The Master in Healthcare Innovation: *A New Paradigm in Healthcare Leadership Development*

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There is a need for a new approach to leadership development in the health care industry. The Master in Healthcare Innovation program prepares the leaders to meet the complex demands of today's health care system.

THE NEED FOR A NEW PARADIGM

There is arguably a crisis in leadership in health care. As the world continues its inexorable shift toward more complex patterns of relationship and organization, and the digital reality takes over more of the functions of our systems, a new brand of leadership is now necessary for thriving going forward. The operation of complexity is driving change at many levels in health systems. From the management of a broad variety of digital devices and processes, an increasingly complex array of knowledgeable health professionals, increased emphasis on providing a context for advancing individual and community health, and the achievement of a value balance between resource use and the health status of all who use the system have now all converged to create the conditions that make it untenable to use more traditional leadership approaches.[1] The evidence of this challenge is the accelerating turnover of health leadership from existing positions and the paucity of willing new leaders to replace them. Report after report suggest that senior health care leaders feel ill-equipped to meet the challenges in regards to innovation going forward.

Traditional approaches to leadership education and to the applications of leadership in health care are no longer adequate to address the issues leaders are confronting in the contemporary health care environment.[2] Traditional operations and financial management foundations of executive education are no longer sufficient to meet the growing demands of health networks with their web of collateral intersections, interfaces, interdependency, and their collective dynamics. Very few traditional programs are innovation centric. Instead, these programs remain leader centric, which maintain the industrial model that has been in existence for many years. The focus must shift to the knowledge worker, which requires a new approach. The principles of complexity science and complex adaptive systems are now the centerpiece for the design, structure, and behaviors of large and complicated service networks.

The collateral and horizontal nature of complex systems, and the collective and collaborative behavior that is necessary to sustain them, produce new rubrics influencing relevant leadership behaviors. These behaviors increasingly depend on equitable relationships, empowerment, dialogue, negotiation, and team-based processes along with a growing dependence on point-of-service decision-making.[3] These have emerged as the mainstay of system sustainability and leadership success. Traditional programs struggle to keep up with the demand for these competences because they often reflect a frame for leadership learning that in many ways is no longer useful. Development of emergent health leadership requires curriculum grounded in innovation as a discipline with the attendant competences that reflect greater equity, complexity, ownership, human investment, and partnership,[4] and the ability to manage ever-changing human relationships as the requirements of change now call for new insights and skills. Connected to all these dynamics is the essential human interface/interdependence with a growing influence of technology in decision-making, action, and evaluation.[5] It is the catalysis of all these factors that drives the essential relevance of the Master in Health Innovation (MHI) degree.

THE NEED FOR A MHI PROGRAM

The MHI program teaches leadership principles steeped in the concepts, evidence, and practices of complexity leadership theory and innovation implementation. Health care organization leaders have stressed that innovation, rather than management, will lead the US health care system to become more affordable, and utilize resources more effectively.[6] Preparing leaders with an understanding of the innovation process will address the critical gap between health care leadership capacity and quality, cost, and error metrics that continue to rise.

The MHI program is a multidisciplinary leadership degree that builds the capacity for individuals to understand, translate, and lead complex health care organizations through the application of innovation and change principles. The program is designed to develop leadership that can apply behaviors that impact individuals, organizations, and health systems. Hallmarks of this program include an emphasis on leadership in relationship to health systems, health policy, organizational operations, innovation techniques, evidence-based leadership, and complex adaptive systems. This program is radically different and streamlined to develop health care leaders while integrating personal wellness principles within the context of the changing health care landscape. The MHI is itself an innovative educational experience directed to develop health care leaders using an active interdisciplinary learning model that integrates personal wellness with the principles of innovation and change.

