

AFMC Opioid Response Project: Phase 1 Interim Report

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Highlights of the findings

Phase 1 of the Opioid Response Project has been a success. It has resulted in an online bilingual competency-based curriculum in pain management, opioid stewardship and substance use disorder for undergraduate medical education (UGME). The online modules are perceived to be evidence-informed, comprehensive, accessible and flexible. They were piloted with 170 undergraduate medical students, and **91% of pilot testers reported that they gained knowledge and skills they intend to use in practice.**

Stakeholders believe the curriculum will have a big **impact on the health care Canadians receive**, especially when combined with the curriculum for postgraduate medical residents and practicing physicians that is being developed in phase 2 of the project.

The **collaborative development process** was important to the project's success.

The project engaged representatives from all 17 UGME programs, experts in pain, substance use, and opioid stewardship, experts in medical education and assessment, and representatives from other organizations in the field (e.g., physicians' associations, medical student associations, regulatory bodies, and substance use groups). Over a 3-year period, stakeholders achieved consensus on the competencies required for students in pain management and addictions with a focus on safe opioid prescribing, developed a comprehensive curriculum and created a series of online modules. A repository of MCQs was also developed for use in Medical Council of Canada (MCC) examinations.

The AFMC leadership was able to maintain planned timelines throughout the project and manage the expectations and shifting priorities of multiple stakeholders, including during the COVID-19 pandemic.



What made this project successful

Bringing together the medical schools, involving SMEs from across the country, and engaging MCC and incorporating content into medical qualifying exams are key components of the Opioid Response Project's success. Other important elements of the project's success include strong coordination and communication from the AFMC and the involvement of a strong educational partner in Queen's University. Also critical were deliberate efforts to support uptake, implementation, and sustainability (e.g., school-specific curriculum assessment and mapping and creation of faculty development tools).



What could have strengthened the project further

Strategic involvement of other medical professions, meaningful involvement of persons with lived experience (PLEx) throughout the project, and earlier engagement of more Francophones were highlighted by interviewees as approaches that could have strengthened the project.

About the report

This report presents interim findings of Cathexis' evaluation of the AFMC Response to Opioid Crisis Project. Target audiences for the report are the AFMC and its funder, Health Canada's Substance Use and Addictions Program (SUAP).

The report focuses on the first phase of the project (2018-2021), which developed and is delivering an online bilingual competency-based curriculum for the undergraduate medical education (UGME) curriculum.

The report is organized according to the evaluation questions listed to the right.

This report synthesizes information from program documents, interviews and a survey with Deans from Undergraduate Medical Education (UGME) program to provide recommendations to the AFMC that will facilitate further improvements to the project.

Methods

Methods used in the assessment included:



A review of data and documentation provided by the AFMC (i.e., program documents, meeting notes, tracking log, project deliverables, etc.)



An online survey of UGME Deans in December 2020, with a response rate of 70% (12 out of 17).



Interviews by phone with 14 stakeholders in January 2021.

Details of the methods are provided in [Appendix C](#).

Evaluation questions

The evaluation explored the following questions:

1. **Relevance:** Did the project meet a demonstrable need?
2. **Achievements:** Did the project achieve its objectives?
3. **Efficiency:** How efficiently were project resources used?
4. **Collaboration:** How effective was the approach to collaboration across organizations?
5. **Outcomes:** What are the project's key contributions to the Health Canada SUAP outcomes? (uptake of curriculum by UGME programs; knowledge and skills gained) Were there any unintended impacts and outcomes?
6. **Key issues, challenges and opportunities:** What challenges arose and how were they addressed? What opportunities arose?
7. **Sustainability:** What is needed to sustain the project after funding ends?

Details of the evaluation questions are provided in [Appendix A](#).

About the Opioid Response Project

About the AFMC Opioid Response Project

The initiative was funded by Health Canada's Substance Use and Addictions Program (SUAP). Led by the Association of Faculties of Medicine of Canada (AFMC) with collaboration from key Canadian educational partners, the project aims to develop a curriculum for future and practicing physicians in the diagnosis, treatment and management of pain.

During the first phase of the project (2018-2021) the AFMC coordinated the development and delivery of an online bilingual competency-based curriculum for the undergraduate medical education (UGME) curriculum.

In the second phase (2020-2023) the AFMC will support residents in PGME programs and physicians engaging in CPD opportunities through education and training in pain management, opioid stewardship and substance use disorder.

