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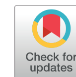
Critical Review

A Burnout Reduction and Wellness Strategy: Personal Financial Health for the Medical Trainee and Early Career Radiation Oncologist



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Abstract

Purpose: Physician burnout is reported in more than one out of every 2 practicing clinicians and is just as prevalent in training physicians. Burnout severity is also associated with increasing levels of financial debt. Medical professionals are notable for their high and increasing levels of debt; despite this, financial literacy is poor among physicians, and financial education is largely absent from medical education. Radiation oncologists (ROs) are no different in this regard, with 33% of residents reporting high levels of burnout symptoms, 33% carrying >$200,000 of educational debt, and 75% reporting being unprepared to handle future financial decisions. To fill this gap, we reviewed the basic tenets of personal financial health for the early career RO.

Methods and materials: The core concept of financial independence (FI) is introduced, and we review 4 basic tenets of personal financial health for the young medical professional: debt, behavior, investment, and asset protection strategies.

Results: FI is achieved by saving until the desired quality of life can be maintained, independent of employment income. Debt strategy involves minimizing debt accrual, understanding student loans, and having a debt management plan. Behavioral strategy involves setting financial goals, calculating worth and a savings rate, budgeting, and frugal living. The basics of investing include asset allocation, diversification, rebalancing, and minimizing expenses. Finally, asset protection includes insuring against catastrophic events with disability, life, health, liability, and property insurance.

Conclusions: Healthy financial practices can lead to FI and may facilitate professional and personal freedoms with the goal of mitigating burnout-associated stressors. The tenets of strong financial health for ROs in the early stages of their career include sound debt, behavioral, investment, and asset protection strategies. Furthermore, initial and continuing financial education is an overlooked

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but important curriculum component. ROs with their financial houses in order can devote more resources to learning and practicing good medicine while living healthy, rewarding lives.
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Introduction

Symptoms of burnout (depersonalization, a diminished sense of personal accomplishment, and emotional exhaustion) have been reported in >1 of every 2 practicing physicians.[1] This affliction, driven by work-related stressors, is just as prevalent in training physicians[2] and has become a focus of the American Medical Association.[3] Burnout has been associated with substance abuse, suicidal ideation, and career dissatisfaction,[4-6] and the rates of burnout are thought to be twice as high in medicine compared with other professional fields.[7] Radiation oncologists (ROs) are no different in this regard, with 33% of residents reporting high levels of burnout symptoms.[8] Indeed, a full session at the 2018 American Society for Radiation Oncology Annual Meeting was devoted to burnout in the specialty, with a focus on resident and junior ROs.

Burnout severity is also associated with increasing levels of financial debt.[9-13] Medical and dental professionals are notable for their high and increasing levels of debt, which is the highest among graduate-degree professions.[14] The median debt of medical school graduates with loans has nearly tripled from $71,000 (in 2018 dollars) in 1986 to $200,000 in 2018.[15,16] Furthermore, 12% of graduates now owe >$300,000 in educational debt.[16] This burden can grow substantially during residency and, at current interest rates, may be 20% to 50% higher by completion of training (Fig 1). Despite this, financial literacy is poor among physicians, and financial education is largely absent from medical education.[17] Again, ROs are no different in this regard, with 33% of RO residents carrying >$200,000 of educational debt (12% of residents report >$300,000)[8,18] and 75% reporting being unprepared to handle future financial decisions.[19]

To fill this gap and in the context of the multifactorial burnout crisis, we review the basic tenets of personal financial health for ROs in the early stages of their career (Table 1) and introduce the concept of financial independence (FI), all with the goal of promoting strong financial stewardship as a wellness strategy.

