

MD/MBA Futures

MD/MBA Program in Health Management, Tufts University School of Medicine

Issue 15/Fall 2007

Tufts Biomedical Business Club

Merging the business of science with Tufts graduate education

With the tumultuous summer and autumn in the stock market, one begins to wonder if there is any rationality, or better yet, any science behind the swings of the market. For the overwhelming majority of stock analysts and Wall Street players, financial number crunching combined with a degree of educated guesswork is how stocks are evaluated. However, students at the Tufts School of Medicine and Sackler Graduate School have a different approach.

Last spring, several students, including Dave Greenwald (Genetics Ph.D. program) and Brigham Hyde (Pharmacology Ph.D. program) began forming what is now the Tufts Biomedical Business Club (TBBC). Using their scientific and medical knowledge from graduate school, the club posted an approximate 9.0% return in three months on investments made on an online virtual stock portfolio.

The club has since expanded to over 50 members from Tufts School of Medicine, Sackler Graduate School of Biomedical Sciences, and Tufts Center for Drug Development. “One of the advantages of having an eclectic group of graduate and medical students” says Greenwald, “is that it mimics

‘real-world’ situations, where M.D.’s, Ph.D.’s, and M.B.A.’s work together and exchange business and scientific ideas.”

The success of their stock portfolio last spring has garnered the attention of one of the top healthcare investment firms in Boston. “Last spring was just a warm-up,” remarks Hyde, “We anticipate greater returns this fall, with the biotech sector heating up as it has in the past.” What Hyde is referring to is the seasonality of biotechnology and pharmaceutical firms—companies typically rush to file their drug-efficacy evidence with the Food and Drug Administration by the end of the calendar year—which enables them to show some evidence of progress in their annual reports to shareholders. The FDA usually rules in six to ten months, meaning that the majority of drug approvals come in the autumn.

The mission of the club is based around the application of scientific and medical knowledge acquired during training at Tufts Medical School to the analysis and evaluation of companies in the healthcare sector. Utilizing the diverse set of skills and experiences held by M.D./M.B.A.’s, M.D.’s and



Left to Right, Dave Greenwald (Ph.D., Genetics), Brigham Hyde (Ph.D., Pharmacology)

Ph.D.’s, the club members work in teams to develop investment theses on specific companies.

The investment portfolio is divided into sectors such as cardiovascular, medical devices/diagnostics, neuroscience, infectious diseases and several others.

continued on p. 5

In This Issue

Tufts Biomedical Business Club

Director’s Message

End-of-Life Care: Ethical Principles

Why Choose the M.D./M.B.A.?

ModernMed

Alumni Milestones

Director's Message

John M. Ludden, M.D., FACPE

Norman S. Stearns M.D. Professor of Health Management



Future physician leaders learn effectively when they put their hands on a complex problem. Medical management and patient care are not simple endeavors. Joining these two is more challenging still. That is one reason why we've moved our M.B.A. curriculum to a more project-based orientation. You'll see one set of reactions to this change in Nicholas Frisch's article, "Why Choose the M.D./M.B.A.?" And seeing what our Alumni are doing underscores the excitement. You'll see some of this in Jamie Doucette's piece, "ModernMed" in this issue.

We believe our website is more than just the public face of our program; it's a tool that our students and alumni can use to communicate to future generations of Tufts M.D./M.B.A.'s in Health Management. With this in mind, we are re-envisioning our site, to better convey to prospective students the passion and high standard of excellence our current students, faculty, and staff bring to our program. The most natural evangelists for our program are current students and alumni, so we will be featuring their thoughts, experiences and anecdotes throughout the site in the form of profiles, short features and multimedia content, including audio and video slideshows that let our students and alumni tell their own stories about what they actually do with an M.D./M.B.A. degree.

Other planned improvements to the website include a fresh look at navigation and the addition of related links to sidebars where necessary. We will also revisit our page content to ensure we are delivering information that's relevant, concise and well-presented. We hope these changes will result in an up-to-date, informative, attractive website that communicates the many advantages our program offers over others of its kind.

With the largest group of alumni from combined, joint and dual degree programs in the country and with our first class approaching its ten year anniversary, we are beginning to have good feel for the broad spectrum of careers that the M.D./M.B.A. opens up. Alumni will be surveyed in the late fall or early winter, but we hear anecdotally that a wide variety of clinical specialties are represented in this group and that careers range from small group practice to hospital staff affairs. Even as residents, our alums report they are often given special tasks by their departments because of their expertise and because of their self-confidence.

