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The Role of Dual Degrees in the Physical Therapist Education Program at Emory University

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Background and Purpose. The increasing complexity of medical care in the United States calls for providers to become leaders in various aspects of health care. Combining clinical skills with knowledge of public health and the business/administrative side of health care allows health care providers, including physical therapists, to effectively manage and navigate the changing health care environment and become leaders in their field. The purpose of this paper is to describe the method and process of successfully establishing dual degree programs in business and public health and in the physical therapist education program at Emory University.

Method/Model Description and Evaluation. The process for institutional level agreements, curricular structure, admis-

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sions process, and graduation requirements for dual degree program students in the Doctor of Physical Therapy (DPT) and Master of Business Administration (MBA) or Master of Public Health (MPH) at Emory University is described in this paper. Additionally, 2 surveys were conducted: 1 survey of all students in 3 DPT classes (n = 201) and the other survey of dual degree program graduates as of 2013 (n = 8). The surveys evaluated student awareness of the dual degree programs during the DPT program application process and characteristics and perceptions related to the dual degree programs.

Outcomes. Eighty-three percent of all students indicated that they were aware of the dual degree programs while applying to our DPT program and 6% indicated it was a key deciding factor in their decision to apply to our program. The graduating grade-point average (GPA) and first time pass rate on the National Physical Therapy Exam (NPTE) licensure of the dual degree students in the DPT program is at least equal to that of the overall DPT class graduating the same year. Moreover, 86% of dual degree program graduates indicated that it made them a more competitive job candidate.

Discussion and Conclusion. In addition to fostering interprofessional education, the dual degree programs at Emory show positive outcomes, as all graduates indicated that their dual degree positively impacted their careers, and the majority reported specifically using their dual degree in their career. Also, the graduating GPA and first time pass rate on the NPTE of the dual degree students in the DPT program is at least equal to that of the overall DPT class graduating the same year, suggesting that the burden of an additional course of study was not adversely impacting their performance in the DPT program. At Emory University, the dual

DPT/MBA and DPT/MPH programs have been designed to provide students with the necessary clinical, business, administrative, policy analysis, and public health perspectives required to excel as leaders in the future health care system.

Key Words: Dual degree programs in physical therapist education, Master of Business Administration, Master of Public Health.

BACKGROUND AND PURPOSE

According to the World Health Organization (WHO), interprofessional education (IPE) is an experience that “occurs when students from 2 or more professions learn about, from, and with each other.”¹ The increasing complexity of health care within the United States (US) compels interprofessional education to extend beyond other health professions to include disciplines of public health and business. One longstanding model for interprofessional education is dual degree programs.

Several allopathic medical schools in the US offer joint degree programs combining the medical degree with such degrees as the Master of Business Administration (MBA) and Master of Public Health (MPH). The availability of Doctor of Medicine (MD)/MPH and analogous programs has grown from 35 in 1994 to 64 in 2004 and to 81 in 2010. The MD/MBA programs followed a similar trend. In 1994, only 13 MD/MBA programs existed. In 2004, 42 programs existed, and in 2010, 52 medical schools offered an MD/MBA degree.^{2,3} Schools of nursing and pharmacy have also established joint degree programs, combining the Master of Science in Nursing (MSN) with an MBA and the Doctor of Pharmacy (PharmD) with an MBA.⁴⁻⁶

The necessity of training health care providers in these dual arenas of business or public health has been argued in a number of studies. For instance, Baker and Daginawala discuss how clinical, financial, and regulatory considerations of health care require that

physicians must acquire leadership skills if they wish to assume managerial roles.² The authors posit that these skills will be widely applicable in every stage of the clinicians' careers and that the skills can be gained by matriculation in MBA or MPH programs. Pearson and Stebbins describe that health care professionals who possess knowledge in both clinical and administrative aspects of the health care industry can become an essential link between the medical staff and the management team.⁷ Within the changing health care system, there is a high demand for physician leaders who have been trained to operate in an environment that demands both the delivery of high caliber clinical care and fiscal accountability. In addition, the authors state that every medical practitioner needs to be savvy to the business side of health care in order to maintain a proper balance in the industry.⁷ Larson et al⁸ measured the growth in number of MD/MBA programs in the US and concluded that this rise indicates increasing interest in management education in the early careers of physicians. The authors argue that medical professionals increasingly must apply principles of management to the delivery of health care and that these efforts improve patient safety, health care quality, organizational effectiveness, design, and clinical decision-making. These findings represent a larger movement by clinicians to appropriate managerial tools into the provision of quality health care.⁸