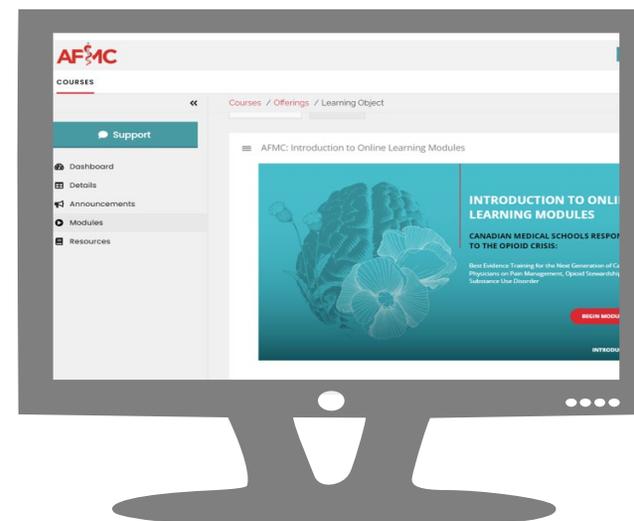
This report will focus only on the first phase of the project.

Target population

In the first phase, the primary targets are learner physicians in UGME programs. The project seeks to provide them with the tools necessary to improve pain treatment including safe opioid prescribing.

The secondary targets are the 17 Faculties of Medicine who have oversight of the undergraduate medical curriculum, the Medical Council of Canada which is responsible for the assessment of MDs entering into practice and the Royal College and College of Family Physicians of Canada who have the oversight of MDs entering Residency.

The underlying target population are the patients – namely the people of Canada - who will benefit from the physicians trained in Canada being competent in the management of pain and the appropriate prescription of pain medications such as opioids.



Screenshot of the Opioids Response Project introductory module (<https://elentra.opdes.queensu.ca/courses>)

Objectives

1. Achieve consensus at the medical schools (i.e., UGME level) as to the competencies required for students in pain management and addictions with a focus on safe opioid prescribing.
2. Develop a series of modules that form a comprehensive curriculum on pain management and addictions using existing best practices and adding new topics to address gaps or weaknesses in current offerings.
3. Use technology and on-line delivery of the curricula to maximize cost-effective methods and to effectively support its integration into the UGME programs.
4. Develop an evaluation framework that assesses the acquisition of knowledge and skills through the curriculum and evaluation of its uptake in Canadian medical schools.

There was a clear need to update UGME curriculum around opioids

In the early stages of the project, the AFMC commissioned an environmental scan and gap analysis to determine the state of opioid prescribing and pain management education in Canadian undergraduate medical schools. Significant gaps were discovered, confirming the need for a national, standardized, comprehensive curriculum.

When asked in interviews, stakeholders agreed that there was a real need to update UGME curricula regarding pain and problematic substance use. Some faculties of medicine were making an effort to update their curricula, but as one stakeholder explained, “If you think about 17 medical schools trying to tackle this, each in their direction – that in itself is a lot of duplication of effort, and can create inconsistencies and confusion around what is the leading standard.” Some stakeholders said they felt pain and substance use are not taught well, and wanted to contribute to updating the curriculum.

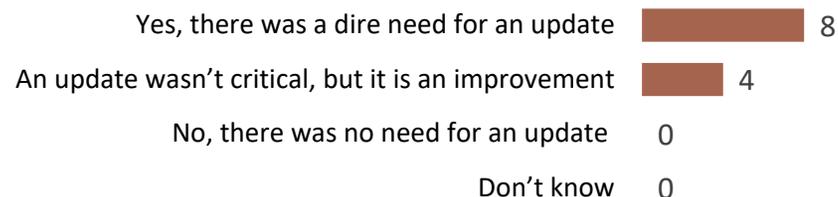
When asked why they or their organization had chosen to participate in the project, many stakeholders explained that the opioid crisis created a need they could not ignore, with some noting that they felt a personal investment in the project’s purpose.



At some point in their lives, virtually all people will need some kind of pain medication, and how we deal with that can either turn the trajectory of their lives to everything is good and better, or living on the street. The consequences of not understanding that, or ignoring the problem, is huge.

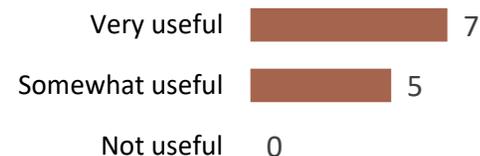
- Stakeholder interview

Most UGME Deans agreed that there was a real need to update how the topic is covered in Canadian UGME programs¹.



¹Source: Dec 2020 survey of UGME Deans (n=12), “In retrospect, was there a real need to update how pain management, opioid stewardship, and substance use disorder is covered in Canadian UGME programs?”

Having a national standardized curriculum was found useful by all surveyed UGME Deans².



²Source: Dec 2020 survey of UGME Deans (n=12), “How useful is it to have a national standardized curriculum for pain management, opioid stewardship, and substance use disorder in undergraduate medical education programs?”

