

# **Bridging the Financial Literacy Gap in Medical Education: A Case for Curricular Reform and Practical Tools**

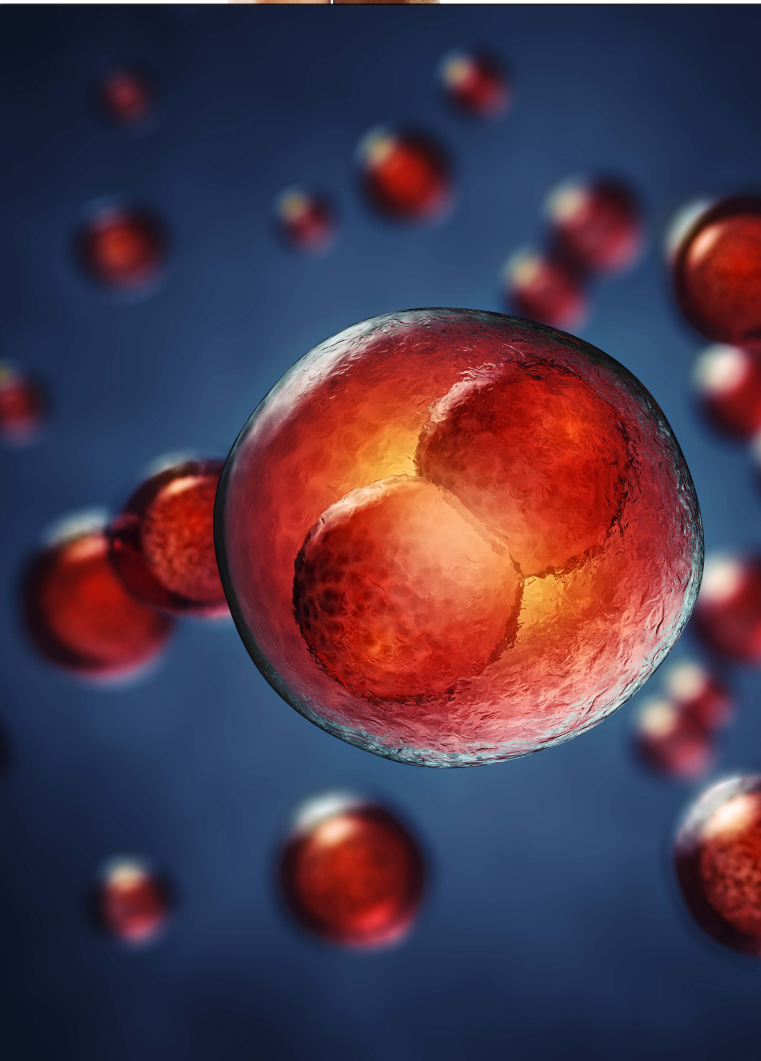
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# Bridging the Financial Literacy Gap in Medical Education : A Case for Curricular Reform and Practical Tools

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## Abstract:

Medical students routinely graduate with educational debt exceeding \$250,000, yet most receive little formal instruction in personal finance or healthcare economics. This gap leaves trainees poorly prepared to navigate complex financial decisions related to borrowing, repayment, specialty choice, and long-term career planning. Drawing on MD/MBA student experience and synthesis of existing literature, this perspective examines the financial literacy gap in medical education and its implications for physician wellbeing, professional autonomy, and engagement with an increasingly complex healthcare system. We highlight how inadequate financial preparation contributes to avoidable financial stress, burnout, and constrained career decision-making, particularly during early training years when debt burdens are highest and income is delayed. At a systems level, limited exposure to healthcare finance leaves future physicians ill-equipped to understand reimbursement models, consolidation, and the growing role of private equity in clinical practice. Based on these observations, we propose a three-pronged approach emphasizing curricular reform, improved access to structured financial education, and normalization of healthcare finance as essential professional knowledge. By reframing financial literacy as a core competency rather than a peripheral skill, medical education can better equip future physicians to make informed financial decisions, navigate evolving healthcare systems, and build more resilient, sustainable careers.