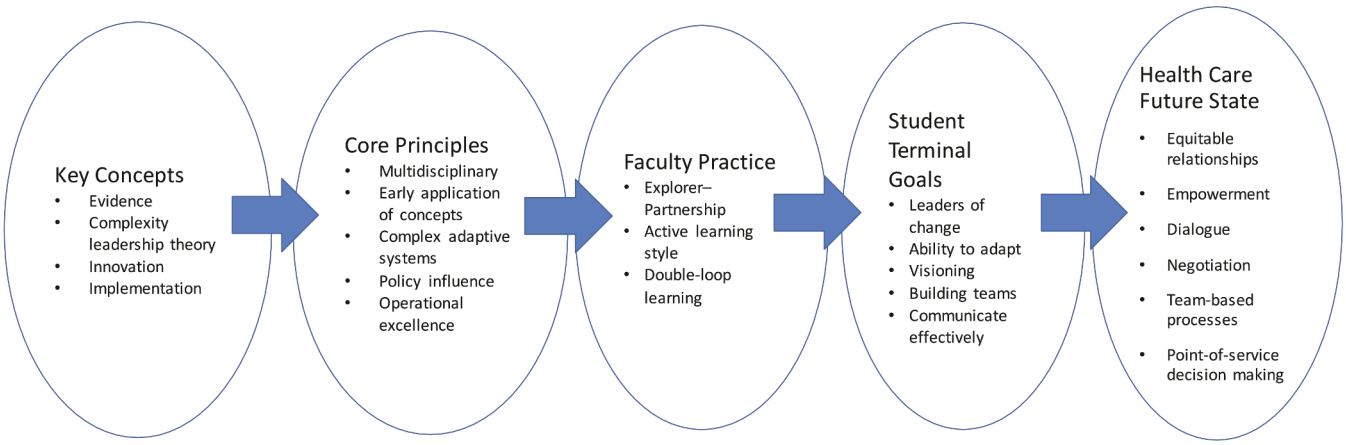
This program differs from other innovation programs such as the doctor of nursing practice (DNP) in executive leadership in that the MHI focuses on the application of innovation leadership practice across the health care system rather than focusing specifically on the practice of nursing or advanced nursing. The MHI is focused on the application of leadership behaviors, whereas the DNP is focused on the creation and translation of evidence of leadership at an executive level. The MHI is also multidisciplinary, whereas the DNP is nursing specific.

DEVELOPMENT OF THE MASTER IN HEALTHCARE INNOVATION PROGRAM

The MHI program was initially conceptualized as a program to prepare leaders to function in complex health care organizations by utilizing complexity leadership principles that would focus on collaboration, innovation, networking, and change. Graduates of the MHI program were anticipated as being equipped to lead change, through ambiguity and chaos, to shape health care organizations to better adapt to the monumental shifts in payment and patient care structures, moving from volume to value.

Developed in alignment with the overall organizational strategic plan of the College of Nursing at The Ohio State University, the MHI program focused on health care innovation through curriculum development that supported unique,

Table 1. The MHI Experience



original pathways. To capitalize on the strength of innovation in program development, selected experts who were predisposed to innovation and demonstrated respect for the unique needs of the program were recruited to assist the team with course development.

After the needs, goals, and objectives were identified, a strategic action plan was developed. The plan focused on setting established timelines for course development and program evaluation. The team formulated specific strategies to achieve and measure innovation as the key focus for every course.

As a result, we found that teaching by modeling was a profoundly influential practice in innovation. Not only does the need exist to focus on the application of innovation leadership, but that practice should focus across the health care system, rather than focusing specifically on a tradition of nursing or advanced nursing and was different. There was a definite need for change.

THE MHI CURRICULUM AND PROGRAM OUTCOMES

Curriculum development by backward design starts with identifying the transferable skills (competencies) required upon graduation. Innovation leaders need different competencies than their manager counterparts (Table 1). Leaders of change require the ability to adapt, envision, build teams, and communicate effectively. They must also be able to navigate complex systems and relationships in order to build connections outside the traditional organizational hierarchy. The following is a list of the program outcomes of the Master in Healthcare Innovation.

