

Orthopedic Master's in Business Administration: A career path analysis

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Abstract

In recent years, it has become increasingly important for physicians to understand the healthcare system holistically. Thus, some physicians have sought formal education in business through a Master's in Business Administration (MBA). In this study, we looked specifically at orthopedic MD-MBAs and their career trajectories. We conducted a cross-sectional study of 127 orthopedic surgeons who have both MD and MBA degrees. Through online searches and phone calls, we compiled information regarding years in practice, fellowship training, practice type, non-clinical roles, and business school education. Almost all (96.85%) orthopedic MD-MBAs identified are still practicing clinically. The most common nonclinical roles are administration (38.58%), industry consulting (20.47%), and entrepreneurship (11.02%). Most (65.35%) pursued MBAs after medical school, but dual-degree programs are increasing in popularity. Almost all (88.57%) graduates of such programs have been practicing for less than 15 years. Orthopedic surgeons participate in a variety of nonclinical roles including administration, consulting, and entrepreneurship. For those currently in training, it is important to recognize the many opportunities that exist and the potential paths to pursuing them.

Introduction

Background

Due to the ever-changing healthcare landscape, it has become increasingly important for doctors to understand the healthcare system holistically. Thus, some medical schools, in an effort to mold more

well-rounded physicians, have adopted introductory business courses into their curricula.¹ Some students, who are especially interested in the business of healthcare, pursue dual-degree MD/MBA programs, which now exist at over half of all accredited allopathic medical schools. This is a drastic change from 1993 when only six such programs existed.^{2,3} Alternatively, physicians may choose to pursue MBAs after their training through Executive MBA programs. To successfully navigate all the opportunities that exist today, it is important for trainees and practitioners interested in pursuing an MBA to understand how the degree can affect their future career prospects.

MBA Education to Address Growing Healthcare Complexities

As a result of shifting healthcare reform, the US healthcare system is very dynamic and complex. To counteract these complexities and navigate the layered regulations imposed on the them, physicians are assuming nonclinical roles, dissolving structural boundaries and working across silos to enact positive change.⁴ While in the past, hospitals were primarily managed by physicians, less than 3% of leadership roles in hospitals are held by physicians today. By pursuing formal educations in management, many physicians hope to reclaim these leadership roles and bridge the divide between healthcare providers and administrators.^{5,6}

The Master's in Business Administration (MBA) Education

A Master's in Business Administration (MBA) is widely considered to be the apotheosis of business education. For physicians, having an MBA means having the business acumen needed to analyze the healthcare system holistically.⁷ Additionally, an MBA education includes the development of strong communication and leadership skills, which are equally applicable to the operating room as they are the boardroom.^{7,8}

Stigma Against MD/MBA Education

At one time, an education in management was considered irrelevant to the practice of medicine and excellent medical knowledge was above reproach. In fact, for many years, there existed, and to an extent still exists today, a stigma against physicians who pursued business education. This is because medicine, at its core, is focused on the good of the patient while business, is focused on the good of the company. Physician-MBAs were thought to have nefarious intentions and criticized for being overly concerned with monetary gain.⁹

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Changing Perspectives on MD/MBA Education

One recent study found that MD/MBA graduates view themselves as doctors first and generally act in favor of the patient.¹⁰ According to a survey done by Parekh and Singh, the primary motivations for pursuing an MBA include learning the business aspects of the health-care system (67%), obtaining a more interesting job (52%), and surviving better in a new system (47%). Only 25% reported enhancing their salary as a motivating factor. Benefits reported by physician-MBAs include evaluating systems operations and implementing improvements, learning how to be an effective leader, comprehending financial principles, working within a team, effective negotiations, career acceleration, professional flexibility, credibility in multidisciplinary domains, management skills, communication skills, and decision-making skills.⁵⁻⁷ Evidence suggests that physicians-MBAs were positively affected by their MBA education and would recommend it to other physicians.⁵⁻⁷ The only commonly reported reservation was opportunity cost.⁶

Purpose

The purpose of this study is to elucidate the career trajectories of orthopedic MD-MBAs and provide more insight for current and future physicians interested in pursuing a Master’s in Business Administration (MBA).

