

**FINAL ASSESSMENT REPORT**  
**Institutional Quality Assurance Program (IQAP) Review**  
**Bachelor of Health Sciences (BHSc HONS) PROGRAM**  
**Date of Review: March 7 - 8, 2022**

*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 undergraduate and graduate programs delivered by the Bachelor of Health Sciences 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 Bachelor of Health Sciences program submitted a self-study in January 2022 to the Vice-Provost Faculty to initiate the cyclical program review of its undergraduate programs. 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 Executive Dean, Faculty of Health Sciences, and selected by the Vice-Provost Faculty. The review team reviewed the self-study documentation and then conducted a review on March 7-8, 2022. The review included interviews with the Provost and Vice-President (Academic), Vice-Provost Faculty, , Executive Dean of Faculty of Health Sciences, Associate Dean , Director of the program and meetings with groups of current students, full-time faculty and support staff.

The Director of the Program and the Executive Dean of the Faculty of Health Sciences submitted responses to the Reviewers' Report (October 2023). Specific recommendations were discussed, and clarifications and corrections were presented. Follow-up actions and timelines were included.

**The following program strengths were identified:**

- Well-designed, innovative, and interdisciplinary curriculum. ○ Use of Inquiry and PBL ○ Praxis Pathways Curriculum
  - Emphasis on the development of transferrable skills ○ Detailed curriculum map ○ Admissions: use of supplementary application, existence of equity pathways ○ Produces excellent students
  - Highly dedicated faculty with shared vision ○ Effective governance and leadership

**The following areas of enhancement were suggested:**

- The perception of being a “pre-med program” and attendant consequences for student culture
  - Expansion of the number of full-time Teaching Track faculty to provide long-term stability
  - Consider additional cohort-building activities to support in-course students affected by the COVID-19 pandemic.
  - Review program-level learning outcomes in light of UDLEs, noting that we have important and valued curricular elements that aren’t reflected in the outcomes.
  - Ensure grading consistency in courses with multiple sections ○ Provide student survey data disaggregated by year for future IQAP reviews

## **Implementation Plan**

<b>Recommendation</b>	<b>Responsibility for Leading Follow-Up</b>	<b>Timeline</b>
<b>1a. We encourage the BHSc program to review their program-level learning outcomes and their alignment with the University’s Honours Degree UDLEs.</b>	Assistant Dean, BHSc	Feb 2024

**Proposed Follow-Up**

Because the structure of the BHSc (Hons) Program is somewhat unique, mapping of the UDLEs to the PLOs is not always a straightforward matter, and the reviewers felt that there were some valued aspects of our curriculum that weren't clearly reflected in the PLOs. In preparing our IQAP self-study, we did a survey of all of our instructors to get their input and feedback on updating and refining our PLOs and their alignment with the UDLEs. The Assistant Dean and Assistant Director will re-review them at this point and make the linkages between UDLEs and PLOs clearer and more self-evident.

**1b. We recommend that the BHSc program segregate inprogram survey results by year of study to allow for longitudinal tracking of the mastery of learning outcomes.**

Assistant Dean,  
BHSc

Next IQAP  
cycle

**Proposed Follow-Up**

The principal mechanism by which we track the mastery of learning outcomes is student completion of the courses themselves, and our curriculum map documents the way that the learning outcomes are addressed by the various mandatory and elective courses. Student surveys may add some additional insights about this, but are not the primary measure for mastery of learning outcomes. With respect to survey data: normally when we survey our own students about various matters, we do indeed capture year of study and segregate survey results accordingly. The survey results we cited in Appendix 13 come from IRA, and it is not clear whether year level is an available piece of data in those surveys. The Assistant Dean will follow up with IRA and MI to determine if this information is available already. If available, segregated data will be included in our next IQAP review.

