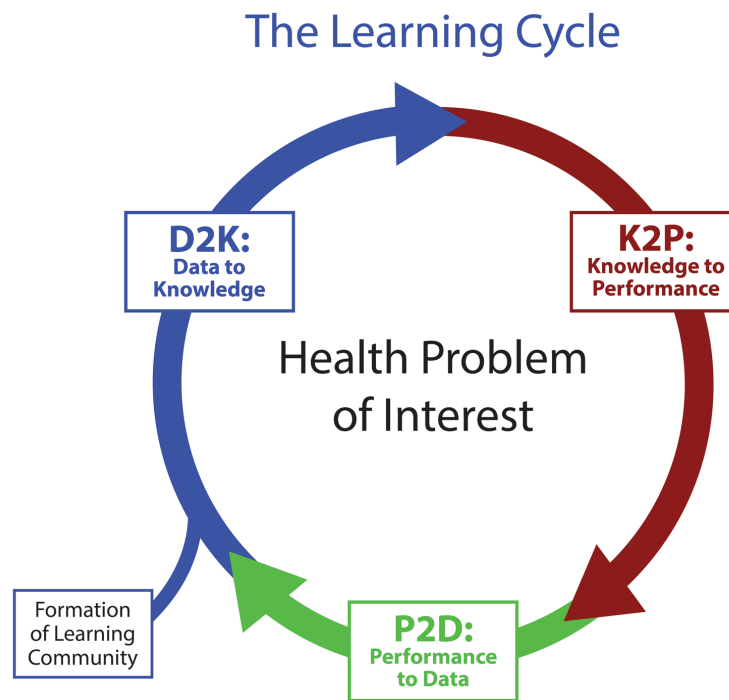


Department of Learning Health Sciences

Five-Year Strategic Plan 2018-2023

Executive Summary and Strategic Plan Narrative



Revolutionizing Learning, Transforming Health

Executive Summary

The Department of Learning Health Sciences (DLHS) is a first-in-the-nation basic science department focused on the sciences related to learning across multiple levels of scale (i.e. individual, group, organization, region, nation). DLHS works to improve health in systemic ways by advancing the sciences that make learning effective, routine, and efficient. Our research programs generate new knowledge that enhance learning at all levels; our educational programs train new researchers and practitioners in the sciences of learning; our service programs enhance health professions curricula and guide health systems as they evolve to become learning health systems.

The department is organized into four sub-units:

- The **Division of Professional Education** focuses on learning by individuals and teams in health care settings;
- The **Division of Learning and Knowledge Systems** focuses on learning at the levels of complex organizations and large-scale systems that span states and nations;
- The **Clinical Simulation Center** focuses on learning by individuals and teams in environments using advanced simulation technology that models the circumstances in which health care is practiced; and
- The **Educational Programs** unit encompasses all DLHS degree and certificate programs, including two graduate degree programs, the Health Infrastructures and Learning Systems (HILS) PhD and MS and the Master of Health Professions Education (MHPE), and two faculty development programs, the Medical Education Scholars Program (MESP) and Patient Safety and Quality Leadership (PASQUAL) Scholars Program.

As a result of a robust, collaborative planning process, DLHS has identified the following five goals to guide our work for the next five years:

1. Promote targeted growth and expansion of DLHS **research**.
2. Achieve **sustainability** of the department's **educational programs**.
3. Advance DLHS faculty and staff as **leaders and innovators**, in a **department unique in the nation** for its mission and research expertise.
4. Continue to develop and refine the **department's identity** as a basic science department.
5. Promote **diversity, equity and inclusion** within DLHS.

While these goals are presented in numeric order, all five goals are of high and equal importance to the success of DLHS.

The strategic plan is presented in four sections: background on DLHS, including a summary of accomplishments from 2014 to present; a strengths, weaknesses, opportunities and threats (SWOT) analysis, including a list of initiatives by unit; the goals, strategies, tactics and metrics, including a narrative summary and table; and a description of the team's workforce plans for the next five years.

The DLHS strategic plan is intended to be a living document that will evolve through a continuous cyclical process of examination leading to change. This strategic plan will drive the creation of an implementation plan and process to monitor on an on-going basis metrics and outcomes that are critical to the department's success. The formal written plan will be reviewed and revised annually.

DLHS Strategic Plan Narrative

This strategic plan was written to guide the Department of Learning Health Sciences over the next five years of its development (2018 – 2023). At the time of the plan's submission to the Executive Vice President for Medical Affairs' (EVPMA) Office, DLHS will have functioned for three and a half years under its revised name and mission.