Materials and Methods

We conducted a cross-sectional study of orthopedic surgeons with both MD and MBA degrees. Through online searches we identified 146 potential participants. For inclusion in the study, participants were required to provide information regarding secondary degrees, gender, years in practice, non-clinical roles, current status of clinical practice, practice type (academic vs private), fellowship training, business school attendance, practice setting (urban vs. suburban vs. rural), and geographical location. To gather missing information not found online, we made phone calls directly to participants or their clerical staff. For 19 orthopedic surgeons, complete data were unattainable. These surgeons were excluded from participation in the study, leaving 127 orthopedic MD-MBAs that fit our criteria. To compare the overall prevalence of fellowship training between our population and the general population from 2003 to 2013, we used a chi-squared analysis in SPSS. To compare specific fellowship training among the two populations, we used a one-way ANOVA test. This time period was chosen, because the required data was publically available.

Results

In the sample of the 127 orthopedic MD-MBAs, 123 (96.85%) are still practicing clinically. Years in practice ranged from 0-5 years (17.89%), to 6-10 years (20.33%), to 11-15 years (14.63%), to 16-20 years (13.01%), to 21+ years (34.15%). Almost all orthopedic MD-MBAs (97.56%) are fellowship trained and seven are double-board certified. Fellowship training includes sports (22.76%), spine (20.13%), joints (17.07%), trauma (9.76%), oncology (1.63%), pediatrics (8.13%), hand & upper extremity (10.57%), shoulder & elbow (5.69%), and foot & ankle (7.32%) (Figure 1). Using a chi-square analysis comparing orthopedic MD-MBAs to all orthopedic surgeons who graduated between 2003 and 2013, a significant difference was found with regards to fellowship sub-specializa-

tion ($\chi^2=8.244, P=0.004$). While 100% of orthopedic MD-MBAs who graduated in this time period pursued fellowship training, only 82.5% of the general orthopedic population pursued fellowship training. Only sports showed a proportionally lower percentage of orthopedic MD-MBAs (Figure 2). Using a one-way ANOVA test, no significant differences were found in subspecialty training between our sample and the general orthopedic population ($F=0.420, P=0.882$).¹¹

According to the AAOS 2016 Orthopedic Surgeon Consensus, 93.4% of practicing orthopedic surgeons were male.

Comparatively, 96.06% of our sample is male.

Based on the US Census guidelines, distinct regions were established. The Northeast (33.33%) and South (35.77%) demonstrated a greater prevalence of orthopedic MD-MBAs compared to the Midwest (18.70%) and West (12.20%) (Figure 3).¹²

Furthermore, significantly more orthopedic MD-MBAs practice in urban (67.48%) settings compared to suburban/rural (32.52%) settings. Urban settings were defined as greater than or equal to 100,000 people, while suburban/rural settings were defined as less

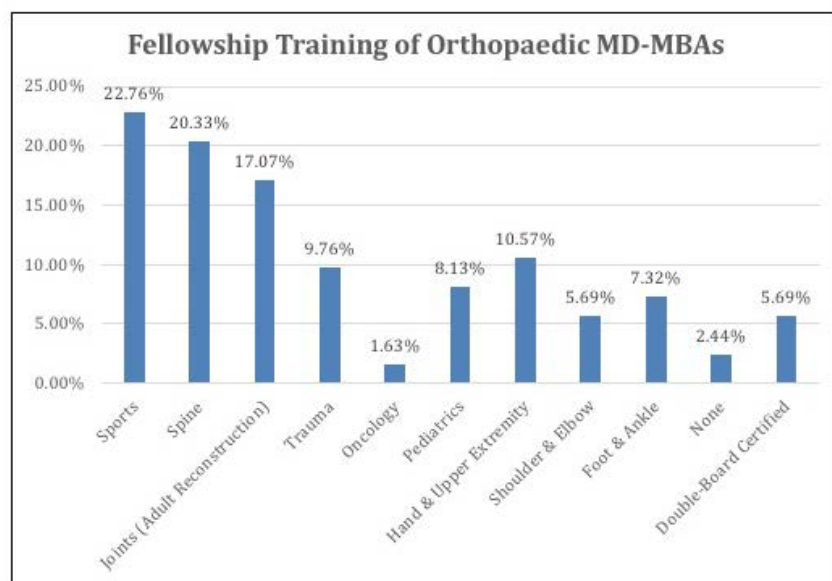


Figure 1. Fellowship training of 127 orthopedic MD-MBAs included in this study (5.69% are double-board certified).

