**Viewpoint: Enhancing the Professional Fulfillment of Physicians**

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**Abstract**

Academic medical centers (AMCs) devote countless hours to studying the diagnosis and treatment of disease, yet little or no time to determining the factors that enhance or detract from physicians’ professional fulfillment. This is unfortunate because physicians’ degree of professional engagement, the quality of care they provide, and their tendency to burn out all depend on the fulfillment they find in work.

Indeed, if AMCs are to thrive, it is vital to understand and promote the professional fulfillment of physicians. This article reviews the sources of professional fulfillment among physicians and outlines ways to enhance it within physicians’ organizations.


**I**f academic medical centers (AMCs) are to thrive in the years to come, it is vital that we understand and promote the professional fulfillment of physicians. We must ask ourselves, What makes us feel excited about our work and motivated to do a good job? What discourages us, leaves us feeling burnt out, and perhaps even leads us to seek other career options? These are not trivial questions. When work is challenging, promotes our personal growth, and enables us to make a difference in the lives of others, our organizations, as well as our patients, students, and communities, are greatly rewarded. On the other hand, if we experience confusion, stagnation, or a lack of appreciation, we are unlikely to perform at our best, and those who depend on us may suffer.

While the term most frequently employed in the literature to describe career contentment is “satisfaction,” we believe that “fulfillment” better captures the sense of professional engagement and reward we seek to elucidate. Satisfaction merely means “enough,” but fulfillment implies completion—the thorough realization of our potential.

This article provides an introduction to the sources of professional fulfillment among physicians. We begin by reviewing lessons about the importance of professional fulfillment from industries outside health care. Next we discuss key findings from the literature on the professional fulfillment of physicians. We then consider one of the most extensively empirically validated and coherent theories of worker motivation advanced in the past fifty years, that of Frederick Herzberg. Finally, we present some practical steps that leaders in AMCs can take to enhance the motivation and professional fulfillment of our most important human resource—the physicians we work with every day.

In this article we do not delve into the impact of personal factors on the professional lives of physicians; however, we recognize that personal factors play a major role in achieving fulfillment. No matter what level of professional success we physicians may enjoy, we are unlikely to feel fulfilled if our personal lives are in shambles. Organizations seeking to enhance the professional fulfillment of their employees cannot afford to ignore the influence of personal factors on overall fulfillment.

At the very least, policies that indirectly stress the personal lives of physicians, such as promotion and compensation programs that require excessive work hours, often undermine personal fulfillment and should be avoided. The potential for workplace policies to enhance the personal lives of physicians also should be taken into account. For example, an academic department might permit physicians with significant family responsibilities to enter into job-sharing arrangements, while also allowing time and providing recognition for physicians to engage in voluntary service outside of medicine.

**Lessons from Nonmedical Industries**

Most physicians have devoted considerably more time to the study of medicine’s scientific and technical aspects than its psychological, social, and organizational aspects. Compared to business school curricula, medical school curricula tend to devote relatively little attention to such topics as motivation and work performance. Yet the future of academic medicine hinges on whether AMCs and health care organizations are led effectively, and we must be prepared to look beyond the bounds of medicine for insights into these critical leadership practices.

How seriously do leaders in nonmedical industries regard the professional fulfillment of their employees? What benefits do corporations reap through efforts to enhance worker fulfillment? What are the effects of such programs on employee turnover, costs of operation, and revenues? Do unsuccessful and successful companies differ in the importance they attach to their employees’ fulfillment?

A 1997 study from the Harvard Business School (HBS) found that the stock prices of companies that invested extensively in employee loyalty and satisfaction rose 147% over a ten-year period. This increase was almost double the increase in stock prices of their nearest
Why Physician Fulfillment Matters

Professional fulfillment among physicians has been linked to a multitude of desirable social and financial outcomes. Indeed, Haas et al. found that a physician’s self-reported satisfaction was strongly linked to patient satisfaction. Patients of physicians who rated themselves as being very or extremely satisfied with their work were found to be more satisfied with their care, suggesting that physician fulfillment affects patients’ perception of the quality of their health care. Similarly, Grembowski et al. found that patients of physicians who rated themselves as having high job satisfaction had greater levels of trust and confidence in their physicians.

Physician satisfaction has a profound effect in the practice setting and on managed care organizations (MCOs). According to Beasley et al. overall job satisfaction was highly inversely associated with turnover, and Buchbinder et al. found that physician job dissatisfaction was the most powerful predictor of physician departures. Turnover tends to create a sense of instability, requiring remaining physicians to cover a larger patient load. This may reduce patient access to care and contribute to physician burnout, while possibly triggering a downward spiral of declining morale and additional departures.