A few of our graduates (you'll see them in the video clips too) are not involved in clinical medicine. Although it makes some in the old guard anxious, they are clear that their combined M.D./M.B.A. degrees put them at the forefront of advances in medical care. Though some wish for a more paternalistic approach, our country's advances in medical care depend on a complex development process. If quality in health care is the effective delivery of great science to patients and populations, then our culture demands that innovations be proven in the market. As innovation proceeds, the management of the inevitable disruption will be a paramount concern.

A handwritten signature in black ink that reads "John M. Ludden MD". The signature is written in a cursive, flowing style.

End-of-Life Care: Ethical Principles

Amit Sura M'08

In the new third year M.B.A. curriculum, students are involved in a course called "Ethics in Practice." Observing hospitals and medical practices during their clerkships, they focus on the issues they see and discuss them in class and through a blog-like discussion board. Emphasis is placed on the particular problems faced by physician executives as they lead organizations. Finally, each student writes up one issue based on a class discussion. What follows is an excerpted example.

John Ludden, M.D., FACPE

In the September 18th 2003 issue of the *New England Journal of Medicine (NEJM)*, a study's findings were published that looked at the determinants of what influenced withdrawal of mechanical ventilation in anticipation of death in the ICU. One might think physicians would base decisions on Multiple Organ Dysfunction scores, patient age, and illness severity. Rather, the strongest determinants of withdrawal were the *physician's perceptions* of whether the patient preferred to have life support and the *physician's predictions* of cognitive function and likelihood of survival.¹ While end-of-life discussions and code status are meant to take into account the primary wishes of the patient, designated proxies, family members, and loved-ones, more often than not physician's biases are imposed. These biases are frequently grounded on the physician's perceptions and predictions, past experience, and personal morals and views. Is the autonomy of the patient preserved in such cases? Are

we as physicians breaking the ethical code of non-maleficence and the principle of beneficence?

The Preservation of Autonomy

One central theme that typically remains lost is what the patient had initially stated to be his or her preference. In an alarming study conducted by *JAMA* in 1995 called, "The inaccessibility of advance directives on transfer from ambulatory to acute care settings," the authors sought to determine how available a patient's directives were during acute hospitalizations. From the 53 cases examined, only 26% of the patients (14 cases) had their directives recognized during their hospitalization! When the actual directives were recognized in 12 of the 14 cases, they were used to influence decisions in administering medical care.² Advanced directives influence the way we deliver healthcare, yet why are they forgotten?

When Jeffrey Drazen, author of an *NEJM* editorial called "Decisions at the End of Life," commented on the near-impossibility of conveying the physician's predictions to families without influencing their outcome, he stressed the importance of a strong partnership between clinicians and families.^{3,4} Let us really get to know our patients, he would argue, so that after we deliver our intervention, we can look back and say we did everything he or she would have wanted us to do. Only until then can we claim to have upheld patient autonomy.

Beneficence/Non-maleficence: A Rebuttal to Autonomy

When the President's Commission for the Study of Ethical Problems in Medicine was asked to comment on excluding a competent patient from medical decision making regarding supportive care, the Commission quickly remarked that such an intention is "unjustifiable". They further mentioned that doing so "demeans the patient by barring self-determination" and "allows others to shorten the patient's life."⁵ While such a response seems at first appropriate, those who consider it from the ethical principles of beneficence/non-maleficence might say otherwise.

In an article from the journal *Chest* in February 2005 entitled "Waking the Dying," author Dr. M.R. Tonelli brings to topic the controversial issue of when a patient's decision-making capacity is compromised by medical therapy designed to provide comfort in the form of anxiolysis, amnesia, or analgesia. In such cases, physicians are faced with a

continued on p. 5

MD/MBA FUTURES

MD/MBA Futures is published semiannually for the MD/MBA community.

Editor: Doina Iliescu
Editorial Advisors: Robin Glover, John. M. Ludden, M.D.

Visit the MD/MBA website:
<http://www.tufts.edu/med/education/mddual/mdmba>

Why Choose the M.D./M.B.A.?

Nicholas Frisch M'10

“Why M.D./M.B.A.?” My colleagues and I are asked this question frequently. Everyone has his own, independent reason for pursuing a joint degree at Tufts University School of Medicine (TUSM), but one shared theme is the inherent belief that there is an important relationship between business and medicine. The M.D./M.B.A. program provides a unique means of exploring that relationship, by coupling our M.B.A. experiences with our formal four year medical education.