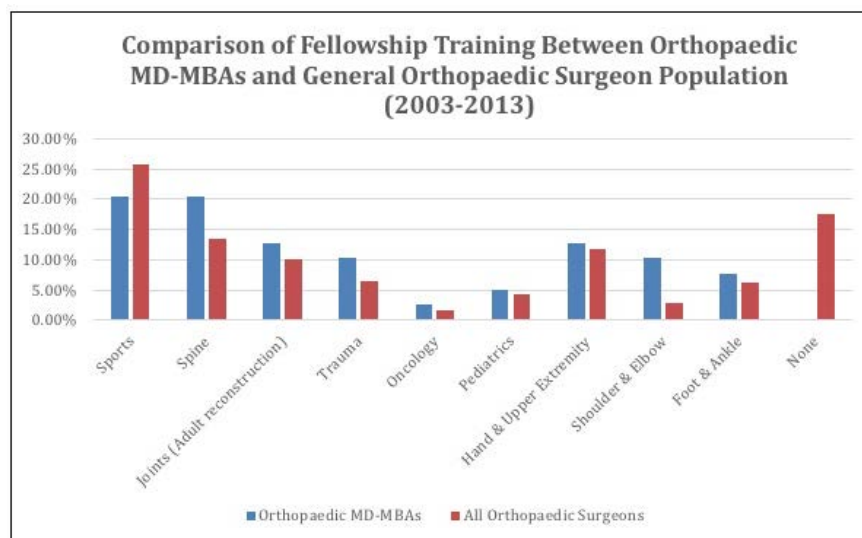


Figure 2. Comparison of fellowship training between orthopedic MD-MBAs and general orthopedic surgeon population between 2003 and 2013.

than 100,000 people. There is no significant difference between private practice (52.85%) and academic practice type (47.15%).

Orthopedic MD-MBAs prepare themselves to perform a variety of non-clinical roles, which were observed in our study group. Almost all of the orthopedic MD-MBAs in our study (81.09%) were involved in at least one nonclinical pursuit. These include administration (38.58%), industry consulting (20.47%), entrepreneurship (11.02%), venture capital/investing (3.94%), non-profit (3.15%), insurance (1.57%), health policy (1.57%), and medical-legal (0.79%) (Figure 4).

Of the 127 orthopedic MD-MBAs, many pursued MBA degrees during medical school (34.65%) either through formal dual-degree MD/MBA programs (27.56%) or at separate institutions (7.09%) (Figure 5). Of the 35 MD/MBA dual-degree program graduates, 31 physicians (88.57%) have been practicing for less than 15 years and 26 physicians (74.29%) have been practicing for less than 10 years. Overall, most current orthopedic MD-MBAs pursued the MBA degree after medical school (65.35%) either during residency/fellowship (3.94%), within their first 10 years in practice (29.13%), 10 to 20 years in practice (22.05%), or 21+ years in practice (10.24%). However, of those with 15 or less years in practice, more than half are graduates of dual-degree MD/MBA programs (54.68%).

Discussion

Demographics of Orthopedic MD-MBAs

In our study, of the 146 orthopedic MD-MBAs identified, almost all (96.57%) were male (96.57%). This is consistent with the higher prevalence of men in the general orthopedic population, MD/MBA population, and MBA population. AAOS 2016 Orthopedic Surgeon Consensus stated that 93.4% of orthopedic surgeons were male. According to a recent study, there is also a male predominance in MD/MBA dual-degree students (72% male to 28% female) and applicants (76% male to 24% female). This is consistent with the general overrepresentation of males in MBA programs across the United States.¹⁰ Similar studies focused on MD-MBAs in other medical specialties, such as ophthalmology and plastic surgery, have also shown large gender discrepancies (80% male and 95% male, respectively).^{5,13} Of the 127 orthopedic MD-MBAs included in our study, 123 (96.85%) are still practicing clinically.

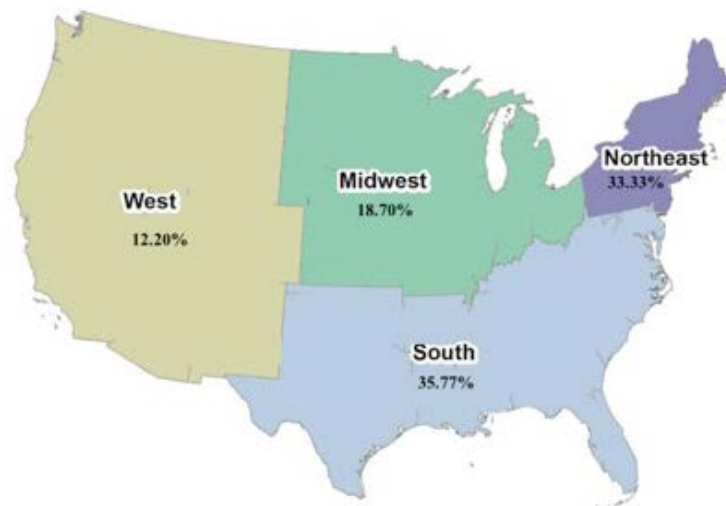


Figure 3. Regional distribution of orthopedic MD-MBAs.