Planning process: In January 2017, DLHS formed a strategic planning committee with faculty and staff representatives from all units of the department. The committee conducted a strengths, weaknesses, opportunities and threats (SWOT) analysis and surveyed the broader faculty and staff to inform the development of goals and strategies. Forty faculty and staff participated in the survey. Based on the survey feedback, the committee formulated a draft strategic plan and submitted it to DLHS leadership for review and refinement. In the fall of 2017, a revised plan was presented to faculty and senior staff at a faculty meeting, the Division of Learning and Knowledge Systems and Division of Professional Education divisional faculty meetings, and an all-staff meeting. Based on comments and suggestions received at each stage, the plan was revised several times and ultimately finalized for submission to the EVPMA's Office.

The DLHS strategic plan has five goals:

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2. Achieve **sustainability** of the department's **educational programs**.
3. Advance DLHS faculty and staff as **leaders and innovators**, in a **department unique in the nation** for its mission and research expertise.
4. Continue to develop and refine the **department's identity** as a basic science department.
5. Promote **diversity, equity and inclusion** within DLHS.

While these goals are presented in numeric order, all five goals are of high and co-equal importance to the success of DLHS.

Goal 1: Promote targeted growth and expansion of bold DLHS research.

DLHS must grow its basic science research portfolio. While aspiring to create transformative knowledge that advances science and improves health, as aligned with the Medical School's discovery pillar, DLHS will prioritize opportunities that secure funding for faculty research to sustain current staff and departmental initiatives. DLHS aims for average support of faculty salaries (from sources other than general funds allocated to the department via the FAM) to be greater than or equal to 60% across the department. This goal spans three units of DLHS:

- The Division of Learning and Knowledge Systems (DLKS) will continue to expand research by aggressively identifying and pursuing new sources of research funding. DLKS was built from the ground up since the departmental reorganization in 2014, and has recruited new faculty members who have engaged in building strong research portfolios.
- The Division of Professional Education (DPE) will expand research through collaboration and health professions education partnerships, for example with other health science schools and colleges, the Center for Research on Learning and Teaching, and Academic Innovation. DPE recognizes the need to increase faculty engagement in innovative and exploratory educational research. As DPE faculty prioritize the development of their own original research, this will shift DPE's emphasis on faculty development and service.
- As the Clinical Simulation Center (CSC) expands into a second location in Med Science Building II in January 2018, DLHS will build upon the CSC's differentiating strength as an academically focused simulation center by augmenting its research portfolio to keep research strongly balanced with education and service.

Goal 2: Achieve sustainability of the department's innovative educational programs.

Another critical goal to ensure the long-term success of DLHS is to build the sustainability of DLHS-sponsored educational programs. These include two innovative graduate degree programs: Health Infrastructures and Learning Systems (HILS) MS and PhD program and the Master of Health Professions Education (MHPE) program; and two faculty development programs: Medical Education Scholars Program (MESP) and Patient Safety and Quality Leadership (PASQUAL) Scholars Program).

The HILS program matriculated its first students in the fall of 2016. DLHS is actively expanding marketing of the HILS program to increase applicants and enrolled students for the fall of 2018. Obtaining training grant support for the HILS program, from many sources, will help to support future PhD students.

In addition to the DLHS-sponsored educational programs described above, the CSC sponsors several educational programs, including the American Heart Association's CPR courses (Advanced Cardiac Life Support and Pediatric Advanced Life Support), Fundamentals of Laparoscopic Surgery, Maintenance of Certification in Anesthesiology, and many other courses for medical students, residents, faculty and staff in Michigan Medicine. With two CSC locations fully operating in January 2018, DLHS estimates that the number of annual learner visits to the CSC will nearly double (from 10,000 to 20,000) by December 2018. The CSC will monitor

staffing and resources to efficiently respond to this rapid increase in scope and demand for services.

Education has been the foundation of the department throughout its existence. Sustaining the educational programs aligns with the Medical School's education pillar, to cultivate a learning community that engages all in bold and innovative education for the advancement of science, health and health care delivery.

Goal 3: Advance DLHS faculty and staff as *leaders* and *innovators*, in a department unique in the nation for its mission and research expertise.

DLHS will continue to revolutionize learning to transform health. Much of DLHS' innovative work in research and education also aligns with the Medical School's service pillar, in that DLHS engages and collaborates with our institutional, local, state, national and global communities to advance health and science. Our research innovations will focus on three primary areas:

- **Learning health systems:** DLHS will work with partners at different levels of scale to advance and catalyze learning health systems. For example:
 - At the local/institutional level in Michigan Medicine, DLHS facilitates a Gastroenterology Learning Community that is implementing a learning health system approach to improve the patient instructions and notification process for colonoscopy preparation. DLHS will partner with the clinical enterprise of Michigan Medicine and other schools across U-M (e.g. School of Dentistry, School of Pharmacy) in successful innovations and implementation of learning health systems. This project is an example of how DLHS helps to improve the delivery of outstanding patient care for populations, as aligned with the Medical School's care pillar.
 - At the state level, DLHS is working with the Michigan Health Information Network (MiHIN) to implement the Knowledge Grid (a software system that accelerates the movement of best practice knowledge into widespread use to improve health) to alert providers about high risk medications and other potential health problems. DLHS will build on the success of an initial Michigan Medicine pilot project to expand this work with other organizations across Michigan.
 - Internationally, DLHS is partnering with the National Research Institutes of Taiwan to predict Hepatitis B patients' liver cancer risk and recommend preventative measures using the Knowledge Grid. DLHS will continue to develop research partnerships with Taiwan and other nations, including the United Kingdom and Switzerland, that are implementing learning health systems on a national scale.

