Nomination for CAHME/Cerner Award for Excellence in Healthcare Management Systems Education

Masters of Health Care Administration
Department of Health Policy and Management
University of North Carolina at Chapel Hill

The mission of the MHA program at the University of North Carolina at Chapel Hill is "to improve decision-making and leadership skills of early and mid-career professionals who aspire to manage and lead the delivery of healthcare in North Carolina, in the United States and globally." We are submitting this nomination for the CAHME/Cerner Award for Excellence in Healthcare Management Systems Education because of (1) our success integrating information management in our curriculum, and (2) our use of multiple forms of technology in our teaching. Students are provided opportunities to apply what they have learned both in the classroom setting and through internships and other applied settings.

The MHA program is housed in the Department of Health Policy and Management (HPM) in the Gillings School of Global Public Health. The program is driven by a competency model consisting of 25 competencies grouped into four domains: Leadership, Policy, Management, and Professional. Each course is designed around multiple competencies, with corresponding assessment tools (MHA Competency Model attached). Competency in the use of health information technology is among the twenty-five competencies.

Students enroll in either the on-campus residential format, or the executive format. The latter is a hybrid model that incorporates synchronous, real-time distance learning technology and required intensive on-campus workshops. Full-time HPM faculty members teach courses in both formats.

Core Courses in Information and Quality Management

Several years ago, our faculty made a decision to rationalize the curriculum placement of quality and information management into a single comprehensive introductory course, "Healthcare Quality and Information Management (HPM 760), taught for several years by a professor in the department who is also the Director of Performance Improvement for the UNC Health Care System. This required first semester course is taken by all residential students, and examines information technology in the context of quality and quality improvement. In the first few weeks of the course, student teams are placed in quality improvement projects in the UNC Healthcare System. Students gain an applied orientation to healthcare information and its use in measuring and improving quality. As part of their improvement projects, students develop a Kaplan/Norton-type "balanced scorecard" for their improvement project. Students also work on a semester-long information technology case study addressing the challenges of specifying new technology requirements for a state public health system. Using Microsoft Access, students are instructed and evaluated in their use of relational database query techniques. This course very effectively prepares students for later elective courses in healthcare informatics, and positions them well to work on quality improvement projects in their summer internship (HPM 760 syllabus attached).

As a distance learning program, executive students take two courses with the same title and taught by the same instructor in two consecutive semesters (HPM 776 and HPM 777 syllabi attached). Content covers information system infrastructure, system selection criteria, data quality and governance, data warehouses, and "Big Data." Coupled with this is content on dashboards and metrics, indicator selection, data dictionaries, and infographics, as well as behavioral concepts (e.g., organizational change) related to

information system selection and implementation.   The course includes instruction and project assignments utilizing quality improvement methodologies.   As with the residential version of this course, instruction and experiential methods focus on key quality improvement methodologies (e.g., Six Sigma). Students are evaluated through applied individual and team assignments.

Executive format students take two additional required courses focused on LEAN/Six Sigma. These two courses provide comprehensive instruction on LEAN/Six Sigma methods. (HPM 690 I and II syllabi attached).

Elective Courses and Experiences

The MHA program, in collaboration with other university units, has developed a Certificate Program in Health Informatics (http://chip.unc.edu/public-health-informatics-certificate/). This multidisciplinary initiative provides opportunities for students with a specialized interest in health informatics to interact with students and faculty from other departments, as well as alumni and practitioners across health sectors (e.g., hospitals, public health departments). The UNC School of Information and Library Science (SILS) is a key partner in this initiative.

In addition to courses in the UNC SILS, we offer two elective courses in health informatics (syllabi attached):

1. Implementing Health Informatics Initiatives (HPM 620) provides an overview of consumer, clinical, and public health informatics initiatives, and frameworks to guide implementation and use of information resources. (HPM 620 syllabus attached)
2. Applied Public Health Informatics: Diagnosis and Design of Public Health System Intelligence (HPM 625) provides students with methods for identifying and using information to address community health concerns, including health disparities, and improving public health decision-making. (HPM 625 syllabus attached).

Experiential and Professional Development Methods

Students in both the residential and executive formats are involved in a number of experiential activities, some of which are course-specific, while others fall under the domain of professional development.

1. Among the most innovative instructional tools developed in our executive program is a simulation merging content in healthcare strategy, and the use of market information for decision-making. Developed with a Lenovo Instructional Innovation Grant, the Franklin State Simulation is carried out over two days.   Student teams are presented with new information over a period of (simulated) months and years.   This simulation provides a powerful experience involving information and strategy, while utilizing information technology as a core element in the simulation (see attached PPT/PDF summary).
2. Many MHA students are active participants in the Health Improvement Group (HIG), a student group established to build students' knowledge and skills in information and quality. HIG sponsors seminars and presentations by with faculty, alumni, and healthcare technology leaders.
3. Students with a long-term professional interest in information technology participate actively in pHIT (Public Health Informatics & Technology), the UNC student chapter of HIMSS (Healthcare Information and Management Systems Society.

4. MHA students in the residential format complete a 12-week internship between first and second year. In collaboration with the preceptor, program director, and advisor, each student develops an internship plan that includes the designation of at least three competencies that are perceived by the student and advisor to be of particular importance to the student. These competencies may be technical (e.g., financial skills, information technology), strategic and analytic (e.g., analytical thinking, systems thinking), as well as leadership-related (e.g., communication, interpersonal awareness). Preceptors design experiences and improvement metrics based on these competencies. At the conclusion of the internship, competency improvement is evaluated by both the student and preceptor. Virtually all internships provide opportunities for students to learn and apply skills associated with information technology and information management. Many are involved in process improvement projects, and several students participate in IT vendor selection processes.

5. Our executive format MHA program has been in existence for over forty years. It has evolved tremendously in that period of time. It began as a program that brought executive students to campus twice a year for intensive courses. The program then progressed to the use of telecommunication; faculty members broadcasted lectures from a central site to a remote site. The next advance involved faculty traveling to multiple sites. Our current platform is synchronous online teaching utilizing Adobe Connect, among the most useable and innovative distance learning technologies. We see ourselves as a leader in the use of distance learning technologies, and through our standing Committee on Educational Excellence and Innovation (CEEI), we continue to explore new opportunities to integrate technologies into our teaching.

The UNC MHA program has a remarkable record of success testing and applying new instructional technologies. As a seemingly trivial but meaningful example of this is our use of social media in the classroom. One of our faculty members started using Twitter in the classroom some six years ago, prior to its evolution as a common social media tool. Our faculty use Poll Everywhere technology in the classroom, and our executive format MHA has had great success with its synchronous distance learning platform. Our home-grown State of Franklin Simulation is a model for using technology to teach health care strategy and marketing.

We have committed ourselves to integrating information technology content throughout the curriculum in specialized information, quality, and informatics courses. Our students learn to manage and analyze complex data bases, and gain facility in conducting analyses to develop market strategy solutions. Of greatest significance, however, is our decision several years ago to integrate our information technology curriculum content with healthcare quality. In this way, students learn about technology from an applied perspective, focused on process improvement, patient safety, and improved patient outcomes. Through strong linkages with alumni, we are able to engage our students in internships and class-based projects that utilize information and information technology in the service of quality. Our students learn about and apply technologies in a meaningful way. It is our history of utilizing technology in our teaching, and providing multiple opportunities for our students to learn and apply information management knowledge that supports our application for the CAHME/Cerner Award for Excellence in Healthcare Management Systems Education.