

Financial Literacy Education for Future Physicians

Viraj Mehta, Chau Pham, Asha Talati, Halana Whitehead, Ernest Young

Class of 2013 Inductee Class of the Alpha of Ohio Chapter of Alpha
Omega Alpha Honor Medical Society at Case Western Reserve University
School of Medicine

Position Paper

June 12th 2013

Introduction

With escalating national health care costs as well as rising personal debt burdens among future physicians, teaching medical students the basics of finance is of paramount importance. Doctors have few formal courses in finance during their training as they are immersed in the sheltered world of medical education for nearly a decade. After completing their training, they are entrusted to be responsible stewards of the health care system, while also often dealing with a significant personal debt burden, yet are left woefully unprepared.

At a systems level, physicians in training have traditionally been isolated from the costs of care, making treatment decisions with little information on financial factors. They are taught to prescribe treatments based on knowledge of the condition and scientific evidence; however, in the current economic climate, where health care costs are projected to encompass nearly 25% of our GDP by 2025, such teaching is insufficient. Medical school curricula should be adapted to include more education on cost-effectiveness and risk-benefit analyses in the context of current health care providers and payers. At the personal finance perspective, many students are faced with significant debt burdens. The average medical school debt, not including undergraduate debt, now exceeds \$160,000. However, there is again minimal counseling on managing such a significant debt while judiciously investing for the future.

Given the financial challenges future physicians undoubtedly face, we propose creating a formalized curriculum to address the most salient financial issues in medicine, while also providing a basic understanding of finance. We suggest having three 1 to 2-week blocks (Blocks A, B, C) dedicated to such financial issues. We recommend Block A within Block 1 of the WR2 curriculum. This should encompass a health systems overview, with education specific to understanding how the United States health system works. This block should cover information on the current health care legislation (ex. PPACA) and important payers and providers (ex. Medicare, Medicaid, private insurance, Accountable Care Organizations). Block B should be required after Block 6, prior to the start of rotations. This block should cover information on health care costs (ex. Impact of technology, diagnostic testing, defensive medicine) and role of physicians in helping to control such costs. Finally, Block C should be required during fourth year, prior to the start of residency. This block should transition from systems based issues to a more personal finance based focus. Topics in this final block should include managing debt, loan repayment, creating a budget, investing for the future, basic investment strategies, understanding physician value, billing, and negotiating.

The goal of such curriculum adaptations should be to empower future physicians to make informed and effective financial decisions not only in the context of working within or leading a health care system, but also on a personal level. The next several sections will discuss key components of the curriculum and their merits. In particular: health care policy reform and legislation, medical school debt, and retirement planning and investing and negotiating.

Current Health Care Policy & Legislation

With the signing of the Patient Protection and Affordable Care Act (PPACA) in 2010 and the Supreme Court's upholding of its constitutionality in 2012, healthcare reform well underway. Its proposed changes are many and will affect the way physicians will practice medicine and also how they are reimbursed. For the current and future medical students of America it will be the reality in which they practice. It is therefore important that the PPACA and health care policy in general be incorporated into the medical school curriculum so that future medical students are aware of the upcoming changes and how it will affect their future lives and decisions.

The question is: what do medical students actually know of the PPACA? Winkelman et al. showed that of large cohort of medical students surveyed only around half (48%) felt they knew the basic components of the ACA with a large proportion (40%) claiming ignorance [1]. This same study showed that again roughly half (46) of students supported the PPACA but this was significantly affected by their stated knowledge of its basic components. This indicated that students that were educated of the PPACA were supportive of it whereas the ignorant remained either ambivalent or opposed to the PPACA. This is in contrast to the fact that 70% of students felt that physicians were professionally obligated in helping to implement the PPACA. Another large multicenter medical student survey showed that only around 54% of medical students claimed to understand the major provisions of the PPACA with 46% either claiming ignorance or undecided [2]. This same study noted that a overwhelming majority of medical students (94%) supported healthcare reform despite being unsure whether it would reduce healthcare cost or improve quality.