**2a. We encourage the BHSc program to consider a more broad-based or "holistic" admissions policy using supplementary questions that assess key non-cognitive variables associated with success in post-secondary institutions.**

None

n/a

### Proposed Follow-Up

BHSc has had a supp app since the program's inception, and has always had the explicit purpose of being a more holistic way of evaluating the suitability of applicants for the program than simply GPA. Since 2016, we have taken a systematic approach to designing supp app questions that give applicants opportunities to speak to 3 key areas: (1) to communicate aspects of their character and values, to be self-reflective, and show selfinsight; (2) their areas of interest, and the kinds of problems and questions that motivate them; and (3) their ability to make sense of complex, ambiguous information and to explain their position. In addition, we have given applicants more choice about what they wish to share by providing several options to choose from rather than asking all applicants to answer the same set of prompts.

We are largely satisfied with the holism of approach already, and when looking at Sedlacek's framework of ['non-cognitive variables' that have been associated with academic success](#), our existing approach actually captures many of these elements. One notable difference from the Sedlacek framework is that we do not ask applicants to talk about leadership experience or community service, because opportunities to participate in these activities vary considerably with geography, school structures, and socioeconomic status; we have deliberately avoided including questions that ask about leadership or extracurriculars due to these equity-oriented concerns.

We can explore whether there are other non-cognitive variables we might want to include in future supplementary application questions. For example, in our May 2022 program retreat we discussed the possibility of incorporating questions that would allow us to understand something about applicants' intrinsic motivation for learning (though it is not immediately clear how this could be authentically evoked or evaluated), or if we want to use the Sedlacek framework (or others) more explicitly in designing our supp app. However, we believe that our current practice already reflects these principles to a substantial degree.

**2b. We recommend that the BHSc program consider modestly (~3-5%) lowering the 90% GPA threshold for equity-deserving groups (Indigenous and Black applicants) to recognize the significant barriers to high GPA faced by these groups, or consider use of a discretionary path for admission of high-achieving students whose circumstances have negatively impacted academic achievement. We encourage the BHSc program to regularly review the admission, retention and academic performance of all alternative**

Assistant Dean,  
BHSc in  
consultation  
with Indigenous  
Health Learning  
Lodge

April 2023

<b>admission pathway students and to consider identifying additional mentorship and support opportunities for these individuals, as needed.</b>		
<p><b>Proposed Follow-Up</b></p> <p>This possibility was considered at length when we developed the EABA policy in the first place (and also in previous discussions about the Facilitated Indigenous Admissions Process, FIAP), and ultimately our consultations rejected this. The principal reason for sticking with the same GPA thresholds is because of concerns that using different standards for underrepresented groups would increase the likelihood that members of those groups may be viewed as less qualified and subjected to ostracism or discrimination as a result, or questioning their own deservingness themselves. Importantly, we have found that the EABA pathway in its current form has already been successful in increasing representation of Blackidentifying students in the program more consistent with Provincial demography using the 90% GPA threshold. Thus, we are inclined to leave it as is for the present time unless our annual analysis of admissions statistics suggests otherwise. However, this may be something we should revisit with respect to FIAP applicants, as they are quite dramatically underrepresented in the applicant pool; since the FIAP process is not specific to BHSc but is FHS-wide, we will revisit this possibility with the Health Sciences Education Committee and the Indigenous Health Learning Lodge in the coming months.</p> <p>We will also continue to work with staff in Community Engagement on McMaster’s Access Strategy to address barriers to higher education for equity-deserving students from the Hamilton area; for example, students from the Black BHSc Association have been very active in working with Celeste Licorish from the Access Strategy to do outreach to students from underrepresented groups.</p>		
<b>2c. We encourage the BHSc program to continue working with the Advancement office to promote the BHSc program to international students. Reflect upon the challenges faced by international students in completing the supplemental application and track the admission and retention of international students in the program.</b>	Assistant Dean (BHSc), Program Manager, FHS International Recruitment, Central Recruitment	Ongoing

**Proposed Follow-Up**

Active efforts have been ongoing since 2019 to enhance recruitment of international students, both with support from University central recruitment team, and with new staff positions in the FHS. For example, central recruitment developed a [specific webpage for international students interested in BHSc](#), which we supported by providing content, recruiting students to provide testimonials, etc. In the 2022 admissions cycle, Taylor Miatello (the FHS Marketing Project Manager) implemented direct outreach to international applicants at various points during the application process aimed at encouraging them to

follow through and complete the various aspects of the admissions process, sustain their enthusiasm for their application to BHSc, and consider our admissions offers positively.