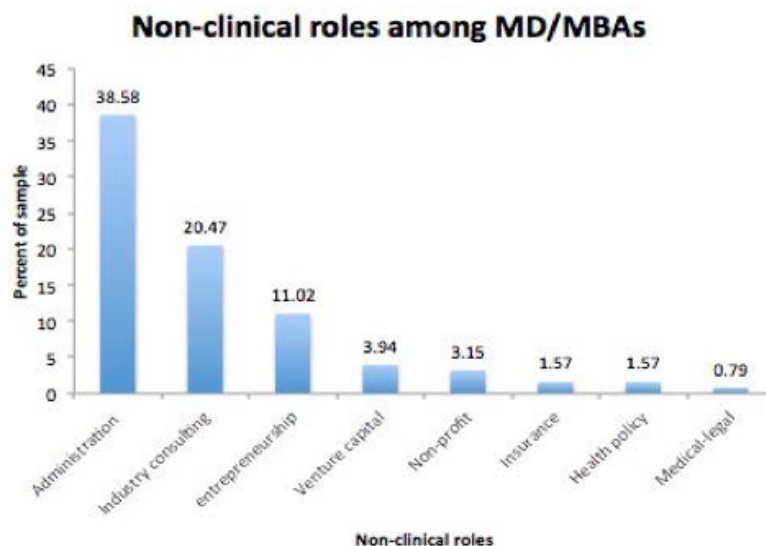


Figure 4. Percent of non-clinical roles among sampled orthopedic MD-MBAs.

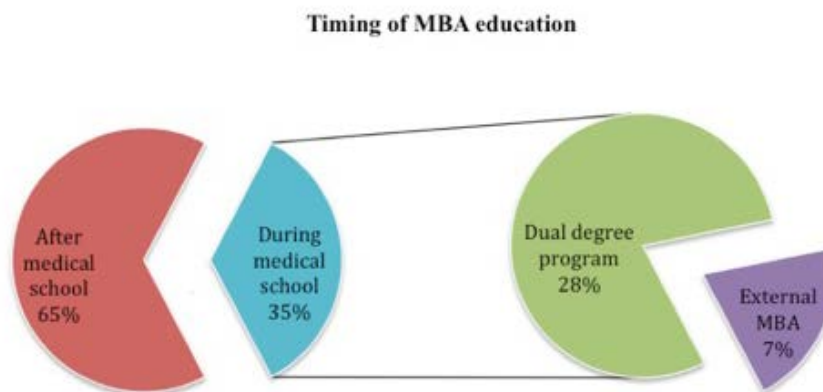


Figure 5. Timing of MBA education of orthopedic MD-MBAs.

However, recent studies have shown that this is not the case in all medical specialties. In fact, two recent studies conducted at the University of Pennsylvania and Harvard University showed that only 80% and 72% of MD/MBA dual-degree program graduates at their respective institution pursued residency following their medical and business education.^{6,14} Similarly, one recent survey of plastic surgeons showed that 21.1% of MD-MBAs in plastic surgery changed their career following their MBA.⁵ Another study conducted via Internet search of 120 ophthalmologic MD-MBAs showed that 92% are still practicing clinically.¹³ While this is significantly higher, it is still lower than the percentage of orthopedic MD-MBAs who are practicing clinically. It is possible that this is due to the high satisfaction rates of orthopedic surgeons in their career. According to a recent study of orthopedic surgeons, 88% of respondents reported that they were either very satisfied or moderately satisfied with their jobs.¹⁵ Another study of orthopedic trauma surgeons showed that the majority (83.7%) of them look forward to going to work 3 out of 4 days of the week and that almost all (90.9%) would choose orthopedic trauma surgery as a career again.¹⁶

Distribution of Orthopedic MD-MBAs

The distribution of orthopedic MD-MBAs for both geographic practice type (urban vs. rural/suburban) and region (Northeast, South, Midwest, West) mirror those of the general orthopedic population. In fact, the urban-rural discrepancy for orthopedic surgeons has existed for decades. According to one study in 2010, there were 238 orthopedic surgeons per 100,000 people in rural settings and 336 orthopedic surgeons per 100,000 people in urban settings.¹⁷ However, this discrepancy between access to orthopedic care in rural and urban settings is even greater than that which is indicated by these statistics, because a population of 100,000 in rural settings is more spread out than one in urban settings.