The importance of health promotion, disease prevention, and overall public health knowledge is highlighted in the Department of Health and Human Services' *Healthy People 2020*, which encourages clinical education to become more effective on education surrounding disease and injury prevention.⁹ The publication states the goal is to "Increase the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and injury, improve health, and enhance quality of life."⁹ Whelan and Black¹⁰ discuss how recent disease outbreaks and natural disasters highlight the need for and understanding of public health issues in medical training programs. The authors review educational strategies that integrate concepts of patient care/traditional medical practice with concepts of public/population health. The authors also highlight the need for follow-up with program graduates to ascertain if the values and skills they obtained through their curriculum were useful in their field of practice.¹⁰

Cooper¹¹ states that medical education has focused on individual diagnosis and treatment, whereas public health is based on a population/community and prevention

model. The author describes a 4-year integrated MD/MPH program that focuses on training students to address important health issues through combined training in allopathic medicine and prevention/population health.¹¹ In this study, dual degree student focus groups revealed a high level of student satisfaction, with several comments that the program broadened their perspective on medicine and influenced their career goals.¹¹ Helfand and Hausman¹² discuss the conceptual model for public health education in podiatric medicine. They acknowledge that the health care system has changed in the arenas of delivery and financing and that there must be an increased focus on assessment, risk stratification, prevention, health promotion, and health education for populations rather than for individual patients.¹² Further, these authors call for medical education to train clinicians that are able to respond to the rapidly changing health care delivery system with an increased knowledge of health care economics as well as an understanding public health principles.¹² Thus, an MPH degree prepares health care providers to achieve this goal.

The increasing complexity of medical care in the US calls for providers to become leaders in various aspects of health care. In addition, the growing intricacy of health care delivery requires increasing interdependence amongst all stakeholders from the community health to the administrative levels. Combining clinical skills with knowledge of public health and the business/administrative side of health care will allow health care providers to effectively manage and navigate the changing health care environment and become leaders in their field. Health care education, therefore, must meet the challenges of this changing environment by offering students in health care fields the opportunity to concurrently pursue advanced degrees in public health and business administration. The field of physical therapy is no exception to this. As physical therapy becomes more and more integrated into the overall health care of the population, physical therapist (PT) education programs must keep up with these trends. Combining the Doctor of Physical Therapy (DPT) degree with MPH/MBA degrees is an ideal way to prepare PTs to meet the ever-expanding challenges of the health care environment.

A review of the literature on joint degree programs reveals no publications specific to dual degree programs in PT education. The number of PT education programs offering dual degrees is unavailable via the Commission on Accreditation in Physical Therapy Education (CAPTE) or the American Coun-

cil of Academic Physical Therapy (ACAPT). Anecdotally, 2 DPT/MBA and 9 DPT/MPH programs were identified by personal communication with CAPTE. Given that there are 218 accredited PT education programs in the country, 2 programs offering DPT/MBA degrees and 9 programs offering DPT/MPH degrees is a small number when compared to other professions, and thus, is not surprising that there is a gap in publications on dual degree offerings in PT education programs.

The purpose of this paper is to contribute to the literature describing dual degree programs offered in PT education programs in the US by describing the programs currently offered at Emory University's DPT program and the process we undertook to initiate these dual degree programs.