The reviewers suggested that we track admission and retention of international students, and indeed we already do so. International applicants are somewhat less likely to receive an offer of admission compared to domestic applicants: in 2022, the overall success rate of international applicants was 2.4%, compared to 4.2% of Ontario applicants; in 2021, it was 2.3% compared to 4.0%. Our conversion rate for international applicants is relatively low (30-50%) compared to that of domestic applicants (approximately 85-90% in the most recent 4 years), but this is not surprising giving the differing geographic contexts of Ontario vs international applicants. Our retention rate of international students does not differ from domestic students.

We will continue to monitor these efforts and implement enhancements in the coming years. Notably, we launched a BHSc-MELD applicant stream this year for international students for whom English is not their first language.

<p><b>3a. To address the perceived ‘toxic’ medicine-oriented culture</b></p> <ul style="list-style-type: none"> <li>○ We recommend that standardized patients in clinical settings be minimized throughout the curriculum and not be used in first-year courses. The focus should shift to the development of general communication skills to</li> <li>○ and with a variety of ‘audiences’.</li> <li>○ We recommend that the program carefully review course titles and course content for real or perceived links to clinical medicine, revising these as needed.</li> <li>○ We encourage the program to continue their efforts to disrupt the ‘med school tunnel vision’ by engaging with alumni who have followed diverse career paths and presenting the multitude of graduate school opportunities (research and non-research). This should encompass/engage students at all levels across the BHSc program, with an emphasis on first-year students to establish a culture embracing a diversity of career paths. The program may consider developing an internal (and possibly external) ‘marketing’ strategy, creating ‘postcards’ or snapshots to showcase the paths and achievements of students and alumni, intentionally emphasizing those not clinically/medically-focused.</li> </ul>	<p>Assistant Dean – BHSc</p>	<p>ongoing</p>
<p><b>Proposed Follow-Up</b></p> <p>Certainly the problem of being perceived as a pre-med program and the attendant issues that foments in the student culture are long-standing issues, and are not unique to the BHSc</p>		

(Hons) Program; indeed, program directors of other Canadian undergraduate health programs report the same kinds of phenomena in their cohorts, and it is probably inevitable that these phenomena will be seen in any health-focussed program attracting high-achieving students. Our experience suggests the biggest drivers of these phenomena are not actually curriculum-related, but arise principally from 3 other sources:

1. The attitudes students bring with them at the point of entry to the program (particularly in relation to family expectations, and the social/political/economic realities that make medicine an especially desirable profession at this point in history). Our instructors and staff routinely see manifestations of this before students even start classes (eg. queries to advisors during 1<sup>st</sup> year registration, questions from students during summer Q&A sessions, comments from students during welcome week).
2. Medical school admissions policies and practices that have upstream effects on students who aspire to medicine (such as increasingly high GPA cutoffs, expectations around extracurricular involvement, requirements for full courseloads, med school application timelines affecting students during their academic year, eg. med school interview invitations and interviews in the first quarter of the year create emotional turmoil that reverberates within the program). The impact of these pressures is abundantly evident to staff and faculty in the program in a wide variety of ways.
3. Peer-level influences, ie. hearing from fellow students and recent alums about their perceptions of what is necessary for med school admissions, which are often overinterpreted or incorrect.

In other words, these problems are not created by the BHSc *curriculum*, but the Program community is a microcosm in which the pressures of medical school ambitions become magnified because we have a critical mass of students who are subject to these systems, influences, and forces.

