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A Brief Educational Intervention in Personal Finance for Medical Residents

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INTRODUCTION: Although medical educational debt continues to escalate, residents receive little guidance in financial planning.

AIM: To educate interns about long-term investment strategies.

SETTING: University-based medicine internship program.

PROGRAM DESCRIPTION: An unselected cohort of interns ($n=52$; 84% of all interns) underwent a 90-minute interactive seminar on personal finance, focusing on retirement savings. Participants completed a preseminar investor literacy test to assess baseline financial knowledge. Afterward, interns rated the seminar and expressed their intention to make changes to their long-term retirement accounts. After 37 interns had attended the seminar, a survey was administered to all interns to compare actual changes to these accounts between seminar attendees and nonattendees.

MEASUREMENTS AND MAIN RESULTS: Interns' average score on the investor literacy test was 40%, equal to the general population. Interns strongly agreed that the seminar was valuable (average 5.0 on 5-point Likert scale). Of the 46 respondents to the account allocation survey, interns who had already attended the seminar ($n=25$) were more likely than interns who had not yet attended ($n=21$) to have switched their investments from low to high-yield accounts at the university hospital (64 vs 19%, $P=0.003$) and to enroll in the county hospital retirement plan (64 vs 33%, $P=0.07$).

CONCLUSIONS: One 90-minute seminar on personal finances leads to significant changes in allocation of tax-deferred retirement savings. We calculate that these changes can lead to substantial long-term financial benefits and suggest that programs consider automat-

ically enrolling trainees into higher yield retirement plans.

KEY WORDS: curriculum program/evaluation; financial management; medical student and residency education.

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INTRODUCTION

Medical students in the United States graduated with an average educational debt of \$120,280 in 2005.¹ Due to this debt and years of deferred income, graduating medical students embark on residency training and their early careers at a substantial financial disadvantage compared to college-educated peers. This early economic hardship is likely to increase as medical schools, teaching hospitals, and the federal government face financial pressures that preclude tuition reductions, salary increases, or more favorable loan terms. Lack of financial well-being may have significant additional consequences: a survey of medical residents showed that higher debt correlated with more severe self-reported burnout and depressive symptoms.²

Financial missteps early in a resident's career (for example, failure to save adequately for retirement or rapid accumulation of debt) can extend the economic challenges facing young physicians. In addition, the recent trend of medical school graduates to select subspecialty careers exacerbates the effect of this rapid rise of educational costs because future earnings are deferred during extended residencies and fellowships. Therefore, there is a compelling need to introduce basic personal finance education during medical training. The American Association of Medical Colleges has recognized financial planning and debt management as important priorities for further education.^{1,3} A recent survey of surgery residency program directors showed near unanimity in the importance of training residents in financial management,⁴ and 84% of surveyed emergency medicine residents believe that residency training should include financial planning education.⁵ Despite these overall attitudes, relatively little is known about how residents actually manage their personal finances. Two studies have demonstrated that only 67% of Canadian and 63% of American urology residents surveyed contributed to tax-deferred retirement accounts without matching provisions.^{6,7}

We sought to assess internal medicine residents' baseline knowledge of personal finance and investing and to evaluate the effects of a brief module on their decisions about long-term retirement account investments.

An abstract of this study was presented at the Innovations in Medical Education poster session at the Society of General Internal Medicine annual meeting, Chicago, May 2004.

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PROGRAM DESCRIPTION

Curriculum. A 90-minute interactive seminar provided an overview of personal finance—income and spending, debt management, taxes, insurance, and retirement savings. Details of the curriculum are presented in the [Appendix](#). The seminar emphasized information about retirement plans that are available during residency. The default retirement account option at the university hospital is a savings account; residents may opt to invest instead in a number of university-managed or publicly traded funds from a large mutual fund company. At the county hospital, residents are not automatically enrolled in a retirement account but may elect to make contributions to mutual funds offered by a large financial services company.

Measures

Financial Literacy. The 2002 Vanguard/*Money* magazine investor literacy test⁸ is a 20-question multiple-choice exam focusing on financial markets, mutual funds, and investment principles.

Pre- and Postcurricular Attitudes Assessment. A preintervention survey addressed interns' self-assessed knowledge of personal finance using Likert scales (1=strongly disagree, 5=strongly agree). On the postseminar attitudes survey, interns rated the value of the seminar, determined if it was valuable to replace a medical talk with one on financial topics, and stated whether they intended to make changes to their retirement account allocations.

Allocation Change Survey. Interns were asked if they attended the personal finance seminar and what their current retirement account enrollment status and investment allocations were at the time of the survey.

Sample Population and Study Design

A faculty member in the general internal medicine (GD) gave the seminar to internal medicine interns at the University of California, San Francisco, during their monthlong ambulatory rotation. A total of 52 (84%) of 62 interns attended the seminar. The remaining 10 were on vacation during the rotation. Immediately before the seminar, interns completed the financial literacy test and preintervention survey; after the seminar, interns completed the postseminar attitudes survey. Two to 10 months later, when 37 interns had completed the seminar, all interns present at a retreat in May 2004 were asked to complete the allocation change survey. Of the 46 respondents, 25 had attended the seminar.

Analysis. Descriptive statistics were calculated for all survey data.

PROGRAM EVALUATION

Preexisting Financial Knowledge, Attitudes, and Behaviors. On the investor literacy test, the interns' average score ($n=52$) was

40%. Most interns disagreed with the statement: "I have adequate knowledge of personal finance." (average Likert score 1.7). Most had not enrolled or made asset allocation changes in their tax-deferred workplace retirement accounts: 87% had their preenrolled plan from the university hospital in the default savings account, and 76% had not enrolled in the county hospital's retirement plan.

Subjective Assessment of Seminar. All interns ($n=52$) strongly agreed that the seminar was valuable (average Likert score 5.0) and felt it was worthwhile to replace a medical talk with a personal finances seminar during their ambulatory rotation (average Likert score 5.0). After the session, interns strongly agreed with the statement: "After this talk, I plan to make changes to my retirement accounts." (average Likert score 4.8).

Changes in Financial Decisions. Of the 25 survey respondents who had already attended the seminars, 16 (64%) reported switching out of the university hospital's default retirement savings account in favor of a mutual fund investment, whereas only 4 of the 21 survey respondents who did not attend the seminar (19%) had made such a change ($P=0.003$). Sixteen seminar attendees (64%) reported enrolling in the county hospital retirement account compared to 7 nonattendees (33%) ($P=0.07$).

Twelve of the 37 interns who had attended the seminar at the time of the retreat did not complete the allocation change survey. Therefore, we performed a sensitivity analysis using the assumption that all nonresponders did not change their retirement accounts. Under this scenario, seminar attendees are still more likely to change accounts compared to nonattendees; the effect reaches statistical significance at the university hospital (43 vs 16%, $P=0.03$) but not at the county hospital (43 vs 28%, $P=0.28$), where residents do less than one-third of their rotations and where the enrollment process is much less convenient.

DISCUSSION

Our study demonstrates that internal medicine interns lack knowledge in personal finance. On the Vanguard/*Money* magazine investor literacy test, the interns' score equaled that of the general population (40%), a level that most financial experts believe demonstrates inadequate knowledge about investing.^{9,10} We also report that this innovative curricular intervention is highly regarded by interns and leads to a significant change in their financial decisions, specifically their investment allocations in employer-sponsored retirement accounts.

The financial advantages for interns who change their pretax investment allocation are substantial. Assuming a conservative estimate of future stock market returns (6% average annual return) and retirement at 35 years after residency, we calculate that interns who enroll in and change their investment allocation in their accounts could have \$53,000 more in tax-deferred savings at retirement *from the 3 years of residency alone*. Using an estimate of 10% annual return (the average historic return on equity-based investments), the additional savings would increase to approximately \$251,000. Raising residents' financial awareness by informing them to save for retirement and

invest in asset classes with higher expected return could therefore translate into significant monetary benefits over the course of their careers.

The long-term effect of single-intervention, continuing medical education lectures and interactive seminars on physician behaviors is generally poor.¹¹ The significant changes in retirement savings allocations by residents based on our single seminar may reflect two factors. Interns are typically inundated with didactics aimed at bolstering medical knowledge; this seminar may have had a greater impact because of its focus on a nonmedical topic. In addition, we suggested that interns perform just one easily accomplished intervention.

There are important limitations to the conclusions of our study. We did not formally randomize interns to attend or not attend the personal finance seminar. However, because interns missed this seminar only because of a predetermined vacation, we believe that selection bias is limited. We relied on interns' self-reported allocations to retirement programs rather than using objective evidence of their choices, which are not readily available because of privacy concerns. Ours is a single-institution study, with a salary structure, retirement program, and cost of living that may not resemble other postgraduate programs in internal medicine. Finally, we only measured the effect on a single personal finance choice (retirement program), and we cannot generalize this change to effects on residents' overall financial status, savings habits, or debt management skills.

Recently, in response to data consistently showing that Americans make poor decisions with regard to retirement savings, several large American businesses have started enrolling their employees automatically into their company's 401(k) plans with a default allocation to mutual funds of stocks and bonds.¹² Because it is clear that medical residents are as financially uninstructed as average Americans, we recommend that teaching hospitals and universities consider following the lead of these businesses. Even with such initiative, because financial management is an underemphasized component of overall resident well-being, we support further educational opportunities for residents in personal finance.

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APPENDIX

Curriculum Outline

Introduction

- Elements of personal finance to be covered: debt management, savings/investment, taxes, insurance, and retirement savings
- Goals of session: to provide introduction to aforementioned topics and stimulate interest for further learning; avoid

major misunderstandings or common financial mistakes; and develop early habits of sound personal finance management. Session does not discuss means of maximizing income as a physician or how to make shrewd investments.

- Young physicians face financial disadvantages: typical 10-year delay in income and savings, high level of educational debt, and absence of instruction (or discussion) of money matters during training.

Debt

- Contrast good debt, which allows for acquisition of an asset that appreciates in value, generally with a lower interest rate and some tax advantages (e.g., mortgage, student loan) with bad debt, which has all of the opposite characteristics
- Prioritize early and aggressive payment of consumer/credit card debt
- Consider basic student loan strategies, including consolidation and paying off highest rate loans first.

Savings and Investment

- Most American households had a very low savings rate (<1–5%)—and conversely, a very high consumption rate.
- Create a “rainy-day fund” (3–6 months of life expenses on hand) before any investments are made.
- Investing allows your money/assets to (1) maintain purchasing power by keeping pace with inflation and (2) generate real (beyond inflation) growth.
- Many liquid investments (including cash, savings/checking account, money market fund) lag behind or only keep pace with inflation.
- Other asset classes such as stocks, bonds, and real estate offer opportunity to achieve both investment goals (see “c”) but come with increased risk.
- There are benefits and drawbacks of investing in mutual fund versus purchasing individual assets (e.g., stocks) directly.

Taxes

- Overhead projections of paychecks from University and County hospitals show how federal, state, disability, Medicare, and social security taxes are automatically deducted.
- Benefits of pretax deduction for workplace retirement accounts (401a, 401k, 403b, 457 plans) include automatic savings, reduction in taxable income, tax-deferred growth, and, in some instances, matching.
- The federal income tax—most physicians' greatest expense—is comprised of tax brackets. Understanding this system and your marginal tax rate is critical for tax-related decisions.

Insurance

- Insurance is how you protect the assets—both personal and financial—you have accumulated.
- You will likely have to purchase medical, disability, auto, malpractice, renter/homeowner, umbrella/liability, small business, and life insurance during your lifetime.

Retirement Saving

- a. Internet-based graphics from <http://www.vanguard.com> highlight (1) how earlier saving (i.e., before or during residency) accrues exponential benefits because of compound interest and (2) how tax-deferred status of retirement accounts leads to increased savings.
- b. Different types of workplace retirement accounts available via residency program (401a, 403b, 457)
- c. There are a number of benefits to establishing a Roth IRA during residency.

Summary

- a. Think of your cash flow using a “roadmap” diagram of how all the dollars from your monthly paycheck are allocated, including taxes, pre- and posttax retirement savings, student loans, rainy-day fund, and living expenses.
- b. Four final points to emphasize: control spending and develop this habit early; save and invest regularly now so that you gradually increase this habit; establish your retirement plan now, not later; and this should only be the beginning of your education about personal finance matters.

Residents are provided with a document that has internet addresses of both hospital retirement programs, suggested books, and internet sites for further reading on personal finance.

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