METHOD/MODEL DESCRIPTION AND EVALUATION

Terminology

Concurrent pursuit of degrees is variously referred to as dual (double) or joint degree. The terminology is not consistently used across institutions and varies with context and even countries.¹³ Broadly speaking, accrediting agencies for colleges and universities in the United States are consistent in defining dual degrees as an agreement by 2 or more institutions to grant dual academic awards, whereby students study at 2 or more institutions and each institution grants a separate academic award bearing only its name, seal, and signature.^{14,15} Joint degrees are defined as an agreement by 2 or more institutions to grant a joint academic award, whereby students study at 2 or more institutions and the institutions grant a single academic award bearing the names, seals, and signatures of each of the participating institutions.¹⁵ Based on these broad definitions, concurrent pursuit of degrees at Emory can best be classified as dual degrees, as each participating school confers degrees separately. Thus, in this paper, we will henceforth refer to our concurrent pursuit of degree programs as dual degree programs.

Evolution of the Dual Degree Programs and Institutional Level Agreements at Emory University

The PT education program at Emory University is administratively housed within the Division of Physical Therapy, located in the Department of Rehabilitation Medicine, Emory University School of Medicine. The idea to expand educational offerings to include dual degree programs was initially raised during the annual fall faculty retreat in October 2005. The idea emanated from faculty discussions related to future directions of growth for the physical therapy pro-

Table 1. Dual Degree Schedule

	Summer	Fall	Spring
Year 1: DPT	DPT classes	DPT classes	DPT classes
Year 2: DPT	DPT classes	DPT classes Apply to public health or business school	January–March: Internship I (10 weeks) March–June: Internship II (10 weeks)
Year 3: MPH/MBA	MPH or MBA year	MPH or MBA year	MPH or MBA year
Year 4: DPT	Internship III (10 weeks)	DPT classes	DPT classes

profession and the need to increase integration of physical therapy and other academic entities within our institution. Emory’s Goizueta Business School and Rollins School of Public Health are both nationally ranked schools for business and public health education, respectively. The initial meetings occurred between the director and associate director of the Division of Physical Therapy and the deans of each of these schools. Both deans were receptive to the idea of establishing a dual DPT/ MBA and DPT/MPH degree. Following input from MPH program directors and MBA faculty regarding curriculum, an initial proposal with the curricular structure of the dual degrees was presented to the dean of the School of Medicine for his approval. Upon approval of the proposal by the deans of all schools involved in the dual degrees, the provost presented the proposal to the Board of Trustees for their approval of the new dual degrees. The timeline from the initial meeting to approval by the Board of Trustees was approximately 1 year. Since this was a collaboration between established graduate level degree programs in different schools within the same institution (Emory University), the process was straightforward and did not require notification to our regional accreditation body. The first DPT student was accepted into the MBA program in 2007 and graduated with the dual DPT/MBA degree in 2009. The first DPT students were accepted into the MPH program in 2008 and graduated with the dual DPT/MPH degree in 2010.

Curricular Structure

The MBA and MPH programs are completed during the students’ third year before their final 3 semesters in the DPT program (Table 1). Though some dual degree programs at Emory are structured purely sequentially (eg, first the MPH program followed by their respective professional discipline), we purposely placed the MBA and MPH programs so that students would enter their dual degree (either MBA or MPH) program having some background in physical therapy (including some clinical experience), but before the completion of the DPT program, so they would also integrate

their new knowledge gained during their MBA or MPH program back into their final 3 semesters with the DPT program, including their third and final long-term affiliation. We believe our structure facilitates the optimal “cross-pollination” between the 2 programs, though we did encounter some challenges. Because the DPT program requires students to complete a group research project and the MPH program requires a partial research project, dual DPT/MPH students are given the option of completing their research begun in the Rollins School of Public Health individually or completing a group research project with other DPT students in their final 2 semesters of the DPT program. Additionally, the final semester of the DPT program includes a required class in community-level health promotion, prevention, and wellness, which covers material familiar to students who have completed requirements for the MPH degree. Therefore, the DPT/MPH students serve as preceptors for this course (as an elective course for the same credit hours).

Students in the Emory DPT program complete 3 short-term clinical affiliations in their third, fourth, and fifth semesters, and three 10-week clinical affiliations typically occurring in the sixth and seventh semesters (Table 1). For dual degree students, their last affiliation (completed during the summer after their MPH or MBA, but before their last 2 DPT program semesters) may be tied to their MPH or MBA degree. MPH students are encouraged to go on their final clinical affiliation to a hospital on a Native American reservation, which is part of the United States Public Health Service (USPHS). This site is truly a laboratory for public health issues and an excellent opportunity for dual degree students to apply the public health principles they have learned to improve the health of this underserved community. While there are no clinical sites specifically aimed toward DPT/MBA joint degree students, these students focus their required administrative projects (to be completed during a clinical affiliation) using principles learned from their MBA education.