As such, we don't believe this is a *problem* that can be *solved*, but rather an expected phenomenon that we can attempt to manage and modulate but not eliminate. Thus, we understand our task as to push back against those pressures and help students find constructive ways to cope with them. We have made progress in those directions already, and the reviewers' comments provide some other indications as to ways we might be able to intervene:

- **Standardized Patients** are used in various courses to align with specific curricular goals, and we will continue to use them where appropriate. We already avoid the use of the term "standardized patients" in 1E06, and tend to use alternatives like "standardized scenarios" instead. SPs are a small part of 1E06, and in that course the focus is on general communication skills and not clinical or professional communication. The upper year Communication Skills course (3S03) is intended to develop communication skills for the helping professions, and so *professional*



communication skills are appropriately the focus; the facilitators of these courses are social workers, and take an approach that is professional but not 'medical'. Updates

to technology may make it possible to move out of the physical space of the Clinical Simulation Labs and avoid the clinical atmosphere of that setting; we were using virtual SPs during COVID and in some cases continue to do so, and we may be able to make use of other physical spaces (eg. classrooms) to minimize the 'clinicalization' of the SP experience (although the large intake of students university-wide in Fall 2020 has placed extreme pressure on classroom availability)

- In terms of **course titles**, there are only a handful of courses where the titles and descriptions have overt or implicit clinical or medical implications; these have already been identified and appropriate changes have been made as part of the most recent annual curriculum revision process through UGC. None of our course content is clinical.
- **Diverse career options** are represented to our students in a wide variety of ways, both actively and passively:
  - All of our program promotional materials, presentations, and website mention health care as only one of many possible career paths; and where medicine is named specifically, it is always named alongside a variety of other health care professions.
  - Our website is slated for major revision in the coming months, and we plan to collaborate with FHS Alumni Engagement to develop new alumni profiles to showcase on our website representing diverse career possibilities. We are also considering developing an enhanced social media presence where we can also feature such alums and other media showcasing our interdisciplinary approach to health.
  - Looking at our menu of course options, many different types of careers are well-represented among them, explicitly and implicitly (including law, global health, health research, ethics, health policy, rehabilitation science, health innovation and entrepreneurship, community health, etc.).
  - HTHSCI 1G02 was specifically designed to ensure that first year students get immediate exposure to a huge range of health disciplines and professions starting on their first day in the BHSc Program, both to emphasize interdisciplinarity in general but also to push back against med school tunnel vision;
  - The Praxis Pathways Curriculum has several direct interventions that were deliberately designed to address these issues:
    - The first activity within weeks of their entry to the program is a 'personal mission statement' workshop in which students are asked to think about their core values, skills, and capacities; this activity very deliberately and explicitly asks students to think broadly about their lives and futures as being defined by more than just careers, and also discusses and pushes back against several aspects of the 'pre-med pressures' many students are already experiencing;

- Praxis Mentors are BHSc alumni who meet with in-course students, and they are recruited specifically to represent a diversity of careers to our students.
- We implemented a new Praxis workshop starting in Fall 2022 called “Pre-Med Poisoning – Prevention and Antidotes” in which we lead a discussion with students about the ways in which the aspiration to medical school can distort their priorities and affect their well-being; we are offering this workshop several times a semester, and there has been a very enthusiastic uptake and positive response from students thus far.
- We offer 2 upper year elective courses for students to think about work and careers in a broad way (3T03 – Work, Self, and Purpose, and 4XX3 – Professional Transitions) and to challenge the tendency to med school tunnel vision.
- We collaborate with the student society to offer “Life After BHSc” panels and other similar events to highlight a variety of careers.
- We have offered suggestions for new workshops to the Student Success Centre about non-medical careers that have been recently implemented.
- Very few of our instructors are MDs (and in fact, a substantial number of our instructors are BHSc grads who are not MDs), so students get exposure to lots of non-MD role models and BHSc grads who did not go the medicine route.

Many of the efforts we have described above do in fact have considerable success in getting students to think about other possibilities, and intervening in some of these problematic dynamics. Ultimately however, this is a health program attracting high achievers, and so to a significant extent it’s probably inevitable that lots of our students will aspire to medicine (which is not in itself a bad thing). Although it is unlikely that we can actually eliminate this problem, we will continue to seek and implement new ways to try and modulate and moderate those tendencies.