Financial Independence

FI is the accumulation of sufficient wealth to permit life without dependency on employment income while maintaining the desired quality of life.[20,21] This state is essentially the personal finance endgame and is what the retiree, who no longer works but has saved enough to live comfortably after employment, classically strives for. But FI need not be limited to the retiree, and the state permits professional, personal, and financial freedoms. With healthy financial behavior, FI is readily attainable for U.S. physicians after 15 to 20 years, or less, in practice. FI can alleviate work-related personal financial stressors, allowing the physician to practice medicine unhindered by the constraints of dependency on income. For some physicians, the path to FI may permit the restructuring of work hours and schedules and provide more room for personal wellness or professionally rewarding but less income producing activities, such as charitable work. For others, FI can be a hedge against an uncertain future (eg, in specialty labor markets such as in RO[22,23] or times of changing reimbursement patterns and health care reform[24]). Furthermore, if individual practice patterns are driven, consciously or unconsciously, by the personal income benefits enabled by the relative-value-unit fee-for-

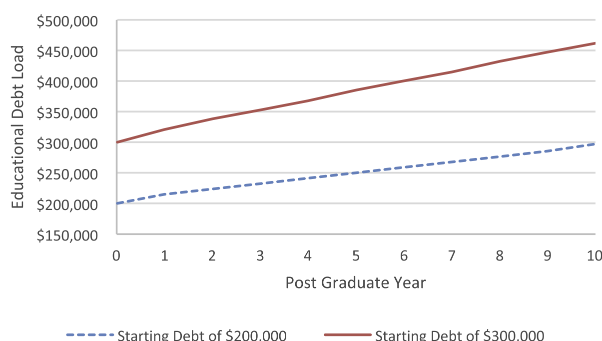

Figure 1 Potential medical graduate educational debt load by postgraduate year during graduate medical education under a government-sponsored, income-based repayment plan. The average starting educational debt load of the graduating medical student was $200,000 in 2018 (blue line), and 12% of graduates owe >$300,000 (red line).[16] This model assumes that the graduate is making the minimal payments on unsubsidized loans while enrolled in the Pay-As-You-Earn repayment plan,[34] with an average loan interest rate of 6.6% in 2018,[27] earning an average resident salary of $59,300 in 2018,[54] with a family size of 1, and lives in the continental United States, with U.S. Department of Health and Human Services poverty guidelines.[55] (A color version of this figure is available at https://doi.org/10.1016/j.prro.2019.02.015.)

Table 1 Summary of tenets of financial health for medical trainees and early career radiation oncologist with select relevant and practical resources

Tenet	Details	Resources
Debt strategy	Debt management plan	Fawcett et al, 2016[36]
	Minimize debt accrual	Steiner et al, 2013[35]
		Grischkan et al, 2018[33]
Behavior strategy	Set financial goals	Tyson et al, 2010[39]
	Calculate net worth	Bach et al, 2016[40]
	Set a savings rate	Stanley et al, 2010[37]
	Budget	Zweig et al, 2008[41]
	Live like a resident (minimize spending)	Clements et al, 2016[43]
	Stay the course (stick to the plan)	Belsky et al, 2010[44]
Investment strategy	Pay down high-interest debt	Bernstein et al, 2014[42]
	Asset allocation	Larimore et al, 2007[49]
	Portfolio diversification	Larimore et al, 2018[46]
	Rebalance portfolio	Bernstein et al, 2010[47]
	Minimize expenses	Piper et al, 2014[51]
	Minimize taxes	
Asset protection strategy	Insure against catastrophic events	Tyson et al, 2010[39]
	Disability	Dahle, 2014[29]
	Death	
	Illness	
	Injury	
	Liability	
	Expensive property	
	Emergency fund	
	Estate planning	
	Personal well-being	
Education	Initial and continuing financial education	Dahle, 2014[29]

service reimbursement model, FI could mitigate these influences.[25]

FI (moving work from a necessity to a choice) can be obtained through many routes but is classically and most reliably done via the steadfast accumulation of wealth such that an individual's assets, when invested appropriately, generate enough income passively to at least equal expenses. This wealth is achieved by increasing savings (ie, assets) relative to lifestyle costs and debts (ie, expenses). Healthy personal financial practices are necessary for FI.