Admission Process

Each applicant has to be independently admitted by both programs (DPT and MBA or MPH). Applicants have an opportunity to apply to our DPT program through PTCAS, and MBA or MPH programs through the application forms of each respective program. However, thus far all applicants have chosen the dual degree option after they have matriculated in the DPT program. Typically, applicants to our DPT program are aware of Emory’s dual degree options before they apply to the DPT program by perusing our website where we have extensive information available about our dual degree offerings. Applicants inquire about the dual degree programs during admissions interviews and some write about their interest in obtaining a dual degree in their application essays. Once applicants have matriculated in the DPT program, they attend open houses at the public health and business schools during their first year. Admissions representatives from these other schools encourage DPT students to contact them to discuss specifics of their degree programs and these representatives are present at an information session held each Fall with the DPT joint degree faculty liaison. Information sessions are held during lunch hour separately for the DPT/MBA and DPT/ MPH dual degree programs; each session attracts about 15% to 25% of the first-year DPT class. A faculty member from the DPT program, along with admission representatives from the Goizueta Business School and Rollins School of Public Health, present the rationale, overview, application process, prerequisite information, and finances, among other things, to interested students and answer questions from these students as well. Program information brochures and business cards of admissions representatives are distributed to the students. Students are encouraged to contact the admissions personnel to arrange opportunities to sit in classes at Business and Public Health schools and to interact with students at each of these schools as they consider the decision to apply for a dual degree program.

Prior to matriculation, all students in both the MBA and the MPH program must have completed at least 1 semester of college-level statistics. The statistics prerequisite is also a requirement for the DPT program and thus applicants to the MBA and MPH programs have met this requirement already. Students matriculating into the MBA program must also have completed microeconomics and financial accounting courses, which are provided free of charge by the business school through online modules that the students can complete at their own pace while in the DPT program before they start MBA classes. Both schools require standardized test scores for admission. The public health school requires the GRE and the business school accepts GRE or GMAT scores for admissions. Finally, both the the business and public health schools offer merit-based scholarships ranging from amounts that cover 20% to 100% of tuition. Strong recommendation letters from DPT program faculty are critical in the admission decisions at both dual degree schools. Decisions by business and public health schools are made on a rolling basis and typically a decision is made within 4 to 6 weeks after the application is complete. The business school requires an in-person interview with the admissions director as part of the admissions process. There is no limit on the number of DPT students that can apply/matriculate in either the MBA or MPH program.

Process for Reintegration of Dual Degree Students into the Final Year of DPT Program

The curricular structure of the DPT program (Table 1) is such that students finishing their long-term clinical rotations return to the program for the final 2 semesters before they graduate. DPT students in the dual degree programs complete part of the 30 weeks of long-term clinical rotations prior to matriculating in the MBA or MPH program, and the remaining after the completion of these programs (in summer), such that all students return back to the DPT program for the final 2 (fall and spring) semesters prior to graduation in May. The dual degree students join the DPT student cohort that started the year after the dual degree students initially matriculated in the DPT program. To facilitate the reintegration of all students for the final 2 semesters after they return from their long-term clinical rotations, a welcome back party is hosted by the program, inviting the entire student body in the DPT program. At this ceremony, the returning dual degree students are introduced to the student body to facilitate their reintegration. Moreover, the faculty in charge of the dual degree programs ensures, while working with the director and

Table 2. Number of Students Matriculating into Dual Degree Programs

Year Matriculating MBA/ MPH	MBA	MPH
2007	1	N/A
2008	0	2
2009	1	0
2010	1	0
2011	2	1
2012	1	1
2013	0	0
2014	2	1
TOTALS (13)	8	5

associate director of the DPT program, that these students are registered for the appropriate credits for the final 2 semesters and that they are included in all correspondence (email listservs, Blackboard course catalog, etc) with the new cohort of the third-year DPT class.

