FINAL ASSESSMENT REPORT

Institutional Quality Assurance Program (IQAP) Review

eHealth M.Sc.

Date of Review: April 29th and 30th, 2025

In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the eHealth Masters program This report identifies the significant strengths of the program, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Review

In accordance with the Institutional Quality Assurance Process (IQAP), the eHealth program submitted a self-study in March 2025 to the Vice-Provost and Dean of Graduate Studies to initiate the cyclical program review of its program. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained the CVs for each full-time member in the department.

Two arm's length external reviewers and one internal reviewer were endorsed by the Deans, Faculties of Business, Engineering, and Health Sciences, and selected by the Vice-Provost and Dean of Graduate Studies. The review team reviewed the self-study documentation and then conducted a virtual review to McMaster University on April 29th and 30th, 2025. The review included interviews with the Deputy Provost; Faculty Dean, Vice-Provost and Dean of Graduate Studies, Associate Dean, Grad Studies and Research, Director of the program and meetings with groups of current students, full-time faculty and support staff.

The Director of the program and the Deans of the Faculties of Business, Engineering, and Health Sciences submitted responses to the Reviewers' Report (August 2025). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

- **Strengths**

The eHealth program's interdisciplinary nature is a major strength. Students have a variety of elective courses offered by the three faculties to choose from. The curriculum is flexible and allows students to formulate their own academic paths, focusing on specific areas of digital health. There are course-based and thesis-based options, which adds to the flexibility. The internships offer invaluable experiential learning that complements classroom learning. The program leadership is strong and dedicated.

- **Opportunities for Improvement and Enhancement, including appropriateness of resources**

The program name "eHealth" is outdated and difficult to understand. The curriculum is starting to be outdated as well since students demand more AI and analytics content. The curriculum also needs to include more frontline clinical context and emphasize increasingly important non-technical topics such as ethics, privacy, regulations, and governance. The contributions from the three participating faculties are not equal, with the business school leading the program, and engineering and health sciences contributing less. Given the low enrollments, whether the thesis-option should continue to be offered is questionable. If the thesis-option is to continue, elimination of the internship requirement for thesis students should be considered. Electives offered by the business school and engineering tend to be more and less popular among students, respectively, due to their actual and perceived differences in workload and difficulty. Currently, alumni are not tracked systematically, making it difficult to monitor if the program is meeting job market demands and if alumni are having successful careers in the field. The program director and most of the executive team members have heavy teaching loads and are struggling to commit to program improvements and innovations. There are concerns around succession plans for the program director and faculty leads in the executive team, as well as general sustainability of the program.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

Recommendation #1: Change the program name "eHealth" to a more relevant, readily accepted, and easier to understand name.
Department's Response and Actions to be Taken: The executive team agrees that it would be beneficial to change the name of the program. This will address concerns of students and assist with the marketability of the program. We will begin this effort as soon as possible, engaging marketing and branding professionals from within the contributing faculties for their expertise. Since the degrees we confer also contain the term eHealth, we will engage with senior colleagues to determine how to make this change as well.
Deans' Response: We agree that the program name should be relevant and easy to understand. We support the idea of engaging relevant individuals (and offices) from participating faculties to help with this exercise. We also suggest that the eHealth Program consult with the School of Graduate Studies to understand if renaming the program would have any impact on the Master of Science degree being conferred.

Recommendation #2:

Analyze and adjust (if need be) the target student phenotypes [in terms of technical background]. Assess if the current admission requirements are sufficiently narrow or broad, and adjust them if need be.

Department's Response and Actions to be Taken:

The executive team agrees that it is useful to revisit these topics in light of the renaming of the program discussed above. Given the increase in the number of competing programs in this space in recent years, we will undertake a detailed exercise to define our competitive position and ensure that an appropriate new name reflects this position. We will also ensure that the target student background and admission requirements are appropriate and clear.

Deans' Response: We encourage the eHealth Program to develop a better understanding of the target population and ensure that the admission requirements are consistent with the academic rigor of the curriculum. This is integral to the broader monitoring of the program's evolving place in the market.