Prolonged physician dissatisfaction has also been linked to increased health problems among physicians themselves. When physicians are ill, costs to the physicians’ organizations rise further due to lost work hours, and additional demands are placed on those who remain at work.

The costs of replacing dissatisfied physicians can be exorbitant. One study estimates the total cost at approximately $250,000 per physician. Such costs are born not only by individual practices, but by whole medical specialties. Growing dissatisfaction in a medical specialty often heralds future declines in the number of physicians choosing to practice in it. As the pool of specialized practitioners shrinks, medical practices must expend more resources to attract a dwindling pool of specialists, and patient access and quality of care are placed at risk.

In MCOs, physician dissatisfaction appears to undermine efforts to make the delivery of health care more efficient. When physicians are unhappy at work within an MCO, their inclination to participate in a managed care plan is adversely affected. This, too, tends to exacerbate turnover, thereby creating additional recruiting and training costs. Similarly, patients of dissatisfied physicians are more likely to disenroll from managed care programs as a result of the difficulty they experience in forming and sustaining long-term patient–physician relationships.

Physicians’ sense of professional fulfillment is positively correlated with patients’ adherence to medication, exercise, and diet regimens. Reductions in physician satisfaction are associated with decreased patient adherence to prescribed disease prevention and treatment regimens, which places patients at risk for adverse health outcomes. Since these outcomes often bear high price tags, the long-term costs to MCOs increase.

Sources of Physician Fulfillment

The current literature provides little reason to be optimistic about the professional fulfillment of physicians. Fully 40% of young physicians state that, if given the choice, they would not go through medical school again. Twenty percent of all physicians report that they are dissatisfied with their careers. How can we explain these high rates of dissatisfaction, and what factors should we focus on to enhance professional fulfillment?

Konrad et al. elucidated ten factors that should be taken into consideration when evaluating the satisfaction of community physicians: autonomy, relationships with colleagues, relationships with patients, relationships with staff, income, resources, intrinsic satisfaction, free time away from work, administrative support, and community involvement. Similarly, Coyle et al. found that the following eight factors could be used to evaluate the work satisfaction of academic generalists: autonomy, professional relationships, compensation, clinical resources, institutional governance, professional status, teaching activities, and professional advancement.
Despite the differences in the daily routines of community and academic physicians, a similar set of factors seems to underlie work fulfillment for both. Although there is disagreement as to how much weight each factor should receive, there is broad consensus that such factors play a major role in physicians’ professional fulfillment and deserve more attention.\textsuperscript{9,17,20–24}

Decreased autonomy, which many physicians associate with working in an MCO structure, fosters a sense of being unable to care for patients adequately.\textsuperscript{21–24} This feeling of inadequacy, in turn, tends to undermine professional fulfillment. By contrast, multiple studies have found a positive correlation between physician fulfillment and the quality of relationships with staff and the surrounding community.\textsuperscript{20,22} If staff members or community members are confident about the capabilities of a physician or that physician’s commitment to the best interests of patients, physician satisfaction tends to increase.

Physician income, another factor in overall physician satisfaction, is a hotly debated topic. Some physicians, mindful of their advanced education, complex skills, and long hours, feel undercompensated, while many outside medicine believe that physicians are overpaid. The ethics of these positions are complex, but there is little doubt that income level and physician satisfaction are linked.\textsuperscript{25,17–22}

Studies show that an annual income level below $100,000 is associated with decreased physician satisfaction. As earnings rise above $100,000, physician satisfaction also rises. The positive correlation does not continue indefinitely, however; satisfaction peaks at incomes between $250,000 and $299,999.\textsuperscript{17,21} Moreover, the relationship between income and physician satisfaction is not symmetrical. Dissatisfaction rises more sharply with decreasing income than satisfaction rises with increasing income.

The situation is similar for work hours.\textsuperscript{16,17} As the number of hours worked per week increases, dissatisfaction rises at a steeper rate than the level of satisfaction increases as work hours diminish. Considering the relationship between dissatisfaction and physician turnover, the dynamics of income and work hours both corroborate an important finding of Pathman et al.\textsuperscript{20} namely, that in regard to physician retention, reducing dissatisfaction is more important than increasing satisfaction.