Graduation

At the graduation ceremony, the dual degree students are awarded 2 diploma certificates (1 for the DPT and the other for the MBA/ MPH) and have the honor of receiving their diplomas before all other students. Technically, these students have met the requirements of their MBA or MPH a year prior to completing their requirements of the DPT program. However, because they met the requirements as part of the dual degree program, the diploma for their MBA or MPH is held until they have met the requirements of the DPT program as well.

OUTCOMES

Outcomes from the dual degree programs include both program level outcomes (number of students matriculating into the dual programs, surveys of DPT students regarding their interest in the dual degree programs during the admissions process, and interest level of DPT I students) and student level outcomes (alumni surveys, DPT program GPA, and NPTE licensure examination pass rates). Perceptions of faculty in the DPT, MBA, and MPH programs regarding the dual degree programs are also monitored via personal communications.

Program Level Outcomes

As of 2013, 6 students applied for the dual MBA degree and 3 students applied for the MPH degree. Five students were accepted,

matriculated, and graduated with the DPT/ MBA dual degree and 3 students were accepted, matriculated, and graduated with the DPT/MPH dual degree. The undergraduate GPA of the students matriculating into the dual degrees programs was slightly higher than that of the overall DPT class matriculating the same year. As of 2014, an additional 5 students were accepted and matriculated into the dual degree programs. (See Table 2 for breakdown of matriculating students by each year.) In total, 4 men and 4 women have matriculated into the MBA program and 5 women into the MPH program.

We administered a survey (Appendix A) to the DPT classes of 2015, 2016, and 2017 to determine the awareness of, and interest in, the dual degree programs during their process of applying to the DPT program. We received 196 of a possible 201 completed surveys for a response rate of 97.5%. More than 80% of the respondents indicated that they were aware of the dual degree programs when applying to our program. (As described in the Admissions Process section above, students most likely learn about the dual degree programs from our website and/or information sessions during applicant interview days.) When asked if the dual degree programs were a factor in their decision to apply to our program, 6.1% indicated it was a key deciding factor, 47.5% indicated it was a factor, though not a key deciding factor, and 45.9% indicated the dual programs were not a factor. Figure 1 depicts which programs interested students during their application process. The most common barriers to enrolling in the dual degree programs identified by the students in the additional comments section of the survey were expense (11%) and the format of the program (7%). Expense and format of the program were both identified as barriers by 2% of the students. Related to for-

Figure 1. Dual Degree Programs of Interest to Students During Process of Applying to DPT Program (n = 196)