Recommendation #3:

Assess if the thesis track should continue to be offered. If the thesis track is kept in the program, assess if it makes sense to drop the internship requirement so that they can focus on thesis work.

Department's Response and Actions to be Taken:

Consideration for dropping the thesis stream was also suggested in our previous IQAP review. The executive team maintains our position that there is benefit to having this research focused stream available for flexibility and to support eHealth research at McMaster. The stream is smoothly administered and, thus, does not require significant effort to maintain. Removing the internship requirement for thesis students is an interesting suggestion. Our experience is that the internship is one of the main appeals of the program for course-based and thesis stream students. We do encourage thesis stream students to pursue internship work that is research focused in support of their thesis work. As such, although no action is currently planned, we recognize the value of the recommendation and will revisit it as we consider program changes resulting from this review.

Deans' Response: We acknowledge that that thesis-track stream is small and does not require significant incremental resources to maintain, however, the eHealth program is encouraged to revisit an internship for this stream especially if the intent of internship is to provide exposure to industry positions. If the internship is attractive because of the perceived career opportunities, we encourage the program to consider whether the program can be more directive in requiring the thesis and internship to be more closely linked or whether it can be made optional.

Recommendation #4:

The reviewers suggest a number of curriculum-based items, listed and responded to below:

Department's Response and Actions to be Taken:

- Focus more on Machine Learning/AI and analytics as core competencies; include more clinical context and real-world health care problems; consider offering more courses related to relevant and increasingly important non-technical topics (e.g., ethics, privacy, regulations, governance)
    - The core instructors meet each summer to discuss core curriculum in advance of the academic year. We will be sure to discuss these topics this year.
    - Clinical context and real-world problems will be components addressed in capstone projects in the new course
    - In the current budget environment, there is pressure for us to reduce the number of elective courses so adding courses is currently not feasible. We will discuss amplifying these non-technical topics within our existing core courses.
- Address issues around the statistics course, eH705. Revise the course content to align better with the rest of the program and change the delivery modality to in-person.
    - eH705 will have a new instructor in the upcoming year, presenting a great opportunity to make adjustments. The new instructor will participate in the annual planning exercise, and we will discuss the fit of the course. Arrangements have already been made to have eH705 be in person in the coming offering.
- Analyze the electives offered by the three faculties for content overlap, workload, pre-requisites, and difficulty for eHealth students. If possible, implement adjustments to make them more accessible and appealing to eHealth students.
    - We do assess the list of electives each year in terms of suitability for eHealth students and have appropriate prerequisites in place. Given the diversity of our student body, it is challenging to assess difficulty level in general for our students. Since the non-eHealth electives are offered by the three faculties for the primary audience of their own programs, it is not feasible for adjustments to be made for the relatively small number of eHealth students taking them. In most cases, there are evaluation components in courses that allow students to apply course content in their areas of interest, making it feasible for eHealth students to explore eHealth perspectives. As such, we suggest no action on this recommendation.

Deans' Response:

- We agree with the need to update curriculum to include discussions on emerging technologies and how they impact real-world health care problems. We agree with the program response about annual retreat to discuss curriculum and amplifying the non-technical topics. However, we note that eHealth students have access to a wide array of electives, including several developed for eHealth students, but they are not subscribed as intended. There is a need to revisit these electives to make their contents more for the constituents and consider making 2 of the electives required for all eHealth students, and the remaining 2 can come from the wide array available through the three participating faculties.
- We are satisfied with the response regarding eH705 and are optimistic that the new instructor will do an excellent job.

- The eHealth Program is encouraged to look at the slate of dedicated courses (core and electives) and ensure that the academic rigor is consistent with the expectations of the program.

Recommendation #5:

Consider implementing a system or method to track and engage with alumni of the program to gather data on their careers since graduation.