## Key Words:

Medical Student Debt; Financial Literacy; Medical Education; Healthcare Economics; Physician Wellbeing

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## Background

Medical student loan debt has become a defining feature of physician training. As of 2024, 73% of medical graduates carry student loans, with average debt exceeding \$264,000, more than double that of the average post-graduate student<sup>1</sup>. Despite this heavy debt burden, little attention is paid to how poorly prepared students are to navigate this financial undertaking. Financial literacy among medical students remains critically low, with nearly half of medical students reporting a need for more financial education during medical training<sup>2</sup>. This results in students making complex decisions including borrowing large sums, choosing between schools, or selecting repayment plans with minimal guidance or formal instruction. This gap is not just an academic oversight. Recent literature has linked medical education debt and a lack of financial literacy to financial stress, physician burnout, and a declining interest in primary care specialties<sup>3</sup>.

Beyond individual well-being, broader forces in the healthcare system demand that future physicians be more financially literate. The increasing role of

private equity in clinical practice, growing consolidation of providers into health systems, and the shift toward value-based care all introduce financial guardrails that impact how physicians practice medicine. Understanding the mechanics of billing, insurance, and healthcare economics is not a luxury, but it is a necessity for protecting both physician autonomy and patient trust. Yet, most trainees receive little to no education on how healthcare financing works or how their personal financial choices intersect with these broader structures<sup>4,5,6</sup>.

This lack of preparation is especially concerning given the way repayment is structured. A common benchmark is the debt service-to-income ratio (DSIR), which measures the share of monthly income devoted to loan repayment. While countries such as the United Kingdom, New Zealand, and Australia use income-contingent repayment schemes that cap repayment burdens and insure against defaulting, the U.S. relies heavily on fixed repayment plans<sup>7</sup>. In many developing countries, the burden is even greater, with early-career borrowers

devoting 20–35% of monthly income to repayment.<sup>8</sup> These often push graduates above thresholds considered financially stressful, making repayment especially burdensome early in a physician's career.<sup>8</sup> For medical graduates, whose debt loads are far higher than average, these conditions create disproportionate financial risk and underscore the urgency of reform.

While recognition of this gap is not new, few solutions have been tailored specifically for medical trainees or embedded within curricula at scale. Even where financial literacy reform is broadly endorsed, efforts to implement it face persistent barriers, including limited curricular time and insufficient faculty expertise. Addressing these barriers requires moving beyond acknowledgment to designing practical, scalable solutions that meet the needs of medical trainees.

### **The Problem: Financial Illiteracy in Medical Training**

The roots of this issue lie in several overlapping gaps. First, medical training prioritizes scientific and clinical rigor while overlooking basic financial competencies. While the Liaison Committee on Medical Education (LCME) requires medical schools to provide students with adequate financial resources and debt management counseling, there are no standardized requirements for financial curriculum.<sup>9</sup> Concerningly, medical school-provided financial counseling that is available has shown no measurable improvement in financial literacy among students, indicating that the current financial curriculum within medical education is inadequate and fails to set students up for financial success.<sup>2</sup>

Second, students face structural challenges. The complexity of federal and private loan options, varied repayment programs, and unpredictable interest accrual make it difficult to plan strategically. This is further compounded by policy volatility, such as shifts in political administrations that alter loan terms, forgiveness programs, and repayment options, creating an unstable landscape that is hard to navigate even for the financially savvy. Financial advising is often decentralized or outsourced, and students are left to navigate a system where missteps are costly and hard to reverse. Additionally, medical school advising is only available to students who have enrolled and therefore are financially committed to the school.

Compounding these structural challenges is the sheer complexity of student loan agreements and repayment conditions. Federal and private loans carry different interest structures, grace periods, and forgiveness options, while loan agreements themselves are dense with jargon and technical

detail. Students often sign these contracts with minimal understanding, overwhelmed by the volume of information and eager simply to secure the financing needed to begin training. Debt management then requires ongoing attention to repayment schedules, capitalization of interest, and refinancing or consolidation choices—topics that are not only difficult to parse and far from the “flashier” aspects of medical training, but also hard to prioritize for students already stretched thin by the demands of their education. Unsurprisingly, many students disengage from this process until repayment becomes unavoidable, reflecting a reactive rather than proactive approach to repayment that has been documented across borrower studies<sup>10</sup>. Evidence shows that repayment outcomes are shaped not only by income, but also by how well borrowers understand loan terms, the burden they perceive, and their credit history<sup>10</sup>. Gaps in literacy around these factors increase stress and carry lasting consequences, including weakened credit scores that make securing housing, practice loans, and long-term financial stability more difficult. Finally, existing financial counseling within medical education often falls short. Sessions are typically passive and information-heavy, lacking practical or interactive tools that help students translate abstract advice into personal financial planning. Unsurprisingly, this contributes to disengagement and leaves many students unprepared to manage repayment effectively. At the same time, there is a tacit acceptance that debt is simply part of becoming a doctor. While this may be true in part, the absence of accessible tools and structured education fosters a sense of helplessness rather than agency. This mindset contributes to avoidable financial errors and amplifies stress during training.

### **Reforms and Solutions: A Multi-Pronged Approach**

To address this problem, we propose a three-part solution: curriculum reform, development of financial tools, and normalized education around healthcare economics.

#### **1. Curriculum Reform: From Premed to Preclinical**

First, financial literacy must be treated as a core competency in medical education. We argue that personal finance and healthcare economics should be embedded at two levels: (1) the premedical curriculum and (2) the preclinical phase of medical school.

At the undergraduate level, medical school applicants should complete a semester-long course in personal finance as part of their prerequisite coursework, much like biology or physics. This course should cover the fundamentals of budgeting,

credit, compound interest, student loans, and basic investing.

Within medical school, structured instruction in both personal finance and health system economics should occur early in the preclinical years. Topics should include loan types and repayment strategies, insurance models (e.g., PPO, HMO), CPT/ICD billing codes, reimbursement models (fee-for-service vs. capitation), and emerging trends in private equity and value-based care. Educating students on how care is paid for, and how physicians are paid, empowers them to both advocate for themselves and communicate more effectively with patients navigating the same system. Importantly, this knowledge translates directly to patient care. When physicians understand the financial consequences of clinical decisions, they are better equipped to help patients navigate insurance plans, anticipate out-of-pocket costs, and access resources. Financially literate physicians are more likely to consider affordability in treatment planning, enhancing both ethical practice and patient trust.

## **2. Tools to Empower Financial Insight**

Second, students need tailored, interactive tools, not just lectures, that are designed specifically for the realities of medical training. Many struggle to grasp how loan interest, residency duration, specialty income, and geographic cost of living interact to shape repayment timelines and long-term financial stability. The real challenge is seeing these factors in concert and understanding their relevance to a physician's career path. Generic debt calculators exist, but they rarely integrate clinical variables such as variable residency lengths or specialty-specific earnings, and they are typically aimed at borrowers or financial advisors rather than serving an educational purpose.

As a pilot demonstration of how such tools might address this gap, we developed a customizable financial model designed with variables relevant to medical students and residents. The model allows users to input assumptions such as tuition, specialty choice, residency duration, loan repayment strategy, and geographic location, and generates projections for total debt, repayment time, and post-tax salary. It was designed as a proof-of-concept educational resource, intended to make abstract financial concepts more concrete, interactive, and directly tied to physician training. Its pedagogical emphasis is on exploration rather than optimization, enabling students and residents to model hypothetical scenarios and better understand how individual decisions may influence long-term financial outcomes.

Because the model was designed as an introductory

educational tool, certain factors, like malpractice insurance, employer-specific retirement matching, or advanced investment strategies, were considered beyond its scope, given their wide variability and relevance to later career stages. Informal pilot feedback collected via anonymous survey from 12 users suggested that the model increased awareness of personal financial considerations, clarified the implications of repayment and career choices, and was perceived as more engaging than traditional counseling sessions. Future iterations could focus on broader accessibility, including development of a web-based or mobile platform, and adaptation for international training contexts where loan structures and repayment systems differ substantially.

