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EDITORIAL

The "scope" of moonlighting during gastroenterology fellowship

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Moonlighting, or the practice of medicine in a secondary job in exchange for compensation, during residency and fellowship training has remained a polarizing topic for decades. While a PubMed search for moonlighting reveals a handful of reviews and surveys on the matter, most of which apply to moonlighting during residency, to date, there are no published reviews examining moonlighting during gastroenterology fellowship. While the burden of student debt, duty-hour regulations, and motivations for moonlighting have evolved over the years, we examine the pros and cons for moonlighting during gastroenterology fellowship.

While one of the key arguments against moonlighting during training centers around patient safety and unsupervised practice of a trainee,[1] gastroenterology fellows represent a unique subset within the topic of moonlighting. While GI fellows are still in training, they have completed residency and are board certified in internal medicine. Fellowship represents a peculiar juncture between being board certified and greenlit for independent practice in internal medicine, while still training in a subspecialized field of medicine. The dichotomy of being board certified while still being a trainee raises key questions regarding fellows' ability to practice independently in their certified field and have autonomy over their work schedule, while still fulfilling the obligations of their training program.

Perhaps the most obvious, and commonly reported reason fellows elect to moonlight during training is for the financial benefit.[2,3] The rising cost of both an undergraduate and medical school education has steadily increased over the past several decades, outpacing inflation.[4] According to the Association of American Medical Colleges (AAMC), the amount of debt for medical school graduates has steadily increased to a median of $200,000 in 2019.[4] A survey of internal medicine residents found that more than half had insufficient funds to purchase textbooks and work-related expenses.[3] Additionally, major life events such as marriage and having children often occurs during this time in training. While the federal student loan forbearance program as a response to the COVID-19 pandemic has offered some temporary reprieve to indebted fellows, overall deferment periods for student loans have been cut by federal legislation, as borrowers are required to begin loan repayment early on in residency.[5] The Biden administration's recently announced loan forgiveness policy, providing up to 10,000 USD in debt cancellation for non-Pell Grant recipients and up to 20,000 USD to Pell Grant recipients, may also provide some relief to many fellows. However, the full extent of this policy remains to be seen, and current litigations have the policy stalled. Compound the financial constraints with the 3 to 4 additional years of deferred financial gratification, as well as the burden of the additional cost of board examinations and licensure fees, and it is not hard to rationalize why many trainees are looking for ways to supplement their income.

Proponents of moonlighting argue that it reduces financial hardship and stress, as higher levels of educational debt have been shown to be correlated with depressive attitudes, increased cynicism, and higher rates of burnout.[3,6] This is further evidenced by the fact that moonlighting activities during training have reproducibly been correlated with indebtedness, loan payments, and number of dependents.[3,5,7] Prior surveys have noted that the extra income generated from moonlighting is typically not used for self-indulgent expenditures, but rather used to pay educational debts and maintain a

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reasonable standard of living.[8] Collectively, all these mounting financial pressures without the relief valve of moonlighting may detract from a fellow's ability to focus on their training.

Gastroenterology remains as one of the highest earning potential subspecialties within internal medicine, with a remarkable difference in salary in private practice versus academia. A survey of anesthesiology residents from 2012 found that survey participants with larger debt burdens were less likely to choose to go into an academic career.[9] This phenomenon can likely be expanded beyond anesthesiology and may be even more pronounced within gastroenterology, given the large discrepancy in income potential, though to date this remains unexamined in the literature. As of 2019, there were 15,469 active gastroenterologists in the United States. Of those, 475 (only about 3%) were dedicated to teaching or research[10] and tasked with educating the 514 filled first-year GI fellowship positions.[7] There is a continued need for more gastroenterologists in academia and limiting or restricting moonlighting thereby increasing debt burdens may dissuade some fellows from choosing a career in academic medicine.