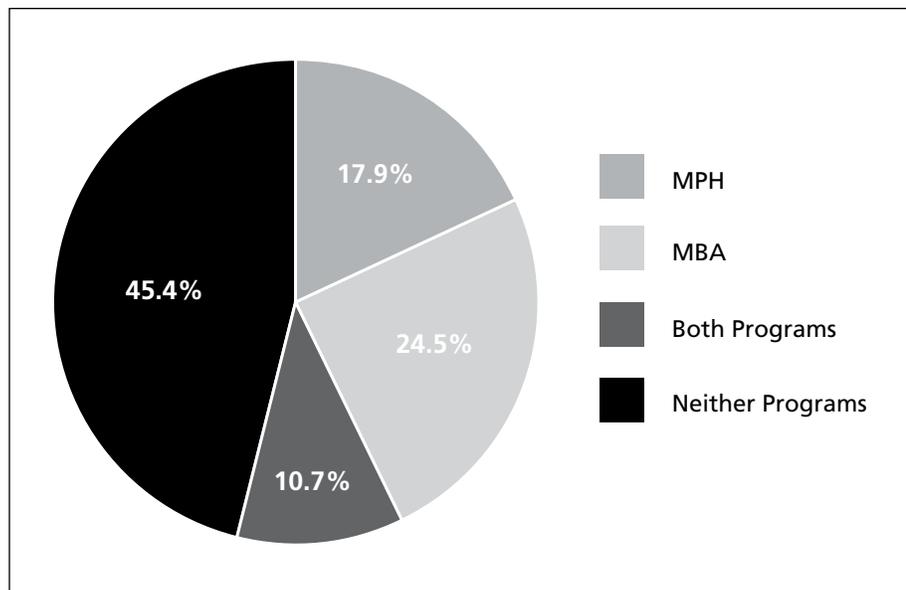
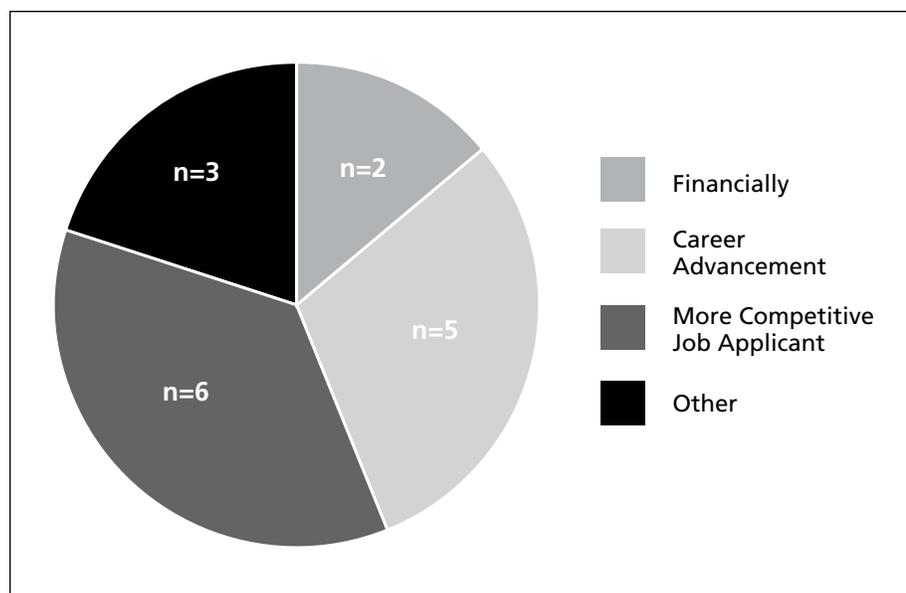


Figure 2. Areas in Which Students Believe MBA/MPH Positively Impacted Their Career



mat, a number of students would have liked the dual degree program to have occurred at the the end of the DPT program.

We gauged the interest level of the first-year DPT students by tracking the number who attended information sessions related to dual degree programs with faculty from the dual programs and DPT dual degree faculty advisors. Since 2007, 15% to 25% of students attended these information sessions.

Student Level Outcomes

The graduating GPA and first time pass rate on the NPTE licensure exam of the dual de-

gree students in the DPT program is at least equal to that of the overall DPT class graduating the same year. Moreover, performance on clinical internships of the dual degree students, as assessed by the Emory University Clinical Evaluation instrument, is consistent with their graduating classmates as well. Thus, it does not appear that student performance in the DPT program is adversely affected by the year away from our program.

As with any academic program, formative evaluation is essential to ascertain strengths and weaknesses of the program. Program alumnae are an excellent audience for such

evaluation, as they can be surveyed about both their experiences in the program and how their dual degrees have served them in the workplace. The authors sent an email survey to all 8 dual degree graduates (Appendix B). All 8 graduates (5 DPT/MBA and 3 DPT/MPH) completed and submitted the survey for a response rate of 100%. Respondents graduated between the years of 2009 and 2013. Six respondents indicated that they were currently using their joint degree professionally. All 8 indicated that the MPH or MBA had positively impacted their career (Figure 2). Students choosing “other” submitted comments such as “better analytical skills” (MBA) and “increased credibility” (MPH). All respondents agreed that the dual degree was worth the extra time, work, and expense and would recommend the dual degree to a current DPT student considering obtaining a dual degree.