## **3. Normalize Healthcare Finance as Essential Knowledge**

While culture change is difficult to engineer directly, embedding financial education into curricula and providing better tools naturally shifts the narrative. When financial literacy is treated as essential rather than peripheral, students internalize its value. Conversations about money, whether student debt or healthcare spending, become normalized, not taboo. This shift fosters a generation of physicians who are not only better stewards of their personal finances, but also more informed advocates within an increasingly complex healthcare economy.

## **Understanding and Addressing the Repayment Landscape**

### **Repayment Attitudes and Risk**

Educational loan repayment is shaped in part by attitudes, not just income. The Theory of Planned Behavior (TPB) offers a useful lens: positive repayment attitudes, such as valuing credit history, recognizing debt utility, building financial knowledge, prioritizing repayment, and acting with integrity, are associated with stronger repayment outcomes<sup>11</sup>. In contrast, negative attitudes linked to gratification-seeking, stress, or a sense of overwhelming burden increase the likelihood of delinquency or default. For medical trainees, who already face outsized debt burdens, these attitudes can amplify risk if not addressed through education.

Financial institutions conceptualize repayment capacity through frameworks such as International Financial Reporting Standard (IFRS 9), which quantifies credit risk using Probability of Default (PD), Exposure at Default (EAD), and Loss Given Default (LGD). Medical graduates represent a unique borrower profile: they carry high loan balances and experience delayed income during residency, raising short-term repayment risk, yet they also possess strong long-term earning potential. This duality underscores the need for

medical education to prepare students not only to manage their personal attitudes toward debt but also to understand how lenders assess their repayment capacity.

### ***Evolving Credit Scoring and Implications for Physicians***

Credit scoring itself is evolving beyond static measures. Novel approaches, including machine learning models and dynamic factors such as credit utilization, evaluate not only whether borrowers repay but how they manage and use credit<sup>12,13</sup>. For example, high credit utilization paired with consistent repayment may be viewed more favorably than minimal utilization, since it demonstrates active engagement with credit.

For future physicians, the implications are significant. Repayment behavior influences not just student loan balances but also downstream opportunities to secure mortgages, practice loans, or refinancing. A lack of awareness about how credit scoring systems function can leave graduates at a disadvantage. Embedding this knowledge in training is therefore not just about reducing stress in the short term but about safeguarding professional and personal financial trajectories.

### ***Implementation and Scalability***

For financial literacy initiatives to have lasting impact, they must be scalable and integrated into existing educational structures. Structured financial education can be incorporated as teaching modules, paired with standardized debt counseling, or delivered through digital platforms to improve accessibility and allow updates as policies and costs evolve. While promising, broader adoption faces familiar barriers: medical curricula are already saturated, few faculty have formal financial training, and students may resist material perceived as peripheral to clinical education.

Several strategies could help overcome these challenges. Peer-led sessions may increase relatability and reduce faculty burden. Integration into existing advising structures can situate financial planning alongside other career development milestones. Finally, partnerships with national organizations such as the AAMC or AMA could help standardize resources across institutions, reducing duplication of effort while raising visibility. Together, these approaches position financial education not as an optional add-on but as a necessary component of preparing future physicians for sustainable careers.

### ***Conclusion***

The financial literacy gap in medical education is a solvable problem hiding in plain sight. Medical

students assume hundreds of thousands of dollars in educational debt with little structured guidance on how to manage it or anticipate its long-term consequences. Without this preparation, many graduates face avoidable financial stress, burnout, and constrained career choices, with effects that extend beyond individual physicians to the patients and health systems they serve.

Addressing this gap requires more than ad hoc counseling or isolated budgeting sessions. Financial literacy must be woven into the fabric of premedical and medical training, equipping future physicians with a working understanding of credit, repayment structures, and healthcare economics that mirrors the real-world environments in which they will practice. Doing so empowers trainees to make informed personal decisions while also engaging more thoughtfully with the financial forces shaping modern healthcare delivery.

While practical tools and resources may help translate these concepts into applied understanding, the broader takeaway is cultural and curricular. Financial literacy should be treated as a core professional competency rather than a peripheral concern. Preparing physicians who are both clinically excellent and financially informed is essential to sustaining fulfilling careers, preserving professional autonomy, and promoting more equitable and patient-centered care in an increasingly complex healthcare system.

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