Tenets of Financial Health for Medical Trainees and Early Career Radiation Oncologists

Debt strategy

The cost of medical education has been increasing at twice the rate of inflation.[26] For those who borrow money to pay for this increasingly expensive education, the interest rate for unsecured federal Stafford graduate student loans from 2006 to 2018 averaged 6.38%,[27] >2 points above the average 15-year fixed-rate mortgage of 4.05%.[28] Moreover, since 2012, these loans are unsubsidized, and the federal government will no longer cover the interest while the borrower attends school.[29] Other sources of debt to consider are undergraduate education loans, credit card debt, mortgages, and car loans. Finally, in the setting of an expensive U.S. health care system,[30] there is downward pressure on physician pay, with physicians earning relatively less than ever before.[31] The combination of the increasing cost of education, relatively high interest rates on educational loans, less favorable loan terms, and changing health care economics make a sound debt strategy essential for physicians in the early stages of their career.

Not to be overlooked, an important component of debt strategy is to minimize high-interest debt accrual during training. Techniques to curtail educational costs include prudent school selection and using preowned or shared books, supplies, and equipment. Frugal living choices and cost sharing can help reduce the total debt burden.

Income during training can also reduce indebtedness. Medical students may be able to work in a limited manner during school, and a spouse or partner may also be able to provide financial support. Many universities allow for substantial tuition reductions for family members of employees. Other notable approaches include scholarships and grants; combination degree programs (eg, MD/PhD); the National Health Services Corps or the U.S. Armed

Table 2 Summary of available federal student loan repayment plans under the William D. Ford Federal Direct Loan Program

Repayment plan	Eligible loans	Monthly payment and loan features
Standard	• Direct loans (subsidized and unsubsidized) • Federal Stafford loans (subsidized and unsubsidized) • PLUS loans • Consolidation loans	• Fixed payments made within 10 years*
Graduated	• Direct loans (subsidized and unsubsidized) • Federal Stafford loans (subsidized and unsubsidized) • PLUS loans • Consolidation loans	• Fixed payments increase every 2 years and loans are paid off within 10 years*
Extended	• Direct loans (subsidized and unsubsidized) • Federal Stafford loans (subsidized and unsubsidized) • PLUS loans	• Fixed or graduated payments made within 25 years
Revised Pay-As-You-Earn	• Direct loans (subsidized and unsubsidized) • PLUS loans† • Consolidation loans†	• Payments calculated from 10% of discretionary income • Annually recalculated using family size and income • Married couples' total income and loan debt considered • Outstanding balance is forgiven after 20 years (undergraduate study) or 25 years (graduate or professional study) • Forgiveness may be a taxable event
Pay As You Earn	• Direct loans (subsidized and unsubsidized) • PLUS loans† • Consolidation loans†	• Payments calculated from 10% of discretionary income • Annually recalculated using family size and income • Married couples' total income and loan debt considered if filing jointly • Outstanding balance is forgiven after 20 years • Eligibility limitations based on dates of loan and disbursement and debt-to-income ratio • Forgiveness may be a taxable event
Income-based	• Direct loans (subsidized and unsubsidized) • Federal Stafford loans (subsidized and unsubsidized) • PLUS loans† • Consolidation loans†	• Payments calculated from 10%-15% of discretionary income • Annually recalculated using family size and income • Married couples' total income and loan debt considered if filing jointly • Outstanding balance is forgiven after 20-25 years • Eligibility limitations based debt-to-income ratio • Forgiveness may be a taxable event

Abbreviation: PLUS = Parent Loan for Undergraduate Student.
The highlighted income-driven repayment plans (shaded) are those best suited for the Public Service Loan Forgiveness program.[2]
Income-contingent and income-sensitive repayment plans also exist, but these are rarely used by medical trainees.
* 10-30 years for consolidation loans.
† Direct loans made to students.