Geographic location, practice ownership, and age are three variables that appear to be linked to physician satisfaction, although they did not appear in either Konrad’s or Coyle’s analyses. Physicians in west north Central and New England states have higher levels of satisfaction than physicians in the south Atlantic, west south Central, Mountain, and Pacific states. These latter groups also report higher rates of dissatisfaction.\textsuperscript{17} Practice ownership can affect satisfaction as well. Physicians reporting both full ownership and a low sense of ownership had decreased levels of job satisfaction.\textsuperscript{9,17,21}

The relationship between physician age and satisfaction is bimodal. Physicians younger than 35 years of age and older than 65 years of age have higher levels of satisfaction than physicians between the ages of 36 and 64.\textsuperscript{17,21} DeVoe et al.\textsuperscript{21} found that age alone was the principal predictive factor in forecasting a physician’s level of satisfaction. Of course, if physicians become dissatisfied early in their careers, they are more likely to move to another practice or even switch professions, both of which carry financial and social costs. Since physicians between the ages of 36 and 64 also wield considerable influence over the career decisions of young people interested in medicine, broad dissatisfaction among this age group may exert deleterious effects on the entire profession for years to come.

Gender also plays a role in physician satisfaction.\textsuperscript{9,17,27–29} Although gender alone is probably not a strong predictor of professional fulfillment, it is associated with other factors related to job satisfaction. When examining patients, female physicians report experiencing greater time pressure than do their male counterparts. Female physicians also earn mean incomes approximately $22,000 less than male physicians, after controlling for other variables.\textsuperscript{28} Compared to male physicians, female physicians perceive a lower sense of control over their patient load, the selection of physicians for referral, and office scheduling.

In addition, female physicians report having more patients with complex, psychosocial problems than male physicians.\textsuperscript{28} The combination of having more complex patients and less control over day-to-day aspects of practice is associated with lower mental health indices. This may help to explain the finding of McMurray et al.\textsuperscript{28} that women physicians are 1.6 times as likely as men to report burnout.

When comparing generalists and specialists in community practice, investigators have found little difference in overall satisfaction.\textsuperscript{20,30} There are, however, differences between the two groups when it comes to satisfaction in academic practices. Primary care faculty tend to perceive fewer opportunities to advance, greater professional role ambiguity, less collegiality, and less ability to make full use of their clinical skills than do specialty faculty.\textsuperscript{20}

Disparities among specialties are also apparent. Leigh et al.\textsuperscript{17} found that in relation to family medicine, specialties such as geriatric medicine, neonatal/perinatal medicine, dermatology, and pediatrics are more satisfying, while internal medicine, otolaryngology, and obstetrics-gynecology are less satisfying. Other studies have corroborated these results.\textsuperscript{24,31–33} Psychiatrists and emergency medicine physicians also appear to have higher levels of dissatisfaction.\textsuperscript{34,35} This disparity may be explained by evidence that satisfaction is lower in procedurally oriented fields than in cognitively oriented fields.\textsuperscript{17}

A Theory of Fulfillment

How can we integrate these and other research findings into a coherent theory of physician fulfillment? Over the years, assumptions about employee fulfillment and productivity have spawned efforts to transform uncommitted workers into highly motivated ones. Unfortunately, most plans, from financial incentives to sensitivity training to counseling, have left employers shaking their heads, with no significant increase in employee motivation, satisfaction, or productivity.\textsuperscript{36}

Why? One possibility is that we have been approaching professional fulfillment
Landmark investigations performed by Frederick Herzberg and colleagues contradict this view. In 1966, Herzberg studied 203 accountants and engineers, hoping to determine what factors contributed to or detracted from their levels of work motivation. He asked two simple questions. First, “Think of a time when you felt especially good about your job. Why did you feel that way?” Second, “Think of a time when you felt especially bad about your job. Why did you feel that way?”

Herzberg found that in addressing each question, respondents did not refer to the same factors. Instead, different factors were associated with high and low levels of fulfillment. Herzberg called the same factors. Instead, different factors were associated with high and low levels of fulfillment. Herzberg called the factors invoked in response to the second question “de-motivators.” Interestingly, these tended to be extrinsic factors not essential to the work itself, including administrative policies, supervision, salary, interpersonal relations, and workplace conditions.

The factors cited in response to the first question he called “motivators,” and these were generally features intrinsic to the work itself. Motivators included the nature of the work, achievement, recognition, responsibility, and growth. Herzberg’s findings have been supported by numerous studies in diverse populations and work environments, including professional women, agricultural administrators, managers nearing retirement, hospital maintenance personnel, manufacturing supervisors, nurses, food handlers, military officers, scientists, housekeepers, teachers, technicians, women working on assembly lines, and Finnish foremen, to name but a partial list.