Several of our dual degree graduates have pursued career paths that exemplify the integration of public health or business into their physical therapy careers. Within 1 year of her graduation, a 2009 DPT/MPH alumnae accepted a position as the rehabilitation program advisor in Partners in Health, a well-known international health relief organization in Haiti. Her role consisted of 70% clinical work and 30% program development of community-based rehabilitation services. These services included the training of community health workers, development of environmental modifications, and advocacy for those living with a disability in the Central Plateau region of Haiti. A 2009 DPT/MPH graduate now serves as the rehabilitation director for a faith-based nonprofit organization based in Southern Belize that provides medical care, disease prevention, and health education free of charge to a vastly underserved community. Our first DPT/MBA graduate served for nearly 3 years in our professional association (American Physical Therapy Association) as an associate director of Federal Government Affairs, representing the needs and issues of the physical therapy industry to federal policymakers and legislators. Another DPT/MBA currently serves as a clinical coordinator for a major medical center in the San Francisco area.

DPT, MBA, and MPH Faculty Perceptions of the Dual Degrees

Perceptions of all DPT faculty related to dual degree programs are gathered and discussed during annual assessment of our programs at the faculty retreat. Perceptions of the MBA and MPH faculty are gathered through convenience sampling.

The DPT program faculty has observed

that the opportunity to enroll in dual degree programs is attracting high caliber applicants to the DPT program at Emory University. Given the rigorous curriculum of the DPT program, applicants to the dual degree programs consistently display impressive work ethics, which is reflected in dual degree graduates being in the top tenth percentile of all Emory DPT program graduates. The DPT program faculty has recognized a strong visibility at the institutional level related to our collaborative efforts with the establishment of these 2 dual degree programs. This perception of our collaborative efforts has resulted in additional interprofessional dual degree programs with the Emory Center for Bioethics (DPT/MA in Bioethics) and School of Applied Physiology at Georgia Institute of Technology (DPT/PhD).

Goizueta Business School faculty appreciate the high caliber of our students in their MBA program based on our students' academic performance and overall contributions to the Goizueta community. A significant component of MBA education occurs through student interaction during and outside of class, dependent on the different industries these students represent. Health care is a major industry in our country and is often under-represented in the MBA classroom. Thus, presence of DPT students is highly valued by the Goizueta Business School faculty.

Rollins School of Public Health highly values the contributions of our dual degree students in their classrooms and in the public health school community. The DPT students bring the unique perspective of the role of rehabilitation in community health on both national and global levels. In addition, our students enter the MPH classroom with the maturity and experience gained from their previous 2 years of DPT training and education, enabling them to serve as classroom leaders.

DISCUSSION AND CONCLUSION

The physical therapy profession has aimed to transform society by optimizing movement to improve the human experience.¹⁶ To achieve this vision, the profession will have to collaborate with other health care providers, consumers, community organizations, and other disciplines to solve the health-related challenges that society faces.¹⁶ Thus, as physical therapy becomes more integrated into the overall health care of the population, PT education programs must keep up with these trends to adequately prepare future practitioners. Interprofessional approaches to efficiently meet consumer and population needs and instill team values in PTs will require training in leadership, business, and public

health disciplines.

In 2004, the Institute of Medicine recommended that academic medical centers “develop leaders at all levels who can manage the organizational and system changes necessary to improve health through innovation in health professions education, patient care, and research.”¹⁷

Combining the DPT degree with the MPH or MBA degree is 1 innovation to prepare PTs to meet the ever-expanding challenges and future of the health care environment. However, only 5% of 218 accredited PT education programs offer a dual DPT/MBA degree and/or a DPT/MPH degree. This is in contrast to the 128 US allopathic medical schools, where 63% offer a MD/MPH degree and 41% offer a dual MD/MBA degree.²

The possibility exists that more programs in PT education offer dual degrees in MBA and MPH than what we know, since a formal reporting structure for dual degree programs does not exist within our accrediting body (CAPTE). We call on CAPTE and the ACAPT to undertake a formal survey of the dual degree programs in PT education in the US. We do not anticipate that the numbers of PT education programs offering dual degrees will be significantly higher than what is reported anecdotally due to the complete lack of scholarly publications related to dual degree programs in PT education in the literature. We believe this is the first paper reporting on dual degree programs in PT education.