Project achievements

The Opioid Response Project accomplished its key objectives

The AFMC has achieved the overarching goal set out for the project: the organization acted as a central resource and facilitator through the co-creation, development, implementation and evaluation of a Pain Management, Opioid Stewardship and Substance Use Disorder curriculum for medical schools across Canada.

Specifically, the project accomplished its key objectives of achieving consensus at the UGME-level of the competencies required for students, producing a series of online modules that form a comprehensive curriculum, and developing an evaluation framework to assess the acquisition of knowledge and skills by learners and to evaluate the curriculum uptake in Canadian medical schools.

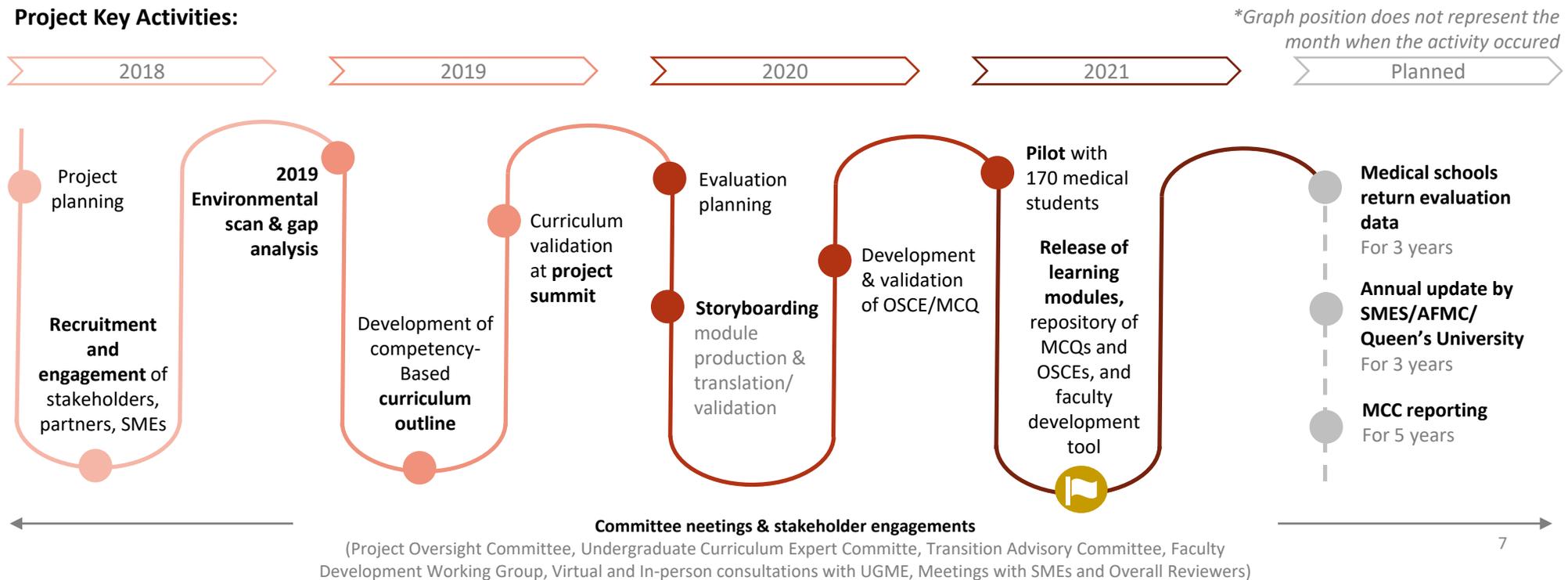
The greatest achievement is that the learning products are very strong

Stakeholders agreed that the curriculum is high-quality, and many used the same descriptors: evidence-informed, comprehensive, and standardized. Others noted that the modules are interactive, re-accessible, and bring in a wide variety of expertise. The flexibility of the curriculum was also felt to be a strength. One stakeholder felt that it was important that “the tone of the modules acknowledges that some of the responsibility for the complications with opioids sits with physicians.”



One of the unique things about this opioid curriculum is that AFMC has reached out to medical schools so that they can pick and choose which components of the curriculum they would like to incorporate into their own curriculum, so it can fit into their overall agenda for their undergraduate medical learners.
- *Stakeholder interview*

Project Key Activities:



Resources were efficiently managed

During the first phase of the project, the AFMC received approximately \$1.99 million to develop the opioids curriculum for undergraduate medical schools, consisting of 10 bilingual online courses, based on established competencies and objectives that address gaps in current educational offerings.

Over 27 months (November 2018 to February 2021), the AFMC secretariat has effectively managed expenditures and prioritized cost-efficient use of resources. Efforts included maximizing in-person opportunities to reduce costs (before moving to virtual engagements), and leveraging the strength of each contributor (e.g., ensuring SMEs focused on content, rather than editing).

