743-752. DOI: 10.1093/cid/ciaa134.

- **Workforce Productivity Value: Unleashes millions of workers—a “health dividend” for an ageing society.** Chronic hepatitis B patients commonly experience work absenteeism and reduced productivity. Achieving functional cure through limited treatment courses substantially reduces time lost to outpatient follow-ups and hospitalisations, restoring labour supply and career continuity<sup>52</sup>. Against the backdrop of a declining working-age population, this reactivation of health capital holds significant macroeconomic implications.
- **Gender Equity Value: Frees women from unpaid caregiving, supporting their labour force participation.** Cancer imposes substantial demands on family care resources, with women shouldering the majority of daily caregiving responsibilities<sup>53</sup>. Achieving functional cure for chronic hepatitis B halts progression to cirrhosis and HCC, thereby reducing long-term care needs for patients. This effectively liberates unpaid family care labour, further increasing female labour participation rates, strengthening household economic resilience, and advancing gender equity.

(2) *National Strategy and Innovation Ecosystem Returns: From Population Quality to Industrial Momentum*

- **Enhancing population health quality fortifies the nation’s human capital foundation.** Chronic hepatitis B and cirrhosis patients predominantly experience disability onset during working age<sup>54</sup>, exerting long-term impacts on labour supply, life expectancy, and social security contribution capacity. Functional cure reduces future end-stage disease and related mortality, thereby elevating overall population health, improving long-term dependency

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<sup>52</sup> HSU Y C, et al. Extrahepatic manifestations and socioeconomic burden of chronic hepatitis B[J]. *Journal of Viral Hepatitis*, 2021. DOI: 10.1111/jvh.13494.

<sup>53</sup> KENT E E, MOLLIKA M A, BUCKENMAIER S, et al. The characteristics of informal cancer caregivers in the United States[J]. *Seminars in Oncology Nursing*, 2019, 35(3): 223-229. DOI: 10.1016/j.soncn.2019.06.002.

<sup>54</sup> YU X L, GONG Y L, SHAO R T, et al. Study on burden of diseases of chronic hepatitis B, cirrhosis, and liver cancer caused by hepatitis B virus[J]. *Chinese Journal of Public Health*, 2003, 19(3): 280-282. [in Chinese].

ratios, and strengthening social security sustainability – constituting a vital component of national human capital enhancement.

- **This creates powerful incentives for innovation, catalysing the development of new productive forces in biomedicine.** Future functional cure therapies for hepatitis B are concentrated in cutting-edge technology pathways—including small nucleic acid drugs targeting the virus (such as siRNA and ASO) and immunomodulatory agents. These approaches entail lengthy development cycles, substantial investment, and significant risks, placing heightened demands on the industry’s innovation ecosystem. In economics, innovation serves as the core driver of industrial evolution and growth by undertaking high-uncertainty investments to achieve technological breakthroughs and reshape treatment paradigms. “Creative destruction” and the resulting profits compensate enterprises for high-risk innovation. Therefore, establishing a rational value assessment and payment mechanism to provide stable expectations for enterprises equates to institutional incentives. With the refinement of real-world evidence and multidimensional value assessment tools, it is anticipated that a value-driven innovation environment will be further strengthened, propelling breakthroughs in the biopharmaceutical industry.
- **Strengthening disease governance and innovation solution delivery capabilities will enhance China’s voice in global health governance.** Chronic hepatitis B represents a major global infectious disease burden. Should China develop systematic advantages in functional cure drug R&D, standardised clinical pathways, and real-world evidence accumulation, this would enhance its capacity to share expertise in global hepatitis prevention and control. The standardised promotion of functional cures would also bolster China’s professional voice in major disease governance, technical standard-setting, and global public health discourse, positively impacting both national health governance capabilities and international standing.

## **Part Four: From Value Recognition to Policy Action—A Systematic Implementation**

### *Functional Cure for Hepatitis B as a System-Level Breakthrough*

The preceding discussion has demonstrated the necessity for the health system to transition from “cost control” to “value investment” across multiple dimensions, including population health, disease burden, sustainability of medical insurance, and innovation ecosystems. To translate this concept into institutional practice, a systematic advancement pathway must be established encompassing: upgrading value recognition, optimising approval and access processes, exploring payment reforms, and implementing the integration of medical and preventive care. Within this framework, functional cure for hepatitis B should be prioritised as a practical application scenario for steady advancement.

#### **I. Strengthening Recognition of Multi-Dimensional Value** *Aligning Innovation Assessment with National Policy*

In this new developmental phase, health and innovation have been explicitly incorporated as vital components of national competitiveness and sustainable development capacity. At the national level, through advancing the Healthy China initiative, strengthening science and technology innovation as a driving force, and establishing a new development paradigm, a value orientation increasingly focused on long-term health outcomes, human capital quality, and socio-economic resilience is gradually taking shape.