- Practice innovation leadership skills, integrating and applying knowledge from the sciences with the fields of organizational culture, health policy, and information technology.
- Demonstrate leadership skills in health systems to improve the safety and quality of health care.
- Provide leadership in interprofessional collaborative teams to improve health outcomes for individuals, populations, and systems.
- Develop skill in the analysis and shaping of innovation work within health systems.
- Demonstrate skill in the application of innovation leadership and evidence-based frameworks for individuals, populations, and systems.

The curriculum is focused in 3 integrated phases. First, students learn about the health care system and foundations of innovation. Second, course work focuses on organization-specific innovation in which students apply assignments directly in their place or work and practice. The third phase of the curriculum is focused on integration and evidence. Here, students will build system-level change projects and carry them out under the mentorship of faculty and community partners. This allows the students to integrate the pillars of the program into an applied change. A capstone project mimicking these 3 phases is interwoven throughout the program to ensure students move beyond content comprehension and into real-world application.

The coursework and outcomes for the MHI program are targeted toward ensuring students the academic opportunities, resources, and experiences to provide the knowledge, behaviors, and skills to achieve successful professional growth in health care innovation and leadership. The coursework is designed to address the core competencies in innovation and leadership, providing the students with positive professional outcomes and advanced skills. At the completion of the MHI program, graduates are prepared to practice innovation leadership skills, integrating and applying knowledge from the sciences with the fields of organizational culture, health policy, and information technology. They are able to demonstrate leadership skills among interprofessional collaborative teams in health systems to improve safety and quality of health care. And finally, the graduates are able to demonstrate skills in analysis and shaping of innovation leadership and evidence-based frameworks for individuals, populations, and systems.

Program outcomes are measured using a variety of teaching methodologies and student evaluation methods. Methods of instruction used in the MHI program include a blended approach of online asynchronous and synchronous classrooms. Synchronous classrooms meet in "real" time and

are supported by web-based videoconferencing that allows students to be together while physically at a distance. During the coursework, students demonstrate skills and synthesis of course concepts through presentations, discussion boards, student peer reviews, surveys, project proposals, small group discussions, and hands-on innovation designs. Students are also introduced to multiple technologies during the program, such as VoiceThread, Google Hangouts, Zoom, and Adobe Connect, that assist them in learning about new technologies as well as presenting their knowledge from course concepts. A final capstone project is required to graduate from the MHI program. It represents a synthesis of course content into the design and implementation of an applied innovation project that demonstrates the leadership of innovation.

THE CAPSTONE PROJECT

The capstone project represents the assimilation of the MHI students' coursework into a real-world project. The capstone experience is modeled after what is used for analogous learning activities in other colleges of nursing graduate programs. Although the capstone courses are not "internships" that would occur on a post-program basis, the capstone courses strongly emphasize application of the MHI program concepts.

Examples of capstone projects include: writing a business plan and proposal for funding to create an innovative technology platform to provide students with rapid access to evidence to guide health care management; developing and evaluating a program to develop the leadership skills of middle managers for innovation; developing a unique program to help impoverished communities to locate fresh, local food resources using Google and Yelp, while partnering with other health care professionals to promote the program and design engagement tools to support healthy behaviors; and developing a new model to manage health care environments through a team-based rotation versus the traditional manager model.

In the MHI program, the final capstone project is associated with 3 courses. The capstone courses build sequentially upon each other, culminating in the final capstone project. In Capstone 1, activities focus more on basic-level application of principles, such as examining the organization's readiness for change and evaluating how innovation, leadership, and culture impact organizational performance in a local work or community setting. In Capstone 2, activities focus on principles of program development, implementation, and evaluation focused on policy, communication, technology, and outcome measurement. It is within Capstone 2 where the project is often launched, though this is dependent upon the organization's readiness for change, and other external variables that may impact the timing of the project. The final capstone project course allows students to integrate the concepts applied in previous courses, evaluate their project implementation, and identify opportunities to improve their projects for on-going implementation.