Department's Response and Actions to be Taken:

The executive team agrees with this suggestion, and we have been investigating ways to implement a more formal process for some time now but have not found the right solution for our needs. Our alumni engage in many ways throughout the year (e.g., mentorship program, mock interviews, guest speakers and lecturers) and have become a great resource for internship job postings to support the program. Formalizing the systems and processes around alumni engagement would be beneficial for the program.

Deans' Response: We agree with the need to implement activities to facilitate enhanced engagement with alumni and encourage the eHealth team to engaging the Alumni offices in the participating faculties in this regard.

Recommendation #6:

Develop a plan for succession to replace the current Director and long-term faculty lead from FHS once their term ends to ensure sustainability of the program.

Department's Response and Actions to be Taken:

Since there is likely at least four years before these roles turnover, the executive team perceives this recommendation as very important but not urgent. In the coming years we will ensure that sufficient time is provided to plan for and onboard replacements.

Deans' Response: We agree with the response and will work with team to prepare a succession plan.

Recommendation #7:

Consider providing additional teaching relief for the Director and the faculty leads to permit time for innovation, change, and growth of the program.

Department's Response and Actions to be Taken:

The executive team agrees that, especially for teaching-track members, additional teaching relief would be helpful to create momentum for implementing innovation and change. Since we have just two staff members supporting the program, the executive team members do participate actively in some program operational activities throughout the year, particularly in the case of the Director. A similar recommendation was made in the previous IQAP report, with the Faculties indicating that this level of teaching relief is consistent with other programs operations. We would encourage the Faculties to consider that the leadership of an interdisciplinary program is more complex and

demanding than that of an in-faculty program, and that some of the changes being proposed here (e.g., rebranding) will require significant effort from the leadership group.

Deans Response: The teaching release for the Director is consistent with comparable programs at the home faculty. The director is supported by a team of Faculty Leads in recognition of the interdisciplinary complexity. We note that teaching-track positions are meant to be dedicated to teaching and educational leadership. However, the program will be provided with supporting resources to undertake the recommended engagement.

Miscellaneous Recommendation:

A few items were listed as bullet points in the reviewer report that are not suitable from the perspective of the program. They are listed here with an explanation of why they are not suitable. As such, we prefer no action on these items and they are not included in the implementation plan.

Department's Response and Actions to be Taken:

- Assess if it is possible to move the internship to the last two terms in the program for course-based students.
    - There are ministry regulations requiring that students finish their degrees with an academic term, so this item is not feasible.
- Improve exposure to research for students as an alternative to internships.
    - The internship is a required program element for all full-time students. Most students tell us that the unique eight-month internship is a key reason that they have chosen the program. Students who are interested in research do have research-focused internship opportunities. We will continue to expose students to digital health related research opportunities (projects) both within McMaster and externally as relevant options for internship work experiences, opposed to alternatives to internships
- Encourage and facilitate more engagement of research faculty to supervise thesis students. Consider additional support and resources for students to pursue the thesis track.
    - As noted earlier, the thesis stream is very small in this program (maybe 1-2 students per year) with students choosing their program stream at time of application. As such, the processes in place under the guidance of Dr. Cynthia Lokker seem sufficient to meet the needs of these few students. Cynthia is a research-based faculty member with a strong network in topics of interest to our students.
- Consider identifying staff members in Health Sciences and Engineering who can connect with current staff members and assist with administrative support for students, instructors, and supervisors to facilitate more or equal engagement across the three participating Faculties.
    - While we agree that the intention is to have equal participation across the Faculties, this intention pertains to curricular contributions. The School of Business is the administrative home for the program and is compensated for housing the current staff. Each of the staff members have colleagues in the other Faculties that they consult with as needed, but it is appropriate for administrative work to take place primarily in the School of Business.
- Assess how to facilitate and promote more engagement from members in the Faculties of Health Science and Engineering.
    - We believe that there may have been some miscommunication with the reviewers on

	this topic and/or misunderstanding of the documentation provided. Particularly with respect to engagement from FHS, there is no issue. While it may appear that DSB contributes more, this is by design and the Faculty is compensated for the administrative oversight via the MOU. In any case, we are actively working to enhance visible and meaningful engagement across all three faculties — for example, through interdisciplinary co-teaching of the capstone and rotation of executive committee roles. The implementation of the capstone course will also provide a mechanism to further encourage equal involvement through mentorship across the faculties to continue this trend.
Deans' Response: We are satisfied with the program response. Regarding support for thesis students, we note that the program is provided with funds for student stipends from the SGS Scholarship Fund. The fund is primarily intended to support fulltime graduate study for research-oriented training, so we ask that the program reviews the allocation of this stipend funding to ensure that thesis students are appropriately supported.	