Physical therapists have long taken leadership roles in health care administration, management, law, and public health. A profile of 7 such leaders was featured in a *PT Magazine* article in 2005.¹⁸ Clearly, there is a greater cost in obtaining a second degree later in a professional career, and thus, a dual degree program reduces the cost when compared to obtaining the second degree separately from the DPT degree. Eighty-six percent of our dual degree graduates indicated that they believed the dual degree made them a more competitive job candidate. This is not surprising and has been noted in other health care professions with graduates having dual degrees.¹⁹ For example, Oakley reported that pharmacist managers with an MBA or MS were preferred for administrative positions in hospitals.¹⁹ In a separate survey, Oakley and colleagues found that only pharmacy directors with an MBA or MS degree believed they had been adequately prepared for their role as director through their academic training.²⁰ This is borne out by our graduates reporting that because of the dual degree, they have “better analytical skills” (MBA) and “increased credibility” (MPH).

Since the inception of dual degree pro-

grams in PT education at Emory University in 2007, 1 to 3 applicants matriculate to these respective programs each year. We deem the offering of the dual degree programs at Emory a success because the dual degree candidates maintain a high GPA through graduation and have a 100% first time pass rate on the NPTE licensure exam, which raises the profile of our alumni body in turn. It has provided a significant avenue for interschool collaboration that the university deems necessary in raising the profile of the institution. Further, offering the dual degree programs helps us meet the interprofessional training goals that are currently being fostered in academic settings. Attracting high caliber applicants to our DPT program is another benefit we have accrued because of these dual degree offerings.

A number of key factors have played a role in our success with the dual degree programs. Emory's Goizueta Business School (current ranking: 20) and Rollins School of Public Health (current ranking: 6) are highly ranked schools in their disciplines by US News and World Report and have a history of establishing and operating dual degree programs (MD program in School of Medicine and JD program in School of Law).^{21,22} Three faculty members in Emory's DPT program have an MBA degree (1 is an alumni of Goizueta Business School) and 1 faculty member has an MPH (an alumna of Rollins School of Public Health). It is evident that having DPT program faculty well versed in the disciplines of MBA and MPH with key contacts among the faculty and staff at these 2 schools has facilitated the close collaboration needed for the success of the dual degree program. The students in the dual degree programs know they have full support of the faculty in helping them succeed in the dual degree program and to ensure their smooth reintegration back into the DPT program for the final 2 semesters. Finally, we believe faculty and administration commitment in both schools involved is critical in establishing and ensuring the ongoing success of our dual degree programs.

At Emory University, the dual DPT/MBA and DPT/MPH programs have been designed to provide students with the necessary clinical, business, administrative, policy analysis, and public health perspective required to excel as leaders in the future health care system.

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Appendix A. DPT 3 Class of 2015 Survey

1. Were you aware of Emory's dual degree programs when you applied to the DPT program?
 yes
 no

2. Were the dual degree programs a factor in your decision to apply to the DPT program?
 yes, it was key deciding factor
 yes, it was a factor, though not a key deciding factor
 no, it was not a factor

3. If you answered yes to question 2, which program were you interested in?
 DPT/MBA
 DPT/MPH
 Both DPT/MBA and DPT/MPH

4. Any other comments regarding Emory's dual degree programs?

Appendix B. Questionnaire for DPT Joint Degree Alumnae

- 1) What joint degree program did you complete at Emory?
 - a. DPT/MPH
 - b. DPT/MBA

- 2) What year did you graduate with your joint degree?

- 3) Are you currently using your MPH or MBA in your career?
 - a. Yes
 - b. NoPlease explain:

- 4) Do you feel that your MPH or MBA has positively impacted your career?
 - a. Yes
 - b. NoPlease explain:

- 5) If you selected "yes" to question #4, please select all of the areas in which you believe that your MPH/MBA has positively impacted your career (circle all that apply)
 - a. Financially
 - b. Helped you advance in your career more quickly than those without the dual degree
 - c. Allowed you to work in a setting of your choice
 - d. Made you a more competitive job candidate
 - e. Other (please specify)_____

- 6) Do you believe that the joint degree was worth the additional time, work, and expense during your DPT degree?
 - a. Yes
 - b. NoComments:

- 7) Would you recommend obtaining a joint degree to a current DPT student who is considering obtaining a joint degree?
 - a. Yes
 - b. NoPlease explain: