Overview, Highlights of the Institute, and Approach

The Institute of Health Administration, located in the Robinson College of Business at Georgia State University, was founded in the 1950s. The mission of the Institute, through its business focused-programs, is to prepare students to manage change, challenges, and opportunities within the healthcare sector. Its graduate academic program has been accredited by CAHME (ACHESA) since 1972. The dual degree MBA/MHA program targets early careerists who value rigorous didactic content from the business and health care domains delivered in a format that facilitates applied learning. The Institute is proud of its almost 1,500 alumni serving in executive management positions throughout the U.S. Our Program emphasizes student attainment of competencies across four domains. Those competencies specifically relating to this application are highlighted, although most competencies require students to be adept in the management and use of information. Competency definitions are provided as an appendix to this application.

Business Knowledge and Skills	Knowledge of the Health Care Environment	Leadership	Professionalism
• Financial Management • Operations Management • Strategic Management • Human Resource Management • **Analytics**	• Clinical Professions and Continuum of Care • Legal and Regulatory Environment • Health Care Economics and Financing • Governance • Health Policy • **Measurement and improvement of org performance** • **Health Information Systems and Technology**	• Strategic communications • Motivation and Empowerment of Others • Group Participation and Leadership • Change Management • Servant leadership	• Self-Regulation, Awareness and Confidence • Ethics, Honesty and Integrity • A Commitment to Lifelong Learning

We are educating future leaders who will be the <u>consumers</u> of information generated by the vast data available within and across the health care sector. Organizational leaders need to be able to identify the information requirements for improving performance (measuring and improving organizational performance), create an information infrastructure that supports meeting those requirements (health information systems and technology), and have the analytic capabilities to know the power and the limitations of analytics. At the same time, our graduates are expected to enter the

workforces as capable <u>producers</u> of information needed by organizational leaders. Therefore, we place a high value on ensuring that our graduates have strong analytic capabilities.

The Integration of HIT into the Curriculum and Content Delivery

Academic programs across the College have increasingly emphasized development of competencies relating to analytics and the use and management of information and technologies. Broad based skills are developed in the MBA courses and focused on health care within the MHA portion of the curriculum. We describe here the development of the three principle competencies related to this application. All referenced courses are required.

Health Information Systems and Technology: Digital Innovation (**MBA** 8125) ensures that students are able to analyze the broad impact that IT is having on industry, leverage IT to generate business value, make informed decisions about the acquisition and implementation of IT, and consider risks and ethical concerns associated with IT. We build upon this foundation in the **MHA** course in Health Information Technology (HA 8670) through which students gain exposure to the internal and external facing clinical, financial, and managerial and information systems that support the industry. The course has a wide focus that goes beyond EHRs to include value-based care as facilitated by clinical quality measurement (CQM); technology to support Care Coordination such as Health Information Exchange (HIE) and Remote Patient Monitoring (RPM); and technology to support Patient Engagement such as Patient Portals, PHRs, Patient Generated Health Data (PGHD), and Telehealth, as well as apps that extend EHRs enabled by SMART and FHIR.

Measuring and Improving Organizational Performance: Data Driven Decision Making (**MBA** 8040) and the above referenced **MBA** digital innovation course provide students with an introduction to using information to improve performance. In MBA 8040, students gain expertise in visualizing and presenting data that supports organizational decision making processes, and in data driven models to address critical challenges faced by organizations and society. In **MBA** 8125, students examine how IT

can be an enabler for business process improvement and service innovation, how to recognize business processes and assess their information-related needs, and how to develop organizational agility through innovations enabled by IT. Within the **MHA curriculum**, students further apply these skills in the context of the healthcare sector. In Health Services Research and Methods (HA 8700), students gain expertise in quantitative methods, measurement of healthcare quality, and using data to support quality improvement.   In Operations Management (HA 8620), the quantitative skills are applied to process improvement through tools such as simulations, balanced score cards and dash boards, and the use of technology to support project management.