- **Health professions education:** DLHS is catalyzing the science of health professions education. Through our annual Health Professions Education (HPE) Day, DLHS will promote the sharing of HPE research across three U-M campuses and measure the scholarly outcomes and collaborations that result from this event.
- **Clinical simulation:** Through its growing core faculty research program, the CSC will continue to evaluate the effect of simulation on learning outcomes and expand its robust innovations program for improved training and patient safety. For example, using 3D printers, the CSC will collaborate with research and teaching faculty to design more realistic models in order to replicate specific anatomical conditions that can then be used to train medical students.

Goal 4: Continue to develop and refine the **department's identity** as a basic science department.

DLHS joined the Endowment for Basic Sciences to become a basic science department in January 2016. Since then, DLHS has made rapid progress to launch initiatives and take a strategic direction to embody the qualities of a basic science department. For example, DLHS launched its first PhD and MS program, Health Infrastructures and Learning Systems (HILS), in fall 2016.

Because most of DLHS's faculty have expertise in fields that fall increasingly under the umbrella of "Health Systems Science", the department serves as a force establishing Health Systems Science as recognized basic sciences in the medical school. In this way, DLHS will enrich its identity as a basic science department by supporting teaching and learning in Health Systems Science as this concept works its way into curricula at all levels.

DLHS also will expand its communications and marketing of the department by writing the department's first communication and marketing plan to identify and prioritize strategic messages to specific target audiences. As we forge ahead in new fields of study in learning health systems research and Health Systems Science, we recognize the critical importance of better communicating who we are and what we do.

To further strengthen the department and our sense of shared identity, DLHS will work to align interdepartmental culture to increase cohesion across all units of DLHS. To this end, in 2017 DLHS hosted a series of All Personnel meetings with faculty and staff. These meetings will continue at least three times per year on an annual basis.

Goal 5: Promote diversity, equity and inclusion within DLHS.

As a distinctly interdisciplinary department, DLHS greatly values diversity, equity and inclusion (DEI) in every aspect of our work. DLHS will continue to promote an environment of respect that honors the individuality, dignity and well-being of everyone within the department.

DLHS is committed to increasing diversity, which is expressed race and ethnicity, gender and gender identity, sexual orientation, socio-economic status, language, culture, national origin, religious commitments, age, (dis)ability status, and political perspective. We are committed to challenging and responding to bias, harassment, and discrimination. We are committed to a policy of equal opportunity for all persons and do not discriminate on the basis of race, color, national origin, age, marital status, sex, sexual orientation, gender identity, gender expression, disability, religion, height, weight, or veteran status. DLHS pursues efforts to ensure that our campus is a place where differences are welcomed, different perspectives are respectfully heard and where every individual feels a sense of belonging and inclusion. We know that by building a critical mass of diverse groups on campus and creating a vibrant climate of inclusiveness, we can more effectively leverage the resources of diversity to advance our collective capabilities.

DLHS will champion DEI by expanding and implementing multiple initiatives for faculty, staff and students in the department. Under the leadership of Dr. Gretchen Piatt, Associate Professor of Learning Health Sciences, Associate Director of the Health Infrastructures and Learning Systems MS and PhD program, and DLHS DEI Implementation Lead, DLHS has convened a DEI committee with faculty, staff and student representatives. The committee membership is diverse with respect to race, ethnicity, gender, sexual orientation, age, geography, professional role and other attributes. The committee is working on developing DLHS' first plan to address and institutionalize DEI. While the plan is developed, DLHS will facilitate focus groups with faculty, staff and students about DEI, participate in DEI training activities and promote campus-wide DEI seminars via DLHS departmental media.

As the department grows, DLHS will prioritize diversity and work to reduce the effects of unconscious bias when recruiting and retaining students, staff and faculty. DLHS recently created two new positions and hired a Recruitment and Marketing Coordinator and Student Affairs Program Manager who are incorporating DEI into degree student recruitment strategies. DLHS will also assess staff capacity and develop strategic hiring plans for staff and faculty, including DEI strategies to improve faculty and staff recruitment and retention. In alignment with the Medical School's people pillar, DLHS aims to recruit, develop and retain the best faculty, staff and learners who work together for the greater good.