Extending beyond the financial incentives, surveys have noted that trainees value the educational merit and the ability to maintain skills in internal medicine as an equivalent motivation to moonlight.[11,12] Moonlighting permits for more independent decision making and autonomy which may challenge fellows to recognize deficiencies in their medical knowledge and stimulate them to read on those topics. Having a strong foundation in internal medicine is a key tenet in gastroenterology, and moonlighting may help to provide that outlet to supplement learning during training and bolster internal medicine knowledge.

Fellowship programs are ultimately left to decide their own moonlighting policies under the guidance of the Accreditation Council for Graduate Medical Education (ACGME). The ACGME policy states that moonlighting must not interfere with the fellow's ability to achieve the educational objectives of the program, cannot interfere with a fellow's fitness for work, compromise patient safety, and that moonlighting hours must be counted towards duty-hour restrictions.[13] Collectively, these are perhaps the most widely cited criticisms of moonlighting during training. Programs should be aware of these guidelines and recognize that there is a financial disincentive for fellows to accurately disclose moonlighting hours. While many moonlighting hours may be conducted internally where there may be more oversight and accountability, many gastroenterology fellows engage in external moonlighting at other facilities and are expected to self-report their moonlighting hours. Fellowship programs should recognize that a fellow's incentives may be discordant with a program's long-term objectives. However, it is worthwhile to mention that an all-out prohibition of moonlighting in an attempt to embolden fellows to focus more on gastroenterology may compel indebted fellows to conceal their moonlighting activities, undermining faculty-fellow relationships, which has been observed in other training fields.[5]

The notion that moonlighting will interfere with training is a widely held criticism of moonlighting amongst program directors.[5] While it is conceivable to deduce that excessive moonlighting would distract from the time a fellow has to read, there are currently no data to support this, or even the idea that moderate moonlighting would have such an effect. Jamshidi *et al* demonstrated in a survey of surgery residents during their research month that some residents reported a reduction in research productivity as a result of moonlighting. The authors concluded that this represented a minority of survey participants, there was no consensus amongst survey respondents, and that this is an area of investigation that warrants ongoing research.[11] This finding is largely consistent with the rest of the literature that has minimized the time taken away from reading against the inherent upsides that moonlighting affords residents and fellows[8].

The additional work hours and its effect on physician wellness is another commonly held criticism of moonlighting. Adding elective work hours to an often already demanding schedule may result in a tradeoff with sleep. Inadequate sleep has been linked to deficiencies in attention, memory, decision-making, mood, and motor skills[14,15]—all vital components to the practice of gastroenterology. Valuable experiences in training however often occur during supplemented exposures that challenge fellows outside of their normal working environment. This in turn creates an inherent dilemma; sleep loss may blunt a fellow's capacity to consolidate medical knowledge and retain information, yet exposure to meaningful experiences outside of a fellow's normal operating margins can enhance the educational experience. Since the ACGME's implementation of the policy limiting duty-hours to 80 hours per week averaged over 4 weeks went into effect in 2003, there has been an added emphasis on wellness and limiting the arduous working hours undertaken by previous generations of physicians. If unregulated without the proper oversight to ensure fellows are logging working hours accurately, moonlighting could arguably disrupt an already delicate system.

Moonlighting has unquestionable advantages for gastroenterology fellows during training. Reducing a fellow's debt burden may reduce stress and allow fellows to maintain a reasonable standard of living. Moonlighting also affords valuable educational experiences that can enhance a fellow's training and

foster personal growth and autonomy in preparation for unsupervised practice. This of course, must be carefully balanced against the backdrop of achieving the educational objectives of a fellowship program. Training programs must carefully understand the individualized needs of their fellows while preparing them for an evolving future in medicine amongst chaotic health policy changes. There is likely no "one-size-fits-all" blanket policy, but rather programs will need to tailor their moonlighting practices and policies towards balancing their fellows' needs within the framework of the educational model.

DECLARATIONS

Conflict of interest

The author declares no conflict of interest.

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