Against this backdrop, support for innovation should extend beyond payers (health insurance departments) or service providers (healthcare systems), necessitating a coordinated support mechanism at the national and societal levels. Recognising this, enhancing the value recognition and evaluation system for innovative interventions can be advanced through the following approaches:

- **Upgrade value assessment framework.** In the value assessment of innovative medicines, more comprehensively reflect the long-term contributions of interventions to population health, labour supply, and

socioeconomic resilience from a societal perspective. This will gradually shift the focus of health investments from annual expenditure to strategic considerations of national sustainable development capacity.

- **Establish a “value validation” data loop for innovative therapies.** Leveraging ongoing real-world evidence pilot programmes, systematically accumulate data on the long-term efficacy, safety, and resource utilisation patterns of approved innovative therapies. This will provide a reliable local evidence base for national-level policy formulation, fund management, and public health deployment.
- **Strengthen cross-agency policy coordination.** Within policy frameworks governing technological innovation, healthcare security, and the integration of medical and preventive services, encourage value-driven investment in innovation, directing resources towards technologies and service models demonstrating significant health and societal returns.

By reinforcing this value orientation within the national governance system, a clearer and more stable policy environment can be created for innovative solutions, including functional cure for hepatitis B. This will position such solutions as key drivers in advancing the modernisation of the health system and enhancing national development capacity.

## **II. Accelerating Approval and Clinical Uptake of Functional Cure Innovations for Hepatitis B**

As the first innovative drug for functional cure advances toward new drug application (NDA) phases globally, China—bearing the heaviest burden of hepatitis B disease—must accelerate the entire chain from “technological breakthroughs” to “accessible application.” Building upon the national strategy of prioritising health and innovation-driven development, and the explicit requirement in the National Action Plan to “actively develop innovative solutions for the functional cure of hepatitis B,” a systematic advancement pathway should be established across multiple dimensions. This includes review and approval processes, mechanisms for clinical deployment and dissemination, and payment and security systems. Such

measures will enable these therapies to be introduced, standardised, and sustainably accessible in China at the earliest opportunity.

*(1) Accelerating the review and approval process to facilitate the timely entry of innovative drugs into China*

China's current review and approval system already provides multiple accelerated pathways for innovative drugs targeting major diseases. For instance, when a candidate drug demonstrates potential for significant clinical benefit in early studies, it may apply for the accelerated pathway. This streamlines the review cycle through rolling submissions and rolling communications, creating a more efficient, low risk "fast track" for R&D<sup>55</sup>.

On this basis, it is recommended that innovative drugs achieving functional cure for hepatitis B be incorporated into priority review and breakthrough therapy programmes to enhance review efficiency, enabling eligible Chinese patients to benefit sooner. Furthermore, during the approval process, particular consideration should be given to hepatitis B's public health attributes as a key infectious disease, especially its potential role in reducing risks of end-stage liver disease and HCC, making this a crucial factor for accelerated approval.

*(2) Accelerating clinical adoption and technology diffusion to facilitate standardised implementation of innovative medicines*

For functional cure-oriented innovative drugs to translate scientific breakthroughs into tangible health benefits, executable clinical pathways and sustainable technology diffusion systems must be established. However, patient awareness of the cure concept remains around 30%, and primary care physicians have limited understanding of cure-oriented treatment<sup>56</sup>. To enhance clinical uptake and promote innovation diffusion, the following areas should be prioritised:

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<sup>55</sup> National Medical Products Administration. Pilot Work Plan for Optimizing the Review and Approval of Innovative Drug Clinical Trials[EB/OL]. (2024)[2026-03-12]. <https://www.nmpa.gov.cn/xxgk/fgwj/gzwj/gzwjyp/20240731184417109.html>. [in Chinese].

<sup>56</sup> China Health Promotion Foundation, China CDC AIDS Prevention and Control Center. Research Report on the Current Status of Comprehensive Hepatitis B Prevention and Control[R]. Beijing: China Health Promotion Foundation, 2025. [in Chinese].

- **Promptly refine and standardise expert consensus on the application of innovative drugs for functional cure in hepatitis B.** Building upon existing hepatitis B prevention and treatment guidelines, the latest evidence on innovative drugs should be integrated to supplement patient selection criteria, treatment protocols, discontinuation monitoring requirements, and follow-up management strategies. This will enable clinicians to apply cure-oriented therapies appropriately across diverse clinical settings. When conditions permit, efforts should be made to incorporate these elements into the latest hepatitis B diagnostic and treatment guidelines, clearly defining criteria for identifying target patients.
- **Strengthen physician training and patient education to enhance understanding and acceptance of innovative drugs for functional cure.** Addressing insufficient awareness of cure-oriented therapy among primary care and non-specialist physicians, improve their ability to assess indications, risk evaluation, and follow-up management through continuing medical education, case sharing, and standardised training. Concurrently, enhance patients' comprehension of functional cure opportunities via authoritative public health information and patient management tools.
- **Leverage national and regional health centres as hubs to facilitate tiered technology diffusion.** Establish demonstration models for innovative treatment requirements, medication protocols, and follow-up frameworks within tertiary hospitals first, then progressively extend these across broader healthcare systems to elevate clinical service capabilities across regions. Concurrently, addressing the widespread distribution of hepatitis B patients and substantial primary care management demands, integrate continuing medical education, telemedicine, tiered diagnosis and treatment, and multidisciplinary collaboration.
- **Incorporate functional cure treatment pathways for hepatitis B into integrated medical-preventive assessment frameworks to drive coordinated implementation across clinical and public health domains.**

Within existing integrated medical-preventive and primary-level performance evaluation systems, progressively introduce process-oriented indicators related to functional cure. Building upon existing metrics such as diagnosis rates and standardised treatment adherence, gradually incorporate pathway-specific assessment elements to ensure alignment between clinical practice and public health management towards functional cure objectives.