The closely integrated structure of this program was extremely alluring to many of us, who were drawn to the vast amount of hands-on healthcare exposure offered by the M.B.A. Our consensus is expressed by David Cho (M'11), who firmly believes that the program will allow him to develop into a “more well-rounded, effective physician, both as a patient-care provider and a healthcare leader.” The M.B.A. program, which began for us this past summer, typifies the aforementioned qualities and characteristics, which we were anxious to take advantage of.

The format of the summer curriculum was condensed this year, beginning in late June and continuing through the middle of August. Starting later in the summer provided ample opportunity to prepare for the program, coordinate moving to Boston, and begin acclimating to city life. It also afforded some of us the possibility of actually enjoying what Robert Tanouye (M'11) calls, “the essence of summer.” Many seized the

opportunity to travel, while others utilized the time to spend with friends and family before making the move to Boston. You would be hard-pressed to find anyone who did not embrace the few extra weeks, especially those who were coming directly out of college.

While condensed in format, the courses were well designed for the consolidated timeframe. Our summer curriculum consisted of two components: course work at Brandeis University and a healthcare practicum at the Cambridge Health Alliance (CHA). The courses were organized to lay the foundation of our formal business education, while the CHA practicum facilitated our active utilization of the skills and concepts we were developing in the classroom. According to John Biebelhausen (M'11), “melding the CHA practicum with the condensed curriculum allowed for an integrative overlap in learning...that made for an exciting and challenging summer.”

By far the most important aspect of this condensed curriculum was the professors teaching Financial Accounting, Economic Analysis for Managers, Operations Management, and Ethics in Business and Medicine. They were extremely enthusiastic and passionate, demonstrating the material using relevant health care correlations. The professors emphasized the core principles, and the students, rather than simply regurgitating formulas and theorems, were engaged with a variety of healthcare cases that provided a realistic framework within which to conceptualize the material.

During the afternoons we worked on the CHA practicum, which was coordinated through Northeastern University. Unequivocally the most en-

riching opportunity of the summer, Tanouye refers to the CHA practicum as a “valued hallmark of the Tufts M.D./M.B.A. program.” He reflects that it “gave us the opportunity to exchange ideas with leaders in public health...and allowed us to begin networking immediately.” A remarkable number of physicians, administrators, and staff members attended our final presentations, demonstrating the wonderful commitment and dedication CHA and TUSM has to the success of this program.

Despite the initial awe many of us felt regarding the CHA practicum, reality quickly set in as our workload began to rapidly increase. Biebelhausen believes that this experience “presented a number of challenges including managing the workload, meeting project goals and adapting to existing social networks within the organizations.” While it is true that we faced many challenges, the futures that we all aspire to achieve are no less challenging. Early exposure to the realities of business and healthcare will surely empower us, encourage adaptability and prepare us for what lies ahead.

Now when people ask the question, “Why would you pursue a combined M.D./M.B.A.?” my response is confidently, “Why wouldn't I?” We were immediately immersed in direct healthcare experiences through the CHA practicum. Concurrently the program facilitated our ability to begin networking by establishing ties with professors, physicians and healthcare leaders. The cumulative experience has elucidated many of the ways an M.B.A. has the potential to enhance our understanding of healthcare and provide opportunities for our future in the medical profession.

Biomedical Business Club

continued from p. 1

This allows students who are studying a particular field in their graduate career to bring esoteric and in-depth knowledge to evaluating companies within their focus. In addition to pragmatic training, this system allows students to pursue areas of interest and advance their knowledge of the leaders in their industry.

The research and writing of analyst reports is guided by a set of outside speakers designed to expand and supplement the knowledge base of the group into the financial aspects of analysis. Two of the most recent speakers were from W.R. Hambrecht, the financial firm that handled the Google Initial Public Offering (IPO) and Leerink and Swann, a leading sell side Healthcare firm.

