

The heart of medicine: Money, education, and the values of practice

While financial incentives do factor into students' decisions to pursue careers in medicine, they should not be considered the sole, or even the primary, drivers.

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ABSTRACT: A recent perspective in the *New England Journal of Medicine* suggests that medical education is at risk because rising tuition costs could potentially lead to a decrease in applications and enrollment as talented individuals choose other professions. In the article, the authors argue that increasing debt-to-income ratios for all medical specialties are leading to a bubble market, where the cost of medical education was inflated relative to its returns. However, in neglecting the values of medical education and practice and the means by which residents and students make their decisions, this limited perspective runs the risk of undermining the prosocial motivations of students and practitioners.

In a recent perspective in the *New England Journal of Medicine* (*NEJM*), Asch, Nicholson, and Vujicic analyze medical education through an economic lens.¹ They warn that the rising cost of medical school, combined with society's increasingly limited ability to pay for health care, creates a dangerous situation for medical trainees: the ratio of student debt to physician income may

indicate a bubble market in medical training. However, in considering the financial aspect in isolation from the values and goals of the students, the institutions, and the profession, we risk losing sight of the heart of medicine.

Asch and colleagues are concerned that the “bubble will burst when potential students recognize that the costs of training aren't matched by

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later returns.”²¹ They are right to bring attention to the economic aspects of medical training and practice. One Canadian study found that median expected debt at graduation increased from \$40 000 in 2001 to \$71 000 in 2007,² a trend that has likely continued to rise along with tuition, which recently increased by 5.1% between 2011/2012 and 2012/2013.³ The Canadian Medical Association issued a policy statement saying that “high tuition fees, coupled with insufficient financial support systems, have a significant and detrimental impact on not only current and potential medical students, but also the Canadian health care system and public access to medical services.”²⁴ Further, although *NEJM* is an American publication, it is by its own account “the most widely read, cited, and influential general medical periodical in the world.”²⁵ Thus, these concerns are clearly also relevant to the Canadian medical system.

Sir William Osler, writing in 1885, voiced what sounds like a similar warning to Asch and colleagues of a situation where:

Expenses are heavy, receipts are light; human nature is frail... gradually the standard is lowered, the meshes are widened, examinations become a farce, and the schools degenerate into diploma mills, in which the highest interests of the profession and the safety of the public are prostituted to the cupidity of the owners.⁶

Asch and colleagues fail to discuss the nonfinancial motivations for entering medicine, selection criteria for medical schools, or the purpose and values of medicine, which centre on patient care. Evidence from the field of behavioral economics also shows that emphasizing monetary considerations may crowd out other motivations, leading to a decrease in prosocial behavior.⁷ Purely financial incentives neither encompass the complexities of medical education

and practice nor do justice to the values of medicine that centre on patient care.

The *NEJM* states their objective is to keep physicians “connected to both clinical science and the values of being a good physician.”²⁵ These values are exemplified by the selection criteria for medical applicants discussed below, and by the many medical organizations in which physicians practice, such as hospitals, health authorities, medical associations, and colleges. In the CanMEDS Framework section on professionalism, the Royal College of Physicians and Surgeons of Canada envisions the ideal practitioner as one who “is guided by codes of ethics and a commitment to clinical competence, the embracing of appropriate attitudes and behaviors, integrity, altruism, personal well-being, and to the promotion of the public good within their domain. These commitments form the basis of a social contract between a physician and society.”²⁸ It is difficult to see how the article by Asch and colleagues aligns with these—or *NEJM*’s—stated values, as it does not address clinical science and leaves the question of physician values out of the economic equation. Instead, medical training is considered in this light: “This education is transformed into skills and credentials that are then sold to patients in the form of services.”²¹ Medical students are seen as venture capitalists of their own careers, hence the authors’ concern that “we will march down the debt-to-income ratio ladder, through psychiatrists to cardiologists to orthopedists... until no one is left but the MBAs.”²¹ But medical schools have different selection criteria from business school with good reason.

While financial incentives are real and important, they do not satisfactorily explain why students decide to pursue a career in medicine, or how they are able to thrive under the pressures of medical education. When applicants are first screened, noneconomic

values are at the forefront: motivation and social concern are the first two listed nonacademic criteria for evaluating applicants at the University of British Columbia;⁹ at the University of Toronto, altruism, reliability, responsibility, and perseverance top the list;¹⁰ and at McGill, applicants are asked if they are willing to dedicate and commit themselves to the service of others.¹¹ When students later select their residency, their decisions are not tied solely to the debt-to-income ratio, but are influenced by job prospects,¹² the desire for flexibility, their interest in research,¹³ and vacation time.¹⁴ Interestingly, family medicine, one of the least remunerative areas in medicine, has been found to be favored by students who have high debt.¹³ This evidence demonstrates that students do not simply choose the best-paying residency, which would be expected if debt-to-income ratio were their primary concern.

Medical residency is emotionally taxing. Burnout among residents is increasingly well documented, with rates as high as 82%.^{15,16} This burnout has been associated with increased error and reduced empathy,¹⁷ potentially leading to inferior care. One widely used metric, the Maslach Burnout Inventory, describes three dimensions of burnout: emotional exhaustion, depersonalization, and reduced sense of personal accomplishment.¹⁸ Depersonalization is “an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people.”¹⁸ Standing in opposition to burnout is engagement, an “affective-motivational state of fulfillment in employees that is characterized by vigor, dedication, and absorption.”¹⁸ This is where the qualities that medical schools seek in their applicants come into play, as those who remain emotionally engaged in their training are better equipped to avoid burnout.

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In the field of behavioral economics there is a well-documented effect where monetary motivation and prosocial motivation compete.^{6,19-22} Prosocial behavior, individuals engaging “in activities that are costly to themselves and that primarily benefit others,”⁶ is clearly desirable in medical care. People will work harder at some prosocial tasks that they are not paid to perform.²¹ As one group of researchers put it, “mixed markets (markets that include aspects of both social and monetary markets) more closely resemble monetary than social markets.”¹⁹ Although doctors are paid, this field of research nonetheless shows that what we value changes how we work: focusing on economics in isolation from the values of care may encourage the perception of a mixed market. The danger is that when people focus on monetary rewards this can interfere with the motivation to do work they find intrinsically valuable as well as the motivation of looking good to others.²² While the latter is perhaps a less noble incentive, it is a significant motivator of prosocial behavior nonetheless. The finding that economic motivation may crowd out prosocial motivation²⁰ must be considered when discussing the economics of medical education and physician incomes. It is not simply a matter of tweaking financial incentives: we must consider the values we are encouraging in medical students and physicians because this will affect how they practise.

While expecting undiluted altruism from doctors is unrealistic, neither should we train a generation of physicians who value monetary returns over the social motivations for becoming health professionals. The choices medical students make and the resiliency they exhibit throughout their training goes well beyond reacting to remuneration, and by focusing on monetary concerns such as the debt-to-income ratio in isolation we

run the risk of nullifying prosocial motivations. While we should be concerned about the costs of medical education, it must not be at the expense of the values shared by our medical schools, medical associations, and the *NEJM* itself. These values come to life in the context of patient care, where professionalism, integrity, and the public good must remain at the forefront if we are not to lose sight of the heart of medicine.

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