Implementation Plan

Recommendation	**Action(s) to be Taken**	**Responsibility for Leading Action** (specify the role(s) that will be responsible for each action item e.g. Program Chair.)	**Timeline for Completing Action** (indicate specific timelines (e.g. not 'ongoing') for action)
Change the program name; potentially adjust target student phenotypes and admission requirements (Recommendations 1&2 above)	• Consult with key program stakeholders (ADs, chairs) for process suggestions • Engage with marketing and branding professionals in the three Faculties to develop a plan • Implement plan (expected inclusions: environmental scan, surveys and focus groups with stakeholder groups including both student and employer perspectives, branding development, approval processes)	• eHealth Director & Leads • eHealth Director & Leads • eHealth Director & Leads	• @ annual stakeholder meeting scheduled for September 3, 2025 • Plan developed by end of 2025 • Environmental scan & surveys in Winter 2026 • Focus groups with stakeholder groups in Spring 2026 • Branding development in Spring 2026 • Approval processes in Fall 2026 to implement in Fall 2027
Curriculum adjustment items (Recommendation 4 above)	• Annual instructor meeting to be held where the curriculum recommendations will be discussed by all impacted instructors. Curriculum	• eHealth Director	• @ annual instructor meeting scheduled for August 7, 2025

	adjustments will be decided on for implementation in 2025-2026 academic year		
Implement a method to track and engage with alumni (Recommendation 5 above)	• Compile requirements list for data tracking and plan for how to gather • Consult with other programs to discover their methods • Select appropriate low-cost methods and tools • Populate with historical information as much as possible • Develop processes for ongoing gathering and updating of alumni data • Develop processes for annual alumni engagement	• eHealth Director & Staff	• This will be a lesser priority than the program name change project, so may be delayed. We will aim for completion within 2 years.
Develop succession plans for the Director and Health Sciences Lead (Recommendation 6 above)	• The Director's term is scheduled to end on June 30, 2029 (involved since 2017); the Health Sciences Lead will likely transition out of her role in approximately June 2030 (involved since 2015). Efforts need to be made both to replace these roles and to document knowledge for	• The Director role is typically advertised and a selection committee is formed; this process rests with Senior Leadership of the Faculties. The current Director is happy to support the transition to her successor. • The Faculty Lead positions are selected by	• Discuss @ annual stakeholder meeting scheduled for September 3, 2025 as well as subsequent updates until the roles are filled

	use going forward. • While the selection of the successors is beyond the influence of the program, efforts will be made to ensure that processes are documented as well as possible for use by new team members.	leadership (ADs and Chairs) in the Faculties. The current Health Sciences lead is happy to support the process of onboarding her successor.	
Consider providing additional teaching relief for eHealth Team (Recommendation 7 above)	• Perhaps consideration of the time commitment required of the program team could be revisited on an annual basis. The eHealth team is small and the Director and Program Leads often participate in operational processes. Particularly in years where significant project work (such as the implementation of these recommendations) is planned, additional teaching relief would be very helpful.	• Senior Leadership of the Faculties	• Ongoing

Quality Assurance Committee Recommendation

McMaster's Quality Assurance Committee (QAC) reviewed the above documentation at the December 17, 2025, meeting. The committee recommends that the **eHealth graduate** program should follow the regular course of action with an 18-month progress report and subsequent full external cyclical review to be scheduled in seven years, and to be conducted no later than eight years after the start of the last review.