Forces with their Health Professions Scholarship Program; the Uniformed Services University of the Health Sciences (Bethesda, MD); or financial assistance programs.[32]

However, for many with heavy student debt loads at the end of training, 2 primary strategies exist: consolidating loans and pursuing forgiveness, or refinancing and eliminating the high-interest debt as soon as possible. There are several service-based loan repayment or forgiveness programs. For example, for those working in underserved areas or conducting research there are the National Health Services Corps and the National Institutes of Health Loan Repayment Program, respectively. For those pursuing work in academics and nonprofits (ie, organizations with a 501(c)3 tax designation), the most widely adapted forgiveness path is the U.S. government's 2007 Public Service Loan Forgiveness (PSLF) program, in which more than one third of graduates with debt are participate despite increasing scrutiny of the program.[33]

Under the PSLF program, borrowers who are enrolled in qualifying repayment plans and employed directly by a 501(c)3 or government organization may be eligible to have all educational debt (principal and interest) sponsored by the federal government forgiven, tax-free and without a cap, after 10 years of payments (120 qualifying, monthly, on-time payments). There are several qualifying repayment plans (Table 2), which are largely income-driven repayment plans (ie, the monthly payment owed

is dependent on income, such as the Pay As Your Earn, Revised Pay As You Earn Repayment Plan, and Income-Based Repayment plans).[34] Because most residents and fellows are employed by 501(c)3 organizations, the years of training can count toward the 10 years of service needed for forgiveness. This is particularly appealing with the income-driven repayment plans and results in a lower monthly payment while the borrower earns a lower salary as a trainee.

For academics and others who plan to be directly employed by a 501(c)3 nonprofit or government organization after training, this program can be an appealing approach. Of note, placing student loans into deferment or forbearance during training can be a costly mistake because the borrower would not be accumulating payments toward the PSLF. The PSLF exists at the whims of Congress[33]; therefore, financially savvy borrowers hedge against possible changes in the program and their career path by saving an amount equivalent to their loans on the side in an investing account. These funds can be applied against the debt in the event of career or program changes.

Another recommended strategy for those with high-interest debt is to eliminate the debt as quickly as possible by refinancing with a private lender, living frugally, and directing every available dollar to the debt. Since 2013, private lenders have been refinancing medical student loans at lower interest rates than those offered by the federal government. Being free of student loan debt in 2 to 5 years after residency is an attainable goal for most[29] but requires the behavioral discipline described in the next section. As illustrated by the numerous repayment plans outlined, student loans are complex, and the optimal debt strategy for any individual depends in part on personal goals and preferences. Fortunately, there are many excellent resources available to help with this process.[35,36]

Behavioral strategy

A goal-oriented approach to personal financial health keeps the individual on track to success. A common unit in financial goals is net worth, which is essentially net assets minus net liabilities (ie, debts). The surest path to increasing net worth is a high savings rate, or the proportion of income not spent and placed into savings (eg, investments). In other words, this is achieved by living well below your means. Wealth is what you accumulate and can be achieved by increasing net worth through savings; it should not be confused with income.[37]

This behavioral strategy, that of a "prodigious accumulator of wealth,"[37] is particularly important for physicians, with their delayed entry into the workforce as a result of prolonged education and training and high debt burden. Physicians are typically in their early thirties by the time they complete training. Although there are social and societal pressures for physicians to increase consumption (eg, buy a house) upon completion of training with the accompanying increase in income, our preferred approach is to delay gratification and live like a resident for several years after training. This approach requires physicians to maintain a resident's standard of living as an attending physician, despite the higher income.

The difference between attending-level income and trainee-level standard of living can permit the rapid accumulation of wealth by paying down debt, increasing the savings rate, and getting one's financial house in order. Converting income into wealth involves consciously avoiding the hedonic treadmill[38] and growing into higher income slowly. Creating a monthly budget is the traditional technique to track spending, saving, and progress toward financial goals, and many excellent resources are available to help with this process.[39] An even simpler way is to "pay yourself first" with automated deductions for bills and savings accounts.[40]

Finally, when saving and investing, setting financial goals and working toward them by staying the course despite market volatility is critical. Changing goals and strategies during a turbulent market can lead to selling low and buying high, which decreases investment returns and slows the process. Common behavioral investing traps are paralysis by analysis, recency bias, herd behavior, loss aversion, mental accounting, and changing long-term plans in response to short-term events.[41] A competent, low-cost financial advisor can assist with developing, implementing, and maintaining an appropriate investment strategy. However, all else being equal, the cost of an advisor reduces investment returns. Many physicians, who have already demonstrated the character traits of hard work, planning, self-discipline, and perseverance intrinsic to the profession, are capable of managing their own finances with great success. Of course, this requires interest, the accumulation of a new body of knowledge, and sufficient discipline to maintain a simple, low-cost investment strategy.[42] Many excellent resources are available detailing the nuances of financially healthy behavioral strategies.[41,43,44]

Investment strategy

Historically, approximately 4% of the initial portfolio value, adjusted upward annually for inflation, can be spent each year throughout retirement with little risk of complete portfolio depletion. Thus, FI, or the amount needed to feasibly retire, can be defined as a sum of money that is 25 times annual retirement spending. For example, if $100,000 is needed from the portfolio each year, then $2,500,000 is needed in savings. This is known as the 4% rule[45] and is defined by assumptions based on the historical performance of investments (ie, equities and bonds). A 3% withdrawal rate would be even more conservative.[45] The

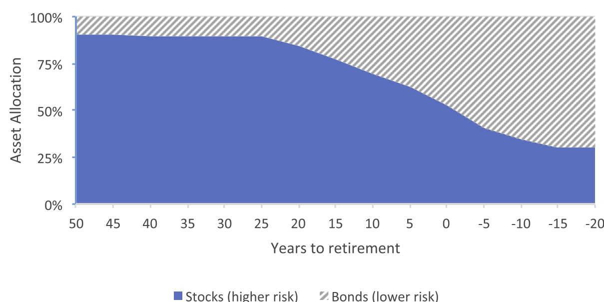

Figure 2 Lifecycle funds. This schematic shows how lifecycle (target retirement) funds adjust their risk profile as the target retirement date (Year 0) approaches. As the years to retirement approach 0, the fund's asset allocation get progressively less risky, shifting the balance from stocks (higher risk) to bonds (lower risk).

nuances of an appropriate long-term investment strategy to reach FI are beyond the scope of this article (eg, investment portfolio design involves many personal decisions), but we cover some fundamental principles. It is critical to recognize that fruitful investing need not be overly complex; some successful investors use a portfolio with only 3 types of assets.[46]

The future value of savings is primarily driven by 4 factors: income, savings rate (ie, percentage of income saved and invested), the rate of return on those investments, and the amount of time over which the money compounds. The amount of control the individual investor has over these factors varies but is greatest for the savings rate, as discussed previously. The expected rate of return depends on the risk profile of the investment portfolio, which is primarily reflected in its asset allocation (ie, the mix of different types of investments in the portfolio, such as stocks, bonds, and real estate). The appropriate portfolio balance of riskier investments (stocks, real estate) and less risky investments (bonds, cash) is determined by the investor's need, ability, and desire to take risk to meet financial goals.

Essential to portfolio design is to minimize uncompensated risk. Ideally, an investor who takes on more risk should receive a higher long-term return as compensation. Uncompensated risk (ie, risk that can be eliminated completely through diversification) should be minimized whenever possible.[47] This can be done by holding mutual funds, which are essentially a pool of many different assets (ie, many different stocks, bonds, or real estate holdings lumped into a single fund) as opposed to choosing a few individual securities.[48] This approach provides broad exposure to the market and minimizes having "all your eggs in one basket." Active mutual fund managers attempt to outperform the market by choosing securities that will do well in the future and avoiding those that will perform poorly. Passive (index) mutual fund managers give up the potential to outperform the market in exchange for eliminating the risk of underperforming the market. Primarily because of their dramatically lower costs, the investment literature has consistently shown that over the long term, passively managed index funds outperform the majority of actively managed funds, especially on an after-tax basis.[47-50] When investing for the future, minimizing expenses is a fundamental principle of increasing returns.