**3b. To ensure all BHSc graduates understand the social factors contributing to health, the BHSc program should consider developing a course (or a course module within an existing course) explicitly focused on the social determinants of health.**

n/a

n/a

### **Proposed Follow-Up**

Although many similar programs have a specific course named “social determinants of health” and we do not, our curriculum map illustrates clearly that these concepts are already present to a substantial degree in a variety of places in the curriculum. Among mandatory courses, social determinants of health are a major or moderate focus in 1E06, 1G02, and 2G03, and a minor focus in the mandatory courses HTHSCI 1X01, 2E03, 2GG3, 2K03, 2X03, 3G03, 3X00, and 4XP3. Among HTHSCI elective courses, social determinants are a major focus in 2DS3, 3AH3, 3DD6, 3HL3, 3MH3, 3NN3, 3RH3, 3RS3, 4AC3, 4IC3, 4IP3, 4LL3, 4M03,

4MS3, 4NU3, 4PA3, 4SC3, 4SR3, 4TE3, and 4ZZ3. Thus, we feel confident that students are getting appropriate exposure and orientation to social determinants of health even though there isn’t currently a course with that name; at the same time, we will continue to look for opportunities to enhance our curriculum in this area.

**3c. In the next 3 years (following Praxis pathway completion by several BHSc cohorts), the BHSc program should undertake a critical reflection on the Praxis Pathway. To facilitate this, we would encourage the program to begin collecting student reflections and feedback on the course and its modules, particularly from those who have completed all four years.**

Praxis  
Coordinating  
Team

December  
2023

### **Proposed Follow-Up**

Program evaluation of the new Praxis curriculum was always a part of our plan, and we have been collecting some data along the way. Now that we are about to launch the final year of the curriculum for the first time in 2022-23, we will be in a position to examine these questions with students who have experienced all 4 years of the curriculum and also aim to get insight from instructors (both those in the Praxis curriculum itself along with others whose courses may be impacted by the existence of Praxis – we are already hearing some of this informally), and from the Praxis TAs, who are also in a good position to offer constructive insight. The MacPherson Institute will be able to help support this work as well. We hope to be able to publish this work in the scholarly literature to disseminate this curriculum work that we are very proud of.

**3d. To better prepare students for pursuing independent research in upper-year courses, we would encourage the BHSc program to develop and require at least one labbased/experiential research methods course. This should follow early coursework that builds an academic foundation in the basic sciences, but precede the independent inquiry projects of the upper years of study.**

Assistant Dean  
BHSc, Assistant  
Director

December  
2023

### Proposed Follow-Up

The existence of few laboratory-based courses in the BHSc program is by design: the original architects of the Program felt strongly that the best way to learn about research methods was to participate in research itself, rather than in decontextualized academic exercises, and I continue to support this principle.

We do have several elective courses that address research methods specifically, including HTHSCI 3HR3, 3QA3, 3V03, 4BR6, and 4BR6, although none of these include laboratory exercises at the present time. With the potential of access to teaching lab space (that used by the iBioMed Program), in the coming year we aim to examine some potential opportunities for integrating laboratory-based activities in existing courses, and consider possible development of new courses or microcourses (particularly to make use of spring/summer

availability in the teaching labs, such as 'laboratory boot camps'), but it is very unlikely that we will make them mandatory, as experience in laboratory research *per se* is not one of our PLOs. That being said, 100% of our students get research experience in some form through their mandatory 3<sup>rd</sup> and 4<sup>th</sup> year project/thesis courses, and we should be able to report some numbers as to the different types of research represented among our student projects/theses as part of our progress report.

**3e. With the growing impact of biomedical technologies, artificial intelligence and informatics in health and medicine, we recommend that the BHSc program consider the addition of mandatory foundational coursework chosen from amongst physics, math, computing science or data science/informatics.**

Assistant Dean  
BHSc

December  
2023

### Proposed Follow-Up

Although we agree that it is valuable for BHSc students to have opportunities to learn about emerging technologies, we won't be implementing this in the form of mandating any additional required courses. It's also worth noting that even though they are not required courses, many of our students already take physics and math as elective courses. It would be valuable to explore the possibility of creating some new courses in collaboration with other departments to approach these disciplines *from a health perspective* -- we believe these would be very attractive courses to students in a variety of programs including not only BHSc, but also Biochemistry, Life Sciences, Biopharmacology, iBioMed, BDC, and more. We will aim to engage with Department and Program chairs in these disciplines to explore possibilities in the coming year. In addition, we are hoping to identify faculty who would be interested in teaching elective courses in health and bioinformatics; we currently have one 3E03 section that focusses on this, but it would be great to expand these opportunities in the near future.