Herzberg found that intrinsic motivators challenged people to work more efficiently at a higher level of quality and enhanced fulfillment. If these were lacking, however, dissatisfaction tended not to increase very much. By contrast, the extrinsic de-motivators played the opposite role. When these variables were deficient, deep dissatisfaction resulted. However, enhancing extrinsic factors such as compensation and workplace conditions did little to boost performance or increase the sense of fulfillment.

Herzberg likens efforts to enhance extrinsic factors to recharging an employee’s batteries, while enhancing intrinsic factors is like installing a generator in an employee. The former strategy may produce benefits initially, but the ante will need to be raised continually to maintain the same level of performance. The strategy of focusing on intrinsic factors, by contrast, tends to be self-sustaining, enabling employees to become their own sources of motivation. Installing a generator, or attending to intrinsic factors, is the only way to ensure long-term and potentially permanent improvements in performance and fulfillment.

When extrinsic factors such as monetary bonuses and new offices are used to reward improved performance, the extrinsic incentives tend to shift our attention away from inherently fulfilling aspects of work. As a result, we feel less of an internal dedication to excellence. Employees begin to depend on the extra income, and if it is ever removed, or if further raises are ever withheld, they experience it as a punishment rather than a mere return to baseline. According to Herzberg, no amount of attention to extrinsic factors will enhance employees’ professional fulfillment or performance beyond the average. In order to achieve greater enhancements, employees must focus on the intrinsically rewarding aspects of work.

Enhancing Physician Fulfillment

Herzberg’s approach provides the foundation of a strategy for fostering physician motivation and fulfillment. First, we need to identify those positions and aspects of work where changes won’t be too costly, attitudes are poor, the costs of de-motivation are becoming expensive, and increased motivation and fulfillment would make a substantial difference. Certainly these features apply to many facets of academic medicine.

Second, we need to understand and accept that the nature of our work itself may have to change. Leaders often do not immediately recognize that the content of work and the way it is performed can or should be changed. Fortunately, the rapidly evolving nature of contemporary medicine has accustomed physicians to the necessity for change.

Third, we need to brainstorm a list of alternative approaches to enriching work. Herzberg recommends that we do so initially without regard to practicality, cost, or time. Later, we can return to the list and weed out ideas that are too costly or impractical. Finally, we need to eliminate suggestions that focus on extrinsic, de-motivating factors, such as financial bonuses.

In increasing professional responsibility to make a position more fulfilling, Herzberg favors “vertical loading” of responsibility, rather than “horizontal loading.” Horizontal loading augments relatively meaningless aspects of a job, resulting in a decreased sense of personal contribution and fewer opportunities for professional growth. Examples of horizontal loading include increasing production requirements, adding fruitless tasks, rotating job assignments, or removing the most challenging components of the job. It’s like starting with zero and then multiplying by, adding, or subtracting another zero. The result, of course, is still zero.

By contrast, vertical loading involves increasing the intrinsically motivating features of work, such as responsibility, recognition, and achievement. Examples of vertical loading include increasing personal accountability, additional authority, fruitful new tasks, and encouragement to develop expertise in a certain area. Unlike horizontal loading, the end result of vertical loading can be enhanced fulfillment.

Once we finalize our list of options for enhancing the intrinsically motivating features of work, Herzberg suggests that we start implementing them in a small, experimental group. By using an experimental group we can closely assess changes in performance, motivation, and sense of fulfillment. To gauge these changes, pre- and post-intervention evaluations should be conducted. In order to avoid confounding effects, extrinsic, de-motivating factors should remain unchanged. It is important to anticipate that drops in performance and fulfillment may occur during the first few
weeks of an intervention, as people acclimate to the new system. Administrators may find it especially difficult to adjust to the new system, because of anxieties about short-term declines in performance. They may also feel as though some interventions are undermining their responsibilities. Over time, however, the rise in physician motivation and fulfillment will be accompanied by a concurrent increase in productivity and quality. With anxieties allayed, administrators may find that they have more time to attend to core managerial and supervisory functions, thus enhancing their own performance and sense of fulfillment.

Because the specific sources of physician fulfillment vary widely among different groups of physicians and practice settings, a universally applicable master list of interventions is impossible to compile. The first priority in every case, however, is to accentuate the intrinsically rewarding aspects of the work. Above all, we need to feel that we have made a real difference in the lives of others.