Fellowship Training of Orthopedic MD-MBAs

Almost all (97.56%) of the orthopedic MD-MBAs in our study completed fellowship. Comparatively, only 90% of all orthopedic surgery residency graduates completed fellowship in 2013.¹¹ This may be due to a greater commitment to education in our study population and different career aspirations. Interestingly, the only fellowship that was underrepresented in the orthopedic MD-MBA population compared to the general orthopedic population was that of

sports medicine. It is possible that this is due to small sample sizes and not truly representative of the entire population. Future studies should investigate any potential association between fellowship and the decision to pursue an MBA.

Timing of MBA Education of Orthopedic MD-MBAs

The timing of the MBA education for orthopedic MD-MBAs has drastically changed over time. While the majority (63.35%) of orthopedic MD-MBAs pursued the MBA after medical school, it has become more common for medical students to pursue an MBA during medical school through MD/MBA dual-degree programs. In fact, of all orthopedic MD-MBAs who have 15 or less years in practice, more than half (54.68%) are graduates of dual-degree MD/MBA programs. Alternatively, a small minority of medical students may choose to pursue an external MBA during medical school, not part of a formal dual-degree program. This usually occurs, because the student's home institution does not have a dual-degree program or because an external MBA would be better suited for the student's specific goals. Furthermore, we found that 88.57% of dual-degree program graduates have been practicing for less than 15 years and 74.29% have been practicing for less than 10 years. This can be attributed to the increase in popularity of dual-degree MD/MBA programs and the fact that they now exist at over half of all accredited allopathic medical schools. For those who pursued an MBA after medical school, the most common time to pursue the MBA was within the first 10 years in practice (29.13%) or 10-20 years in practice (22.05%). This is likely due to their desire to assume non-clinical or leadership roles early in their career. It was less common for physicians to pursue an MBA after 21+ years in practice (10.24%). This is likely due to a decrease in perceived benefits later in their career and because those interested might have already pursued the MBA earlier. It is very rare (3.94%) for orthopedic surgeons to pursue the MBA during residency or fellowship. This is likely due to decreased time and the need to focus on surgical training early in their career.

Non-Clinical Roles of Orthopedic MD-MBAs

By gaining an education in business, orthopedic MD-MBAs are poised to assume non-clinical roles in orthopedics. The most common non-clinical pursuit is administrative work. Multiple studies have found that having an MBA degree tends to shift time away from clinical work and towards administrative responsibilities.^{6,7} Our study

found various other non-clinical roles that orthopedic MD-MBAs pursue. These include industry consulting, entrepreneurship, venture capital/investing, non-profit management, insurance, health policy, and medicolegal work. Similar distributions have been found in other medical specialties, such as ophthalmology, plastic surgery, and anesthesiology.^{5,9,13}

As healthcare evolves over time, it will be very important for orthopedic MD-MBAs to be involved in non-clinical roles, while maintaining their clinical practice. By doing so, they will remain up to date in their clinical knowledge as they influence the future of the orthopedics.

Limitations

There are several limitations to our study as a result of our study design. Online searches and phone calls were used to gather physician information. It is possible that information online is not accurate or up to date. Also, phone calls were only used in certain situations when complete information was not present. This could result in bias, because phone calls were only made to select physicians and not all of them. Furthermore, despite our best efforts to attain a diverse, representative sample of all orthopedic MD-MBAs, it is possible that our geographic location, based out of the Northeast, impacted our Google searches and hence, our study group selection process.

Conclusions

Today, the healthcare system is too complex to be navigated intuitively. Due to increasing economically-driven pressure and external evaluation, physicians can no longer rely solely on their medical knowledge to optimize their ability to practice medicine. Therefore, physicians are increasingly looking to gain concrete business skills to navigate the healthcare landscape and maintain their autonomy.^{8,18} Through an MBA education, physicians seek to gain not only foundational knowledge of core business concepts, but also intangible growth in skills such as leadership and team-building.¹⁸ These skills will not only prepare them to become health system leaders, but also improve their daily clinical communication skills and ability to lead healthcare teams.

Orthopedic MD-MBAs generally maintain their clinical career, while participating in a variety of nonclinical roles including administration, consulting, and entrepreneurship. With the growth of MD/MBA dual-degree programs, orthopedic surgeons

are now increasingly pursuing MBA degrees to help them develop more balanced approaches to solving challenges within the field. For those currently in training, whether at the medical student, resident, or fellow level, it is important to recognize the opportunities that exist and the potential paths to pursuing them. This knowledge will allow them to pave their own paths to success and one day, leave their own impact on orthopedic surgery.

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