<b>4a. Inquiry-based courses should incorporate some individual-level assessment of student learning and comprehension, in addition to the currently-used groupbased assessment. We acknowledge that this will add to the assessment load of instructional staff (instructors, teaching assistants).</b>	None	n/a
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**Proposed Follow-Up**

As documented in the assessment portion of our curriculum map, all of our courses already incorporate individual-level assessments, even in courses where there are substantial groupbased activities.

<b>4b. The program should consider implementing start-ofterm training for TAs/instructors in multi-section courses. This could include sharing of expectations and would address student-raised concerns regarding inconsistency of feedback/grading. It could also provide opportunities for peer evaluation of teaching.</b>	BHSc Staff, Assistant Dean	April 2023
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**Proposed Follow-Up**

This perception that some TAs or instructors mark harder than others is a very common concern among students. With respect to consistency of instructors across multi-section courses, this is something that is already reviewed routinely at the point of grade submission: the Assistant Dean always compares grade distributions in multi-section courses, and follows up with instructors where there are discrepancies (which is rare). With respect to TAs, we will begin by doing some evaluation about the factual basis for this concern – that is, to look at our courses that have multiple tutorials marked by different TAs, and see if there is any evidence of disparity. In at least some courses, instructors already look at consistency of marking by their TAs. We will review this and report on it as part of our progress report.

<b>5a. We strongly recommend that the University and Faculty of Health Sciences support program quality and sustainability with an additional 3-5 teaching-track academic appointments, thereby reducing the reliance on contract instructors (particularly those with a heavy course load). We recognize that this recommendation requires an ongoing investment by the University in the BHSc program, but it would address our concerns for a number of vulnerabilities the current model poses (discussed in Section 5) and reflect continuing support for this outstanding flagship program.</b>	Assistant Dean, Vice Dean	n/a
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**Proposed Follow-Up**

Certainly from the Program's perspective, additional teaching-focussed faculty hires would be desirable; however, it should be noted that our use of part-time instructors is not principally about fulfilling needs not met by the departments, but is by-and-large driven by the existence of people with relevant and valued expertise who simply enjoy teaching in the program in addition to their principal careers. In addition, there may be opportunities for collaborative hires with other existing or new programs in the next few years. The Assistant Dean and Vice Dean will explore these possibilities further.

**5b. We encourage the BHSc program to develop an explicit succession and sustainability plan that includes identifying ways in which the program might engage more FHS faculty members in program instruction (thereby reducing reliance on sessional instructors and working within existing resources). We anticipate that this will be a multi-year plan that includes *in situ* mentorship of those unfamiliar with IBL.**

Assistant Dean  
BHSc

Dec 2023

**Proposed Follow-Up**

In the coming year, the Assistant Dean will aim to connect with the Department Education Coordinators in the FHS departments to identify existing faculty members who have the capacity to teach and who might be a good fit for the BHSc Program; this is something that is being examined across all undergraduate non-clinical programs in the FHS. Indeed, we do

have existing mentorship practices for instructors new to inquiry-based education. See also 5a with respect to part-time instructors.

A succession plan does exist for key roles, and key faculty and staff hires in recent years have explicitly been undertaken with succession planning in mind, such as the teaching-track positions created from 2017-2020, and the creation of the Assistant Director role in 2021.

**5c. The BHSc program should take advantage of newly renovated teaching lab space to build additional lab-based activities into the curriculum. (see also recommendation 3d)**

Assistant Dean,  
Assistant  
Director

Sept 2023

**Proposed Follow-Up** See  
3d;

**6a. See section 5 for recommendations regarding sessional instructors and succession planning.**

n/a

n/a

**Proposed Follow-Up**

See 5.

**6b. Future IQAP reports could benefit from inclusion of program-level data from external surveys, such as the National Survey of Student Engagement (NSSE) (if available).**

n/a

n/a

**Proposed Follow-Up**

This feedback will be incorporated at the point of our next IQAP.