Evaluating public companies in the biomedical sector is only a portion of the TBBC's function. The second goal of the TBBC is to expand the awareness in the biomedical field to the issues surrounding business development. The TBBC runs a business development speaker series covering topics such as venture capital financing, intellectual property management, and other entrepreneurial topics. The primary focus of this division of the TBBC is to encourage student entrepreneurship and educate students on the factors that influence the commercialization of ideas. In particular, the topics encountered by any innovator in academic/medical settings are addressed. The speaker series along with resources and interactive workshops allow students to explore personal interests and obtain knowledge not previously offered.

continued on p. 8

End-of-Life Care

continued from p. 3

dilemma. Should they pull back on these medications, in the name of autonomy, and attempt to involve the critically-ill patient in the decision making process of what seems to be an imminent death? Or should they rely on family or surrogate consensus instead? The article states that those who abide by the principle of "do no harm" would argue that weaning such medications would in fact violate a doctor's inherent duty to provide compassion and care. To have a patient endure psychological, emotional, and physical stress in the name of autonomy would in fact seem inhumane rather than respectful.⁶

Dr. Tonelli goes on to conclude that such arguments are futile. Rather than adhere to one principle for every situation, the author suggests applying ethical principles on a case-by-case basis. Case-by-case analysis will often lead to simple, obvious conclusions, creating a path for subsequent actions.

Tonelli stresses the importance of hospitals and physicians developing policies in which the process is clearly outlined. Protection for the patient remains priority and decisions about end-of-life care should never rest on the shoulders of one physician nor should they be taken as a physician's prerogative. The problem with having a set of guidelines and policies around this issue is that it removes the physician from having to deal with the surrounding emotional pain. While a physician need not be consumed by such pain, he/she ought to be near enough to it to feel the heat.

The principles of autonomy and non-maleficence/beneficence during end-of-life care do not exist in separate

realms. A good organization can ensure that both are preserved.

Hospital physician leaders should formulate organizational goals and policies that recognize the ethical conflicts in end-of-life care. Discussion with clinical staff and clarity of communication are central to any implementation and especially important for any organizational ethics committee. Information systems and patient interaction should seek to preserve patient autonomy by discovering and confirming what the patient would desire during end-of-life care. Clinical staff may need to be led to understand that ethical principles can be adapted to the situation at hand. Analysis for each case must be centered on the patient's level of pain, prognosis, personal directives, and family consensus. No ethical obligation exists in attempting to involve the patient (e.g. weaning the patient off mechanical ventilation) to reaffirm the already known.

(Footnotes)

¹ Cook, D, Rucker G, et al. Withdrawal of Mechanical Ventilation in Anticipation of Death in the Intensive Care Unit. *N Engl J Med* 2003;349:1123-1132.

² The inaccessibility of advance directives on transfer from ambulatory to acute care settings. *JAMA* 2005.

³ Drazen, JM. Decisions at the end of life. *N Engl J Med* 2003;349:1109-1110

⁴ Drazen, JM. Decisions at the end of life. *N Engl J Med* 2003;349:1109-1110

⁵ President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Deciding to forego life-sustaining treatment. Washington, DC: US Government Printing Office, 1983.

⁶ Tonelli MR. Waking the dying : must we always attempt to involve critically ill patients in end-of-life decisions? *Chest* 2005; 127(2):637-42.

ModernMed

Jamie Doucette , M.D., M.B.A.'05
President, CEO

The unique benefits of the M.D./M.B.A. for a unique career path

The M.D. and M.B.A. I received from the Tufts combined degree program have been invaluable to me along my entire career path. While that career path is admittedly unique and I am not currently a practicing physician, the combined degree program provided me with the education, experience, and skill set necessary to start my own company with the vision of not simply affecting the patients I care for, but changing the entire system.

Primary care in the United States has reached a critical point in its history. In fact, the American College of Physicians recently warned that “primary care, the backbone of the nation’s health care system, is at grave risk of collapse.” Physicians are being paid less and less every year as their costs continue to rise, forcing them to see an increasing number of patients just to break even. Patients are tired of having to schedule appointments weeks or months out, waiting for hours in a waiting room, and being rushed through a very personal experience by a physician they barely know. American businesses, which foot much of the health care bill, are struggling to keep up with the rising cost of employee benefits.

I started ModernMed in response to this worsening dynamic. ModernMed is a forward-thinking health care service firm designed to create a better health care experience for patients, physicians, and businesses. Across the country we establish and maintain *modern* primary care practice

environments that are unlike any traditional practice. The ModernMed model has the power to change the landscape of primary care, and, as a result, the entire system. By understanding and responding to the needs of physicians, patients, and businesses in a way that is unique to the health care industry, we are ideally qualified to help build the relationships that will create the highest satisfaction for those who choose this extraordinary form of primary care delivery.

Without the combined degrees, I doubt I would be remotely close to where I am at present. I would not have been able to recognize the problem, analyze it, and create a potential solution without the experience and education that came with the MD. I would not have been able to build the business model, launch the company, recruit talent, and implement strategy without the experience and education that came with the MBA. So while I may not be using the MD and leveraging the MBA, I am certainly using the MBA and leveraging the MD. And while I may not be taking care of patients on a one-on-one basis, I think that we are taking care of both patients and physicians in a much broader setting.