The common theme in these two studies is that roughly half or more of all medical students remain ignorant of the basic concepts of the PPACA. This is not very different from a poll of the American public performed in 2010 that showed that 38% were ignorant of the PPACA [3]. In contrast it appears that medical students are more supportive of the PPACA than the American public which when polled recent showed that 53% of the general population opposed the legislation or desired to change it [4].

With the ignorance of medical students of the PPACA established the next question is what benefit students will garner from their education on the PPACA. Putting aside moral, ethical and utilitarian reasons and just focusing on the financial rationale for teaching medical students the aspects of the PPACA one does not to look any further than the most important decision that medical students face: the choice of a medical field/specialty. It is no secret that debt accrued by medical students and the income disparity between primary care fields and other specialties both significantly affects the specialty choice of graduating medical students [5, 6]. It is therefore very relevant that the PPACA includes changes that will make a primary care choice more palatable: a overall decrease in the amount of uncompensated care as well as a increase in Medicaid and Medicare payments for primary care services [7]. This coupled with the well-known national shortage of primary care providers and decreasing amount of medical students choosing primary care makes the teaching of medical students about the PPACA a societal responsibility.

One hurdle to the implementation of medical student education on the PPACA is the general lack of health policy education received by medical students across the nation. A survey of medical school deans performed in 2011 showed that the national average of health policy education across 4 years of

medical school was 14 hours with some students even receiving no education [8]. This same study showed that this is further diluted with the fact that only 24% of the schools responding had classes dedicated to health care policy as opposed to being part of a broader subject. In addition, health policy is further broken down to topics such as quality improvement, health care costs, Medicare & Medicaid, reimbursement and finally reform. It is thus feasible that of those average 14 hours, the amount spent on actual health care policy and the PPACA is even smaller. The same study noted the two biggest determinants of the amount of health policy education was the flexibility of the curriculum and the faculty interest in the subject. Another major factor is the fact that only 30% of medical schools actually have a department of health policy [9].

With the above in mind, how would one implement more health care policy and reform education into the curriculum at Case Western. The institution has a health care policy department and the curriculum does include some policy education in Block 1 of the preclinical section of our education. Case is also blessed with faculty who are major advocates and proponents in the field of health policy development and education. However there is no health policy education during the clinical years when it is even more relevant and apparent in our interactions with physicians and in the field but also when we are making the crucial decision on specialty choices. Although increased education can be put into Block 1 it will benefit the students if the education was longitudinal across all four years. The nature of medical school is to overload with basic science in the preclinical first two years and with the clinical during the last two years. In this structure the health policy education that is taught in the first two months of medical school is easily lost, especially considering that there lacks significant health policy content in both Step 1 and Step 2 of the USMLE standardized tests. A major obstacle to this longitudinal approach is the fact that most students must decide on their specialty choice one half to two thirds the way through the third year. This makes it not ideal to make health policy education subject only to first year and fourth year approaches. A solution could be a health care policy and PPACA short course at the end of the second year before clinical rotations.

In summary it is apparent that medical students across the country lack the proper exposure and education about the PPACA and health policy. This education if implemented, will not only make better prepared future physicians but will help the students make their future decisions in specialty choice and where they will ultimately practice. It will also make the students more financially aware of reimbursement types and of healthcare in general. We proposed that such education be implemented here at Case in a longitudinal fashion and not just in the Block 1 preclinical segment of the curriculum.

Medical School Debt

There has been much focus of late on the rising cost of higher education in America, and with the passage of the Patient Protection and Affordable Care Act and emphasis on the healthcare crisis, the subject of medical school debt is of particular importance. This debt not only affects the choice in specialty training and by extension the distribution of our national healthcare provider pool, potentially affecting the quality and efficiency of patient care, but also has negative effects on physicians themselves.

According to the Association of American Medical Colleges, for the class of 2013 the current median 4-year cost (including living expenses) to attend medical school is \$273, 455 at a private, and

\$207, 868 at a public school [10]. Median private medical school tuition and fees have increased by 50% between 1984 and 2004 while public school tuition and fees have increased by 133% over the same period [11]. Although there are a fortunate few who can afford these fees, the vast majorities of students turn to readily available loan options and end up financing almost the entire balance of their medical education costs.

Parallel with the rise in the cost of medical education, there has been an increase in debt over the years. An estimated 78% of indebted graduates have debt in excess of \$100,000, while 59% have debt exceeding \$150,000. The average educational debt of indebted medical school graduates is now a little over \$160,000 not including outstanding loans from undergraduate degree programs – additional debt that 86% of graduating medical students carry [11]. Just as medical school costs have sky-rocketed, the costs of an undergraduate education - a necessary stepping stone towards medical school - have nearly doubled. The National Center for Education Statistics estimates that the average loan amount borrowed to attend a 4 year university increased from \$17,600 in 1995-1996, to \$34,600 in 2007-2008 [12]. In addition to the principal balance on the loan amount borrowed, another factor that contributes to the debt burden faced by U.S. graduating medical students is the interest accrued over the lifetime of the loan. Currently, the federal Stafford loans – which have some of the lowest rates available with some loans being subsidized – have a fixed rate of 6.8%. Many students only qualify to have a portion of their expenses covered by Stafford loans and must take out additional loans such as Grad PLUS, which carries a fixed rate of 7.9% or even private student loans that can have rates as high as 11.85% APR, to cover the rest of their expenses [13,14]. Although there are programs such as the Perkins Loan Program that offers a 5% rate for students that have “exceptional” need or the HRSA Primary Care Loan that offers the same rate to students who agree to train and practice in primary care until the loans are paid off, the bulk of students neither meet the need based qualifications, nor choose to enter a primary care field [14].

According to an article published in the Annals of Family Medicine, the U.S. will require 52,000 additional primary care physicians by 2025 with office visits to primary care physicians projected to increase from 462 million to 565 million. The authors found that the primary driver for the increased need will be population growth, followed by population aging and healthcare expansion [15] Despite the projected need for an increased number of primary care physicians, the National Resident Match Program reports that in 2012 the percentage of U.S. Seniors matched to Medicine and Pediatrics was the lowest in 5 years. Meanwhile specialties such as dermatology, orthopedic surgery, plastic surgery, thoracic and vascular surgery, and radiation oncology enjoyed a 100% fill rate. The specialties that were filled with significant numbers of independent applicants and foreign medical graduates were pediatrics (55.2%), family medicine (46.4%), and internal medicine (43.3%) [16]. Even with the availability of multiple loan forgiveness programs targeted towards making a career in primary care more attractive, U.S. Seniors still overwhelmingly chose surgical subspecialties leaving half of the primary care specialties to be filled by foreign medical graduates – graduates that do not carry the same debt burden as U.S. students. The link between debt and choice of specialty was examined by Grayson et al and it was found that students with higher anticipated debt were more likely to choose a career in a non-primary care field [5].

Indeed, the disconnect between the anticipated debt burden of graduating medical students and projected earnings after training appears to be an important driver in subspecialty choice. A brief exercise in using a loan calculator found at FinAid.org reveals that for a loan balance of \$200,000 at a fixed rate of 6.8% to

paid off over 10 years, the estimated salary needed to pay off that loan is \$276,200, with a monthly payment of \$2300 and a total of \$76,200 in interest paid. Increasing the loan term to 30 years would decrease the salary requirement to an estimated \$156,462, but the amount paid in interest increases to \$193,200 [17]. Average physician pay in 2011 for family medicine, internal medicine, and pediatrics ranged from \$148,000 to \$250,000 while specialties such as orthopedic surgery, cardiology, and radiology reported compensation in the range of \$325,000 with 20-40% of physicians in those fields making in excess of \$500,000 [18]. Of course, the above loan calculations are simplified and assume a fixed rate of 6.8% (which, in reality, is a low estimate since many students have GradPLUS or private loans with much higher rates), and that the student is paying off any interest that is accruing from unsubsidized loans while in school. Salary requirements, either actual or perceived, are likely to be even higher if the student does not want to encounter economic hardship while paying off their loans –it is no wonder that U.S. students gravitate towards the more lucrative subspecialties.

Although it is difficult to project exactly how and in what way this imbalance in specialty choice will affect patient care, in a healthcare system that will require more primary care physicians and is moving towards a more primary-care focused model of healthcare delivery, more and more patient needs will be addressed by foreign medical graduates who may or may not have received the same level of training as U.S. graduates. Not only is patient care potentially affected by student debt, but physicians and their own quality of life are affected. An article published in *The Journal of the American Medical Association* found that not only were symptoms of burn-out (such as emotional exhaustion and depersonalization) positively associated with high debt, but also that these symptoms were less frequent in international medical graduates [19]. In this study educational debt was not only found to affect physician quality of life, but was also associated with lower In-Training exam scores, suggesting that even the acquisition of medical knowledge required for safe and best practice was affected by debt [19].

With the increase in the cost of medical school education there has come an increase in medical student indebtedness. This in turn has shifted the distribution of specialty choice in the U.S. towards surgical subspecialties leaving primary care fields to be filled by foreign medical graduates. Although it is unclear if and how the increasing number of foreign medical graduations will in of itself will affect patient care, studies have shown that debt is associated with emotional exhaustion and depersonalization in U.S. graduates. Both of these symptoms of burnout interfere with a physician's ability to empathize, establish patient rapport, and deliver personalized quality patient care.

There are loan forgiveness programs and legislation regarding interest rates being proposed that aim to address the issue of medical student debt at the systems level. We can and should however address this issue at the level of medical school education as well: we propose adding dedicated medical school curriculum to educate and inform students about debt and strategies to mitigate debt at the individual level.

Retirement Planning & Investing

A 2011 survey of physicians within 6 years of retirement, found that more than half had changed their career plans since the beginning of the current economic recession. Of those reporting a change in plans, 70% stated that they intended to work longer because their savings had been depleted or had not

grown as expected [20]. Data also shows that the average retirement age is increasing for physicians in most specialties[21]. It is clear that doctors currently approaching retirement encounter significant challenges in the face of an unpredictable economy, which begs the question: could something have been done to better prepare these physicians for retirement? And if that is the case, then what can be done to better prepare medical students not only to begin their careers, but also to end them? For this reason we propose that the medical school curriculum be amended to include education on retirement planning to ensure that future generations of Case Western graduates can face retirement with confidence regardless of the economic climate.

Retirement saving and planning should be a priority for all young professionals entering the workforce, but it is especially critical for young physicians. Extended education and training leads to delayed earning potential, creates debt and also deprives physicians of years of money-managing experience gained by those already in the workforce [22]. All of this causes physicians to be at a disadvantage from the outset when it comes to saving for retirement. An important goal of retirement education during medical school would be to equip graduating students to compensate for these deficits and prevent them from forgoing additional opportunities for retirement saving during residency. While earning power is limited during residency, those who begin contributing to their retirement during this time can still reap substantial benefits. On average, workers who begin saving for retirement in their 30s have to contribute twice as much annually as those who begin in their 20s to reach the same savings goal [23]. Many programs offer 401(k) or 403(b) plans, but this requires residents be educated in their options and know the importance of early contributions for adequate retirement preparation. Younger workers in particular are more likely to disregard opportunities for retirement saving [24]. In fact, in 2010 they made up a significant proportion of the 21% of eligible workers who forfeited such opportunities by not participating in their employer's 401(k) plan [24]. Additionally, education on retirement planning during medical school can help students avoid common financial mistakes made during residency and beyond such as compensating for years of financial deprivation by overspending on both day-to-day expenses and large purchases rather than contributing to their retirement funds [20, 25]. All of this can contribute to the difficulties many physicians face as they try to end their careers and enter the next stage of their lives.

Given these facts, we propose that the medical school curriculum include at least basic education on retirement saving and planning. Many common mistakes made by young physicians could likely be avoided if at least basic education on retirement planning and 401(k) and 403(b) plans were provided in medical school. The opportune time to provide such education would be during fourth year when medical students are preparing for residency and will soon be faced with important decisions regarding retirement accounts provided as part of their programs' benefits packages. By providing this information just prior to residency, the curriculum could help new interns develop good habits for retirement saving that they can carry with them through their medical careers and beyond and prevent them from making short-sighted choices that could have a significant impact in the long-term.

Negotiations

Negotiation is the art and science of securing an agreement among people with conflicting interests. It is the strategy to resolve differing opinions when common interests often exist. When seen this way, physicians engage in negotiations daily with their coworkers, supervisors, administrators and

patients. Successful negotiation requires not only effective communication and interpersonal skills, but also an understanding of the needs of the involved parties, best alternative to a negotiated agreement, and tactics to achieve a mutually acceptable solution [26]. However, medical students currently have no formal training to acquire all these valuable skills.

Physicians now are becoming more active in leadership and management of the health care system. In addition, many are moving away from independent practices and are instead working with larger organizations [27, 28]. These situations will require honed negotiation skills as physician needs and goals compete with other clinicians and administrators. Physicians must be able to negotiate effectively for scarce resources. Despite these current challenges, medical students are entering the work force with little understanding of physician value and without strategies to maximize their worth. For example, a study in the American Family Physician reviewed office-based visits across various specialties and the derived incomes. They reported that certain primary care physicians, like family physicians, general pediatricians, and general internists saw a disproportionately higher number of patients yet earned less on average when compared to specialists. The study suggests that primary care physicians are undervalued relative to their service. Although just one example, such discrepancies can have far reaching impact. Medical students who feel ill-equipped to negotiate a better value for their time with hospitals or large organizations may choose to simply avoid primary care careers, which will threaten to worsen primary care access for patients [29, 30].

In creating a negotiations curriculum, teaching a simple model could provide a strong foundation for fourth year medical students about to enter residency. Anastakis suggests that the “basic needs model” may be best suited for the current health environment. This model requires negotiators to prepare the following in advance: identifying their needs, setting objectives for the negotiation, establishing a best alternative to negotiated agreement, and creating strategies and tactics [26]. Combining this simple framework, or any other negotiation model, with a better understanding of typical expected earnings over physicians’ lifetimes, managing debt, and simple investment strategies would empower the medical student to approach her first contract with more confidence.

Physicians continue to face tremendous challenges in the work place. With increasing administrative oversight to new models of practice, medical schools ought to prepare their students not only to be outstanding physicians, but also with the expertise to navigate the evolving practice of medicine. Negotiation skills will improve with each experience. Empowering future physicians with these skills from an early point will ultimately result in greater personal satisfaction, as well as leave them in a better position to negotiate on behalf of their patients.

Conclusion

Medical students and the physicians that they will become are in a unique position financially. Most of them carry large amount of education loans in excess of \$200,000 when they enter the work force. There they face new challenges unique to physicians including working in large care organizations and insurance corporations for reimbursement and managing costs. In addition this landscape is changing due to the PPACA and additional reforms and instituted in the near future. These future physicians also face the same issues as most other professions including retirement saving, debt reduction and investment

planning. Despite this position, most medical students go into residency and then practice without any financial education or training.

We believe that by setting aside dedicated curricular time throughout the four years - as outlined in the introduction of this paper - Case Western will be able to produce not only physicians of the highest clinical and scientific acumen, but also those that are financially literate and prepared to contribute to the changing landscape of the business of medicine.

1. Winkelman TN, Antiel RM, Davey CS, Tilburt JC, Song JY. Medical students and the Affordable Care Act: uninformed and undecided. *Arch Intern Med.* 2012 Nov 12;172(20):1603-5.
2. Huntoon KM, McCluney CJ, Scannell CA, Wiley EA, Bruno R, Andrews A, Gorman P. Healthcare reform and the next generation: United States medical student attitudes toward the Patient Protection and Affordable Care Act. *PLoS One.* 2011;6(9):e23557.
3. Deloitte Center for Health Solutions (2010) Consumer Perceptions of Health Reform. Available: http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/US_CHS_PostReformConsumerPulseSurvey_061010.pdf.
4. Kaiser Family Foundation (2012) Kaiser Health Tracking Pool: April 2013. Available: <http://kff.org/health-reform/poll-finding/kaiser-health-tracking-poll-april-2013/>
5. Grayson MS, Newton DA, Thompson LF. Payback time: the associations of debt and income with medical student career choice. *Med Educ.* 2012 Oct;46(10):983-91
6. Cullen E. Health policy in medical education: what young physicians know about the Affordable Care Act. *rch Intern Med.* 2012 Nov 12;172(20):1605-6.
7. National Physicians Alliance (2011) Overview of the Affordable Care Act (ACA). Available: http://npalliance.org/wp-content/uploads/NPAF.Overview.of_.ACA_.031211.pdf
8. Mou D, Sarma A, Sethi R, Merryman R. The state of health policy education in U.S. medical schools. *N Engl J Med.* 2011 Mar 10;364(10):e19
9. Relman A. Will the new generation of physicians promote health care reform? *Pharos Alpha Omega Alpha Honor Med Soc.* 2011 Spring;74(2):40-1.
10. Bloomberg: <http://www.bloomberg.com/news/2013-04-11/medical-school-at-278-000-means-even-bernanke-son-carries-debt.html>
11. Association of American Medical Colleges (accessed 4/18/13): <http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/medical-student-section/advocacy-policy/medical-student-debt/background.page?>
12. National Center for Education Statistics. "Trends in Student Financing of Graduate and First-Professional Education: Selected Years, 1995-96 to 2007-08" (accessed 4/18/13): <http://nces.ed.gov/pubs2011/2011217.pdf>
13. StaffordLoan.com (accessed on 4/18/13): <http://www.staffordloan.com/stafford-loan-info/interest-rates.php>
14. AAMC (accessed 4/18/13): https://www.aamc.org/advocacy/meded/79232/federal_student_loans.html
15. Petterson S, Liaw W, Phillips R, et al. "Projecting US primary care workforce needs: 2010-2025." *Ann Fam Med.* 2012;10(6):503-509.
16. NRMP Match stats 2012. Pg 17: <http://www.nrmp.org/data/resultsanddata2012.pdf>

17. FinAid loan calculator: <http://www.finaid.org/calculators/scripts/loanpayments.cgi>
18. Medscape physician compensation report 2011:
<http://www.medscape.com/sites/public/physician-comp/2011>
19. West C, Shanafelt T, Kolars J. "Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents." JAMA. 2011;306(9):952-960.
20. Jackson & Coker Research Associates. Jackson & Coker Retirement Survey: An online research study. Aug 2011. http://www.jacksoncoker.com/documents/JCRetirement_Survey.pdf
21. Kane L. Most Specialties Are Retiring Later...But Not Family Physicians, GPs, or Surgeons. Medscape Connect. March 2010.
<http://boards.medscape.com/forums?128@106.v1aOaQEUFNU@.29fc70e7!comment=1>
22. Ron Lieber. Your Money- Investment Advice for Doctors: First Do No Harm. The New York Times. Aug 2011. <http://www.nytimes.com/2011/08/27/your-money/investment-advice-for-doctors-first-do-no-harm.html?pagewanted=all>
23. Liz Weston. Smart Retirement- Your 20s: Planning pays off richly. MSN Money. Oct 2011.
<http://money.msn.com/retirement-plan/your-20s-planning-pays-off-richly-weston.aspx>
24. Humell AH. 401(k) plans in 2010: An Update from the SCF. Center for Retirement Research at Boston College Issue in Brief. July 2012: 12-13. http://crr.bc.edu/wp-content/uploads/2012/07/IB_12-13.pdf
25. Sullivan P. Wealth Matters- Money Advice for Doctors and Lawyers and the Rest of Us. The New York Times. March 2013. <http://www.nytimes.com/2013/03/30/your-money/money-advice-for-doctors-and-lawyers.html?pagewanted=all&r=0>
26. Anastakis DJ. Negotiation skills for physicians. Am J Surg 2003 Jan; 185(1):74-78.
27. Debra Beaulieu. Physician employment: 4 tips for successful contract negotiation. Fierce Practice Management, 2012 Nov 5.
28. Robert E. Moffit. Doctors' worth is undervalued in ACA system. Omaha World-Herald, 2013 May 28.
29. Biola H, Green LA, Phillips RL, Guirguis-Blake J, Fryer GE. The U.S. primary care physician workforce: undervalued service. Am Fam Physician. 2003 Oct 15;68(8):1486.
30. Bodenheimer T, Pham HH. Primary care: current problems and proposed solutions. Health Aff (Millwood). 2010 May;29(5):799-805.