**7a. We encourage the BHSc program to create (and maintain) an *Instructor's Handbook* listing resources available to instructors and students to support academic integrity, student wellness and identifying the appropriate contacts for issues arising. This is of particular value for new instructors, but also can encapsulate the many changes occurring regularly in the academic environment (including in response to COVID-19).**

Assistant Dean,  
Assistant  
Director,  
Instructional  
Assistants

September  
2023

**Proposed Follow-Up**

We actually started doing this a few years ago but the project stalled at that time; we have recently reinvigorated it in the form of a Wiki in our BHSc Instructor Team on MS-Teams so that it can be a living, dynamic document. This will also make extensive use of resources already available from the MacPherson Institute, and we will also collaborate with MacPherson staff if there are additional resources that they could develop specifically for the BHSc context. We will aim to have this mostly completed by the end of this summer, and update it on an ongoing basis after that.

We are also considering whether we want to have an annual orientation session (formal or informal) for TAs and instructors who are new to the program particularly with a view to

orienting newcomers to the particular pedagogical approaches and ethos of the BHSc (Hons) Program. Initial planning for this will take place in Summer 2023.



<p><b>9a. Given the increasing demand for student mental health services, we recommend increased mental health support to BHSc students: either internally in the BHSc program and/or through improved access to central services at McMaster. This could also include supporting the BHSc Academic Program Advisors to undertake professional development, such as that offered on campus (<i>Professor Hippo on Campus</i>), through CACUSS (Canadian Association of College and University Student Services) and NACADA (National Academic Advising Association). Where applicable, this should include covering costs of workshops and/or attendance at national or regional meetings.</b></p>	n/a	n/a
<p>The crisis in campus mental health is something that all universities are grappling with in recent years. We do not anticipate that we will create BHSc-specific versions of mental health supports that are already available on campus (for example, through Student Wellness, Student Success Centre, etc). The Student Wellness Centre and the Student Accessibility Services office have both added a number of new counsellors and other staff in recent years to attempt to address the demand. Insofar as it is possible to do so, our Advisors aim to refer students to professional supports for mental health, but of course many of the academic issues that bring students in to meet with an Advisor are entangled with mental health issues. Among our Advisors and office staff more generally, the majority have indeed already taken Mental Health First Aid, SafeTalk and/or ASIST, Professor Hippo On Campus, or other training, and we absolutely support and encourage them to do so as part of their professional development, with costs covered by the Program.</p>		
<p><b>9b. Given the critical role of and increased need for Health Sciences Library resources and personnel from across the educational programs offered in the Faculty of Health Sciences, we would recommend enhanced resourcing of the Health Sciences library to meet these demands.</b></p>	University Library	2024
<p>The reviewers did not identify any specific gaps in the library collections or services in acute need of improvement with respect to the needs of the BHSc Program <i>per se</i>, though of course the broader context of financial pressures on academic libraries in terms of licencing agreements, unfavourable currency exchange rates, and other issues affect the overall body of materials and support available to BHSc students. With respect to the BHSc Program’s specific needs, the active involvement of HSL librarians in the Praxis Pathways Curriculum is particularly noteworthy, along with their support of other BHSc courses, and addressing the research-related needs of our students and instructors.</p>		

Program expansion across the university has put a strain on library resources. With a greater emphasis on health programming, the Health Sciences Library has experienced this strain disproportionately. It is known that McMaster libraries are currently resourced below their peers and a review of required resources out of the Provost's Office is planned.

**9c. As demand for the Anatomy lab/surgical skills space has increased—both with the increasing size of the BHSc program as well as additional students in the Integrated Biomedical Engineering Program and Health Sciences Program, additional staff may be required, such as a teaching lab manager who may be able to contribute to programming with additional active learning opportunities for BHSc students. Such an individual could also play a central role in the recommended lab-based course noted above.**

Assistant Dean  
– BHSc

ongoing

As we explore the possibilities of introducing laboratory-based activities and courses in BHSc (see 3d), we may indeed find that a staff role to support these activities would be useful; at the same time, it seems unlikely that such activities would be numerous enough to warrant a full-time staff role. The reviewers' suggestion to consider coordinating with the Education Program in Anatomy and/or iBioMed to create a joint role is a useful one, and there may also be other opportunities for collaboration with other existing or new FHS undergraduate programs in the near future. We do not wish to commit to the creation of such a position at this time, but this will be on our radar for consideration in the coming years as needs and opportunities arise.

### **Dean's Response Faculty of Health Sciences**

We were grateful to receive the Reviewers' Report of the Bachelor of Health Sciences (BHSc) (Honours) program. We wish to extend our thanks to the external reviewers, Dr. Ebba Kurz of University of Calgary and Dr. Sarah Wells of University of Ottawa; and to our internal reviewer, Dr. Lyn Turkstra. Their review of our undergraduate Health Sciences program was collegial, thorough, and thoughtful; and their insights were both affirming and supportive in the further evolution of the Bachelor of Health Sciences (BHSc) (Honours) program.

We have reviewed the report carefully alongside the Program's responses to the recommendations raised by the reviewers. We thank the reviewers for acknowledging the program's many strengths, including its dynamic and innovative nature, the dedicated faculty

and staff who are committed to the program vision and support of learners in achieving that vision, practices of regular reflection, and a responsive and contemporary orientation.

We feel that the program has earnestly reviewed the recommendations and provided reasonable plans to move forward with these. More specifically, we acknowledge the program's several types of responses that include full support of the reviewers' recommendations with targets for completion; and descriptions of work that is already occurring within the program that addresses recommendations and is usually "ongoing" in nature. Some recommendations were also felt to be unnecessary by the program and we will address these below along with the others.

The BHSc (Hons) Program expressed strong agreement with the reviewers and provided specific plans for recommendations related to alignment of program outcomes; review of equity streams; analysis of the Praxis programming outcomes; consideration of content regarding biomedical technologies, AI, and informatics; and development of an instructors' handbook.

The BHSc (Hons) Program also pointed to several places where they are already doing work in recommended areas or agreed that ongoing reflection and review was needed, including, maintaining a broad health-oriented program context and culture; recruitment of international learners; learner readiness for independent research in upper years; consistency of TA marking in multi-section courses; consideration of the faculty complement of the program; and lab-based staff support. Additionally, the program will include data segregated by cohort and year in program in future IQAPs.

There were several recommendations for which the program felt that it was already meeting the spirit of the recommendation. We agree with this interpretation by the program. These included:

1. Recommendation 2a: That the program's admissions process already incorporates a holistic approach, including use of many of the factors within the model suggested by the reviewers.
2. Recommendation 3b: That while there is not a single course titled, "Social Determinants of Health" with this as its primary focus, there are multiple, mandatory courses and several senior electives that have the social determinants of health as a major focus.
3. Recommendation 4a: Inquiry-based courses already include individual level assessment as demonstrated by the program's curriculum map.

4. Recommendation 9a: That there are a large number of available mental health support resources within the university and that it is appropriate that these are not duplicated at the program level. Additionally, training has already been provided for people within the program, including student advisors and administrators, to support their initial approach to learners who express difficulties with their mental health.

There is also a recommendation (9b) pertaining to the resourcing of the Health Sciences Library. We understand that library resourcing is being reviewed by the University across all available services. The reviewers noted growth across all education programming in the Faculty and expressed concern that library resources have not increased proportionately; however, the reviewers do not specify concern in service delivery to the BHSc (Hons) Program per se. We support a review of resourcing of library services.

Again, we thank the reviewers for their thoughtfulness in broadly considering the many issues facing our BHSc (Hons) Program; and for working with our Health Sciences program team to conduct a successful, virtual review. We acknowledge the excellent organization of this review by the BHSc (Hons) Program; and thank them for their earnest consideration of the recommendations put forward by the reviewers.

#### **Quality Assurance Committee Recommendation**

McMaster's Quality Assurance Committee (QAC) reviewed the above documentation, and the Committee recommends that the Honours Bachelor of Health Sciences undergraduate programs should follow the regular course of action with an 18-month progress report and a subsequent full external cyclical review to be conducted 7 years after the start of the last review.