Through these measures, a comprehensive system spanning clinical pathway development, capacity building, awareness enhancement, and evidence accumulation can be progressively established. This will enable the standardised and prudent application of innovative functional cure medications across all tiers of China's healthcare institutions.

*(3) Refine payment policy alignment to build sustainable access framework for innovative drugs*

Innovative drugs with curative potential often require only limited treatment courses yet deliver long-term, multidimensional benefits. National policies already support comprehensive value assessment frameworks and encourage tiered, innovative payment models, laying the institutional groundwork for aligning reimbursement with curative innovations. To strengthen the adaptability of the payment system to such therapies, the following measures are recommended:

- **Incorporate innovative drugs' long-term value into medical insurance access assessments.** Within the existing comprehensive value assessment framework, evaluations should consider factors such as the drug's ability to halt disease progression, reduce future healthcare costs, and improve patient quality of life. This ensures payment decisions better reflect long-term benefits and societal value.
- **Promote coordination within the multi-tiered protection system to enhance patient affordability.** Basic medical insurance should bear core treatment responsibilities, while commercial insurance, supplementary medical insurance, and medical assistance provide tiered support tailored to

different demographic characteristics. This approach reduces instances where patients delay or abandon treatment due to financial constraints.

- **Introduce targeted subsidies aligned with local fiscal conditions to enhance accessibility in key regions and for priority populations.** Drawing on experiences from local fiscal subsidies for hepatitis C<sup>57</sup> and rare disease treatment, regions with the capacity may explore phased fiscal support for curative innovative drugs to facilitate early adoption and scaled implementation.
- **Explore payment models tailored to the characteristics of innovative drugs for functional cure of hepatitis B.** In recent years, national policy has advocated incorporating multidimensional considerations into drug value assessment and payment mechanisms, encouraging stakeholders to jointly explore models such as payment by treatment cycle, payment by treatment outcome, and risk-sharing between funds and enterprises<sup>58</sup>. The Interim Measures for Disease-Based Payment Management in Medical Insurance (2025) concurrently stipulate that disease-based payment should be advanced for treatments with clear processes and demonstrable efficacy, while reserving flexibility for innovative drugs through case-by-case negotiations and dynamic grouping. Building upon this, priority may be given to exploring innovative payment methods based on treatment courses or outcomes, combined with case-by-case negotiation mechanisms to ensure the prudent inclusion of innovative drugs for functional cure within the payment system.

Through the integration and innovation of payment policies, institutional safeguards can be established to ensure the accessibility of functional cure

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<sup>57</sup> Yunnan Provincial Disease Prevention and Control Bureau. Hepatitis C is Curable, Medical Insurance Covers Treatment Costs, and Financially Disadvantaged Patients May Qualify for Government-Subsidised Treatment Fee Reductions[EB/OL]. (2024)[2026-03-12]. [https://ynsjkj.yn.gov.cn/html/2024/jikongkepu\\_1121/235.html](https://ynsjkj.yn.gov.cn/html/2024/jikongkepu_1121/235.html) [in Chinese].

<sup>58</sup> National Healthcare Security Administration, National Health Commission. Several Measures to Support the High-Quality Development of Innovative Medicines[EB/OL]. (2025-06-30)[2026-03-12]. [https://www.nhsa.gov.cn/art/2025/7/1/art\\_104\\_17058.html](https://www.nhsa.gov.cn/art/2025/7/1/art_104_17058.html) [in Chinese].

innovations for hepatitis B, thereby fully realising their clinical and public health benefits.

## **Conclusion**

Confronted with accelerated population ageing, the dual burden of chronic and major infectious diseases, and persistent structural pressures on medical insurance funds, China's healthcare system must urgently transition from a paradigm of "cost control" to "value investment," with improved health outcomes as the central focus. Drawing on an analysis of macro-level challenges and national strategic priorities, this paper outlines a reform pathway built on a multidimensional value assessment framework, emphasising tertiary prevention, early interventions, and innovation-driven strategies.

As a country with a significant hepatitis B burden, China stands to benefit greatly from innovative functional cure therapies. These treatments deliver multiple layers of value: providing durable clinical benefits through finite treatment courses, strengthening household economic resilience, restoring workforce productivity, and driving industrial innovation. At the same time, they offer a practical lever for payment reform, the integration of medical and preventive care, and evidence-based policymaking grounded in real-world evidence. By advancing reforms in concept, institutions, and implementation in a coordinated manner, this approach can extend innovative therapies to broader patient populations, enhance the effectiveness of the public health system, and establish a stronger foundation for improving population quality and achieving high-quality development.