Analytics: The **MBA** course in data driven decision making is foundational for development of the analytics skills our graduates need. Predictive Analytics in Healthcare (**HA** 8750) emphasizes aggregation of data from multiple internal and external sources (HCUP, AHA, and HIMSS), and the use of multiple analytical and text mining techniques to glean actionable intelligence from large datasets. It covers the process of formulating business objectives, data selection, preparation, and partition to successfully design, build, evaluate and implement predictive models for a variety of health care applications. Students gain exposure to commonly used software (XLMiner, Tableau) and refine analytic techniques such as cluster analysis, regression, neural networks, and forecasting.

Content Delivery: Our content delivery distinguishes itself through three dimensions: 1) our heavy reliance on current readings; 2) our emphasis on case based learning for contextualizing theoretical concepts; and 3) our use of team projects to ensure application of theory and to promote peer-to-peer learning opportunities. Health Information Systems (HA8670) has entirely new readings each year to ensure current content is covered. Case-based learning includes cases around process innovation and analysis, healthcare quality, technology integration, and value-based care via population management. Team projects are incorporated into almost every class mentioned here. For example, in the MBA Digital Innovation course, students work in teams to identify a problem, identify data to inform

the problem, visualize the data to provide insight, and interpret and apply the findings. In Predictive

Analytics, students are required to apply tools and techniques learned in the course to large datasets.

They work with a local health care organization to understand how it uses analytics to affect outcomes.

Experiential Learning in HIT

Students are exposed to experiential learning both within the classroom (as described above)

and during their required experiential learning course (residency or field study). Because of the strength

of our Program, most projects include a strong emphasis on the use of technology or data to improve

organizational performance. Three examples are provided.

- The development of an initial framework for a geriatric population health strategy at a major

  academic health system which will transcend the typical health system architecture and focus

  on future strategy. This will include design of a Key Driver Diagram for geriatric population

  health to include current programs, creation of an ACE Unit dashboard to evaluate/monitor Unit

  performance, and a financial model inclusive of projected ROI for the ACE Unit.

- An analysis of low utilization and non-standardized processes for use of robotic surgical

  instrumentation in order to increase OR Robotic utilization. The project uses data from the

  Cerner Surginet reporting system, incorporates analysis of scheduling data, analysis of training

  processes, and uses Lean A1 and Lean A3 tools among other analytic approaches.

- An analysis of the use of mobility technology tracking systems and algorithms to automate

  data collection and measures for reducing pressure ulcers in the intensive care unit of an

  academic medical center, and ultimately impact patient experience, patient safety and

  organizational goals in the CMS value based purchasing initiative.

Professional Development Opportunities

IHA program competencies include "Life Long Learning." To support this competency, we

provide stipends for students to attend national and local chapter activities for ACHE and NAHSE.

Moreover, faculty are involved in presenting at these meetings and pushing the frontiers of research through their involvement in ICIS, HIMSS, INFORMS, and other such association. One faculty member (Baird) was the Student and Professional Development Chair on the GA HIMSS Board last year. He recruited our student (Isenburg - letter attached) as a student representative to the board. We support student attendance at both the local and national HIMSS conferences.

Alumni Involvement

Alumni have engaged the program in advisory, preceptor, mentoring, and guest lecturing roles. Through our governance structure that includes our advisory and alumni boards, the Institute responds to changes in the industry over time. Board members, including alumni, have provided strategic visioning and overview of industry trends to ensure our competency model and curricular focus remains relevant. Several alumni participate as preceptors for students engaged in HIT related projects. Preceptors participating throughout the program have been at the director to senior level; titles include Director of Performance Improvement, Director of Quality and Clinical Decision Support, VP of Operations, Associate VP for Nursing Operations and Informatics, and Director of Business Intelligence. Moreover, alumni have been involved as guest lecturers on topics relating to HIT. For example, a former student has provided guest lectures on the use of technology to improve revenue cycle management. Another alumnus has lectured on the use of HIT in the management of ACOs and PCMHs.

Conclusion

Our processes are designed to ensure that we continue to push the curricular frontiers in HIT and analytics. With the continued involvement of our stakeholders and our engagement with industry and research, our curriculum will continue to develop the HIT and analytics related competencies required to lead the health care sector in the coming decades.