Each capstone course is a practicum course supervised by a primary preceptor in the setting in which the capstone course experiences occur. The student, preceptor, and faculty develop an individualized set of learning objectives and activities within the overall objectives for each capstone course, within a goal of a substantiated immersion and application of the course concepts. Capstone practicum hours are consistent with the numbers of credits for each course. These courses provide students with the opportunity to apply the principles of program development, implementation, and evaluation focused on innovation, leadership, and systems content into an innovation project in a health care environment. Students demonstrate comprehension and application of course content from previous and concurrent courses. The final capstone project allows students to synthesize the interrelated course competencies, integrate the concepts learned in the MHI program's core courses, and demonstrate evidence of understanding and application of innovation principles, concepts and strategies for implementation, and evaluation in a singular project that centers on innovation and complexity leadership.

FACULTY ROLE IN AN INNOVATION PROGRAM

In an innovation program, the faculty role is quite different from a traditional program. Faculty are required to move from an industrial age educational paradigm to a digital age paradigm in which web-based distance education and learning is the norm.[7] Specifically, faculty facilitate an adult, active learning approach in which faculty and students collaborate using computer-mediated communication and a double-loop communication style.

The role of an MHI faculty member moves from the traditional lecturer to an explorer–partner with student learners. In many ways, the role is antithetical to the teacher role in which knowledge is imparted by the content expert and validated through student assignments.

The MHI faculty role shares the role of content expert with the students as the learning topics are explored using innovative frameworks that require engagement, collaboration, and teamwork. In this approach, it becomes readily apparent that students access different resources and provide information that is different from faculty knowledge and thus enriches learning for both faculty and students. For example, in the course on innovative organizational cultures, students are expected to learn about Schein's[8] organizational culture model in which the basic elements are artifacts, values, and underlying assumptions. Students also learn about the differences and interrelationships of these elements and the positive impact on organizational effectiveness when the elements are aligned, and the negative impact on the organization when there is misalignment. In a traditional learning model, students might be assigned to reading references, websites, and videos related to organizational culture and Edgar Schein's model. The learning assessment would be a written assignment or podcast to reflect understanding in a traditional model.

In an active learning approach, students engage in 3 learning phases for each element of Schein's organizational culture model beginning with artifacts.[8] Students are assigned into

groups of 5 or 6. The first phase is an individual assignment, and phases II and III are group assignments.

Phase I

The goal for this phase is to identify the meaning and use of artifacts in an organization. Each student is assigned a specific health care organization or system and required to review resources including the Internet, personal interviews, and printed materials, and using Schein's definition of artifact, identify 2 to 3 artifacts for the organization. In addition, the student describes the origin of the use of the artifact and its meaning and use in the organization as well as the value of the artifact to the community. Each student presents their information in a 2-minute presentation to the team using text, VoiceThread, or audio summary.

Phase II

In this phase, students work as a team and provide peer comments to each team member. The team determines the top 5 artifacts of the organization based on prevalence and examples of the artifact. One student is selected to present the top 5 artifacts using voice, text, or video media. Students are encouraged to be creative in their presentations.

Phase III

In this phase, each group compares the selected artifact with the established theoretical definition of an artifact. One team member selected by the group presents rationale and support or lack of support for the definition in a single presentation.

Outcomes

Students learn individually the nature and examples of an artifact and then collaborate with others to select artifacts based on the established definition. This assignment continues on to exploration of organizational values and underlying assumptions using the same interactive processes. The goal is to provide an educational model that simultaneously provides a solid foundation to understand the nature of innovation approaches to learning and engage students in understanding organizational culture as well as pushing the wall in styles of learning.

Our learning model encourages team work and reinforces the reality that innovation requires more than 1 person. One person has an idea and now needs to have a receiver of the idea to review and validate the usefulness of the new idea. Further, a successful innovation needs to move from small attempts to a largescale change.

CONCLUSION

The time is now for a new paradigm in health care leadership education and practice. The MHI program is disruptive and challenges many traditional academic and health care norms which is why the program is the right solution. A well-designed MHI program ensures the right curriculum, the right faculty, and the right students, all in partnership with the community in designing what's needed in health care today. It's exciting to be in health care today and help shape future leaders who are ready to lean into their discomfort as well as help manage others discomfort in some uncertain, uncharted, waters. NL

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