For information about ModernMed visit <http://www.modernmed.com/>.

Dr. Doucette is currently President and CEO of ModernMed, a health care service company focused on customer service, prevention, and wellness in the primary care space through the implementation of modern practice models. Dr. Doucette has extensive experience with alternative practice models as he has worked with retainer physicians in a variety of capacities for the last five years. Dr. Doucette has also been involved in Angel Investing and advising entrepreneurs for several years in a variety of industries. His principal experience involves the health care and information technology industries, with secondary experience in professional sports franchises and facilities, nutrition, and fitness. Dr. Doucette received his MD and MBA from Tufts University School of Medicine’s MD/MBA program in Health Management in Boston, MA. Dr. Doucette received his BS/BA from Duke University in Durham, NC.



Graduating class of 2007 with Dr. John Ludden. From L to R: John Ludden, Jane Chen, Loraine Wu, Le Grand Reynolds, Arthur Yan, Ryan Gosselin, Sachin Shah, Babar, Khokhar, Trevor Emory, Robert Osterhoff, Michael Madanat

Lisa Bard Levine, M.D./M.B.A. '05 and Wilton Levine

are proud to announce the birth of Benjamin Samuel Levine on August 31, 2007. Benjamin is joined by his excited older brother, Joshua. Lisa is currently a physician consultant at The Bard Group, a healthcare strategy consulting firm in Needham, MA. Lisa can be reached at llevine@bardgroup.com.

Karen Scott, M.D./M.B.A. '01 married Steven Ebert (a lawyer!)

Alumni Milestones

on June 10th and celebrated with several M.D./M.B.A. alums.

Karen also has had two recent publications accepted, one in the Journal of Ophthalmology (dealing with reliability of telemedicine in diagnosing ROP--a preterm eye disease) and one in Archives of Ophthalmology (a cost-utility analysis of telemedicine for diagnosing ROP). Both are In Press.

Joshua Riff, M.D./M.B.A. '02 writes "Life is good since leaving

continued from previous column

Tufts. After graduation my wife and I moved to Baltimore where I completed three years of an Emergency Medicine residency. The majority of my life was working, hanging out with my wife, and training for triathlons. We moved to Tucson, AZ so we could hike and bike all year round and continued to travel including an epic trip in Thailand. Shortly after that trip, about nine months plus a few weeks, we had our son Asher. While in Tucson I spent at least 25 hours a week cycling or running and was loving life, work, and my family. Just when I was settled in and I placed an offer on a home I was given an opportunity to serve as the medical director for Target in their retail clinic strategy. It is an interesting opportunity; in addition to providing medical care for colds, strep throats, and UTI's we get to do a ton of preventative care and have administered 1000's of flu shots every week. I still try to work four to six shifts a month in the ER to keep the clinical skills alive."

Nicole Williamson, M.D./M.B.A. '06 and her fiance proudly announce the birth of their daughter, Haley Rose Wilson, born September 15, perfectly healthy at 6 lbs!



continued

Biomedical Business Club

continued from p. 5

In addition, the TBBC has partnered with the YMCA of Chinatown, and the *I Hate Cancer* charity (www.ihatecancer.org) to donate a generous portion of the returns made on investments by the club. "Active citizenship and philanthropy are important issues that the TBBC takes very seriously," says Greenwald.

The TBBC provides an avenue for M.D.'s, M.D./M.B.A.'s and Ph.D.'s to pursue interests in the industry of healthcare. The group is actively seeking alumni participation in any form and encourages input from any interested source. To learn more visit the TBBC website. www.tufts.edu/sackler/sgsc/TBBC/Index.htm



A Peaceful New Year To All



Contribute to this Newsletter!

MD/MBA Futures is seeking submissions for the spring 2008 issue. Students, alumni and M.D./M.B.A. faculty are all invited to contribute to the newsletter. Please e-mail your milestones and article ideas to doina.iliescu@tufts.edu by Friday, April 4 for inclusion in the spring edition.



Note to our Alumni:

Shortly you will receive an e-mail request to complete a questionnaire. Gathering information and feedback is important to the evolution of the program. I hope you will take a few minutes to provide us with this asset.

Tufts University School of Medicine
MD/MBA Program in Health Management
Department of Public Health & Family Medicine
136 Harrison Avenue
Boston, MA 02111