As medicine has become more compartmentalized, there is a danger that this source of deep fulfillment is becoming less apparent. For example, reducing face-to-face contact between physicians and patients weakens their relationship and with it physicians’ sense that we are making a real difference. To increase the fulfillment of academic physicians, we need to ensure that the intrinsically fulfilling aspects of the work are accentuated, not suppressed.

Other fundamental factors related to physician fulfillment are growth and recognition. Given the length and rigors of medical education, as well as the vital role of lifelong learning, there is little doubt that physicians must be committed to ongoing intellectual growth. In focusing on the acquisition of knowledge and skills, however, we must not neglect personal and professional growth.

Physicians should be encouraged to become involved with organizations and service opportunities that expand their personal and professional horizons, rather than to consider voluntary service a detriment to efficiency and productivity. Such service opportunities might include teaching Sunday school, serving on the board of a school corporation or community service organization, or providing free medical care in a medically underserved community at home or abroad.

Few opportunities for growth are as valuable as truly constructive criticism, and few things contribute more to professional fulfillment than earnest appreciation and praise. When Austin Regional Clinic implemented a form of peer review and feedback focused on promoting fulfillment, their annual physician turnover rate dropped from 8% to 3%. A structured forum for addressing and correcting problems, as well as recognizing improvements, offers immense intrinsic motivation.

**Conclusions**

We ignore the subject of physician fulfillment at our peril. For academic medicine to thrive in the coming years, we need to attend more carefully than ever to the factors that enhance and detract from the quality of work we do. If we operate with a clear understanding of the psychology of professional fulfillment and the various organizational strategies that foster it, we can promote a powerful sense of fulfillment among physicians. This, in turn, can help to rekindle the noble aspirations that drew us to careers in medicine in the first place.

**References**


I was not the typical internal medicine intern in some ways. I was relatively young and from the start of my medical career I knew that I was interested in a career in public policy. I had already spent two summers as an intern on Capitol Hill during college, and I knew that it was not likely that I would take a traditional career pathway in medicine. While at Michael Reese, I had begun to explore attending either law school or a doctoral program in health policy. I was miserable, and had begun to regularly complain to my classmates and attending residents that internal medicine was not for me. Every day I asked myself why I was putting up with the grueling internship and the prospect of two more years beyond that when I was already heading toward a career in which I would probably not practice medicine in the traditional sense. Somehow the word got back to Jordan, and that was what prompted the call to meet.

I don’t recall the details of the discussion, but I do remember that Jordan started off with a general question about how I was dealing with the stress of internship. At this point, I had made up my mind to leave, but I thought I would be polite and listen. Jordan asked me about my career goals. When I told him that I was headed toward a career in health and science policy, he did not miss a beat. He talked about the potential impact I could have as an intern in public policy and went on to lay out why he thought completing residency would provide important experience and credibility for a career in health policy. Somehow I left that meeting surprising myself by agreeing to stick it out a bit longer in the program.

As often happens in circumstances like this, the ‘I’m-not-putting-up-with-this-anymore moment passed. Throughout my residency, Jordan continued to demonstrate his support for my unusual career path. In my senior year of residency, he allowed me to complete an unusual elective rotation with the policy office of the American College of Physicians in Washington, DC, an experience that reinforced my desire to pursue a career in policy. I completed the internship and the residency, and Jordan was always on my list of mentors I stayed in touch with as I moved along in my career. He encouraged me when I applied to the Robert Wood Johnson Clinical Scholars program and again when I applied to the graduate program of the Wharton School at the University of Pennsylvania. After completing my fellowships and graduate school, I went on to the RAND Corporation and later to the Centers for Disease Control and Prevention. When I became deputy director of the National Institutes of Health and Jordan was president of the Association of American Medical Colleges, I was delighted to be in regular contact with him again. In the health and science policy community in Washington, Jordan is uniformly respected for his ability to bring constituencies together in the interest of the public—an extraordinarily valuable and rare skill within the Beltway these days.

I recently ran across my internship class photograph with Jordan seated in the middle of the front row. It reminded me that Jordan was what so many of us wanted to be when we grew up—a compassionate physician, an excellent teacher, a skilled researcher, an active member of the broader medical community—and on top of all of that, he had this cool Omar Sharif thing going on. I know that I was not the only intern in our class to receive a call for a well-timed one-on-one conversation that had a lasting impact. We all chose different careers paths, but we all benefited from his leadership, his mentorship, and most importantly, his standard of excellence—though none of us ever became quite as cool as Jordan.

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