Similar to minimizing fees, minimizing the tax liability of investments is essential to optimize long-term returns. More broadly, understanding the tax implications of financial activities is a fundamental principle of good financial health.[51] The best way to optimize investment-related taxes is through the prudent use of tax-protected accounts, such as 401(k)s, 403(b)s, 457(b)s, health savings accounts, 529 college savings accounts, and individual retirement accounts. The most common distinction is Roth versus traditional (tax-deferred) individual retirement accounts. Both accounts reduce the drag on returns from taxes during growth, but Roth account contributions and withdrawals are made after-tax and traditional account contributions and withdrawals are pre-tax. Because trainees are generally in lower tax brackets than attending physicians, the usual strategy is to make Roth contributions during training and then tax-deferred contributions during peak earnings years. When investing in a nonqualified account after maxing out retirement accounts, special care should be paid to using tax-efficient investments.

An example of simple, low-cost (ie, fees and taxes), passively managed, broadly diversified, index mutual fund portfolios is the lifecycle (target retirement) funds offered by many investment companies and available in most employer-sponsored retirement plans. These funds are automatically rebalanced and adjust their risk profile as the target retirement date approaches (Fig 2). Investing savings in these funds requires little-to-no maintenance and provides a simple approach that is preferred by many investors. As previously indicated, there are many excellent resources available that detail the nuances of simple yet sophisticated and financially healthy investing strategies.[42,46,49]

Asset protection strategy

Protecting oneself against catastrophic financial events through insurance is another fundamental principle of personal financial health.[39] Examples of financial catastrophes include disability, death, illness or injury, liability, and loss of expensive personal property. In general, we favor insuring well against these risks and self-insuring against noncatastrophic risks to save money. Using high deductibles also reduces the cost of insurance.

Disability insurance premiums are relatively expensive but essential because the ability to practice medicine is a typical physician's primary asset. Individual, specialty-specific policies are generally more costly and difficult to

qualify for than group policies, but are portable and may provide superior definitions of disability. We recommend working with an experienced, independent agent to ensure appropriate coverage at the lowest possible price.

Term life insurance, with the binary outcome of life or death, is much less complex and expensive but no less essential for those with dependents. Simple 20- to 30-year term, level premium life insurance can readily be found online through comparative aggregators and purchased from an independent agent.[52] Buying disability and life insurance while young and healthy is easier and less expensive. Whole life insurance, which combines a death benefit with an investment vehicle, can be much more costly and complex than simple term insurance. Optional at best for any physician, it is generally inappropriate for young, indebted physicians. We caution against combining insurance and investing in this manner.

For unexpected life events or expenses, an emergency fund of 3 to 6 months' worth of living expenses in a safe, accessible location is useful. This can be a buffer for life's inevitable curve balls, including short-term disability.

Estate planning should also be part of any financial plan. Estate planning dictates where children and assets go in the event of an individual's death and minimizes the hassles and cost of this transition. Consisting at a minimum of a last will and testament, many physicians also opt to have a power of attorney, living will, and various trusts in place.

Finally, and not to be overlooked, the most valuable asset we have is our mental and physical health, and devoting the necessary resources (eg, time, energy, and money) to caring for ourselves and our personal relationships (eg, marriage) should be prioritized above all else. Each of these aforementioned asset protection strategies have their own complexities, but many helpful educational resources are available.[29,39]

A Way Forward

The increasingly well-described burnout crisis among ROs and medical professionals is likely a multifactorial process, but personal financial factors, including debt loads, have been implicated as a contributing force. Increasing income is of diminishing returns for increasing happiness,[53] but robust financial health can lead to FI and may facilitate professional and personal freedoms, with the ultimate goal of mitigating burnout-associated stressors. The essential tenets of strong financial health for ROs in the early stages of their career include sound debt management and behavioral, investment, and asset protection strategies (Table 1). Initial and continuing financial education is an overlooked but important curriculum component for medical professionals, and many resources cited in this review can help in that regard. The ultimate hope is that those with their financial houses in order can devote more resources to learning and practicing good medicine while living healthy, rewarding lives.

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