The flexibility to re-allocate travel and accommodation expenses due to the restrictions of the COVID-19 pandemic created opportunities to strengthen other areas of the project. The re-allocated budget was used to accommodate logistical costs of video conferencing, and to cover additional honoraria for subject matter experts/reviewers and specialized SMEs across disciplines.

Overall, the project secretariat indicated that the available resources were sufficient to complete the project.

The collective strength of partners was leveraged

Partners leveraged Health Canada's resources by in-kind contributions, in the form of services provided. The initiative built on the collective strengths of the 17 Faculties of Medicine, the Medical Council of Canada, subject matter experts, and other partner organizations.

The project also leveraged existing resources on pain management, opioid stewardship and substance use disorder tailored to the Canadian context.

Knowledge products are reaching the target audience

The AFMC has engaged in many efforts to disseminate the knowledge products developed by the project, including issuing newsletters and project update communications to stakeholders, delivering presentations and workshops, and producing manuscripts.

During the development of the curriculum and the pilot phase, knowledge products have been disseminated to several stakeholders:

- The 2019 environmental scan and gap analysis was sent to approximately 70 stakeholders, including committee members and other Health Canada funded projects.
- The online modules were sent to over 400 individuals, including learners, committee members, reviewers, medical schools, Health Canada and other health organizations.
- The online modules were piloted by 170 learners (UGME students).

Although only recently launched, the official webpage³, hosting information, tools, and resources, including links to the curriculum, was distributed by the AFMC communication department to over 3,000 individuals.

As schools begin to incorporate the knowledge products in their undergraduate curriculum, many more learners and other interested stakeholders may be reached.

³ <https://opioids.afmc.ca>

The collaborative approach was highly valued by stakeholders

Stakeholders of the project included representatives from all 17 UGME programs, experts in pain, substance use, and opioid stewardship, experts in medical education and assessment, and representatives from other organizations in the field (e.g. physicians' associations, medical student associations, regulatory bodies, and substance use groups). These stakeholders were involved in a variety of ways: on the undergraduate education committee, on the transition advisory committee, on the project oversight committee, as SMEs, as overall curriculum reviewers, as module reviewers, as the secretariat, and as consultants (for curriculum development, assessment development, and translation).

Almost all stakeholders said that they would recommend using a similar collaborative approach on future projects. Aspects of the collaboration that were particularly valued include:

- **National:** patients move across provincial lines, and should have the same standard of care in every province
- **Multi-organizational:** different perspectives from different organizations important are critically important, since healthcare can be siloed
- **Inclusive of the perspective of PLEx:** people with lived experience are experts in their own care, and it is important to include their voice in any curriculum development project
- **Iterative:** developing the curriculum with multiple stakeholders over multiple rounds ensures that the curriculum resonates and is useful

Project management was viewed as largely seamless

Stakeholders feel that the project has been very well managed. Timelines were manageable and well-communicated, and many felt that the AFMC's coordination was a key part of the project's success. The unbiased and well-connected nature of the AFMC was also noted as a value-add, with one interview explaining, "It's like meeting the right life partner. If it was anyone other than AFMC, it wouldn't have worked as well. They get education. They made a very difficult project look easy because they are used to that role of coordinating medical schools, working together, and moving things forward. I don't think anyone else could have done what was done, especially in the time frame." Most stakeholders said that they would participate in the project again, if given the opportunity.

“Often there are camps, the substance use group, pain management groups are separate groups that are really on opposing sides of the issue, often. I think this project has been valuable in bringing these groups together, at least some key players, discussing that point of view, and seeing what's best for medical students. That impact of working more holistically is important.”
- *Stakeholder interview*

“From the first meeting I attended to the last meeting I attended, it evolved a lot. I was very pleased that the feedback that was provided was listened to.”
- *Stakeholder interview*

A similar approach may not work in every future project

Stakeholders explained that healthcare and medical education in Canada is very provincially driven, and that a collaborative model will only work where there is an appetite for a national approach. One stakeholder explained the opioid crisis as a perfect storm that makes the Opioid Response Project's model suitable, noting that inadequate UGME coverage and over-prescribing of opioids created a need for a national, comprehensive approach.

Contributions to SUAP outcomes

The project has successfully contributed to Health Canada SUAP outcomes

At the outset of the project, the AFMC set performance targets that aligned with Health Canada's Substance Use and Addictions Program (SUAP) outcomes.

The **reach of the AFMC project well exceeded its initial targets**, with all 17 medical programs involved in each stage of the project, 170 undergraduate medical students participating in the pilot, and a large number of stakeholders engaged through the annual summit and committee meetings.

The vast majority of pilot participants reported **gains in knowledge or skills** that they **intended to use in practice**.

1. SUAP Immediate Outcome 1.1: Targeted stakeholders and Canadians access evidence-informed information on substance use.

As a result of the project...

- 170** Undergraduate medical students participated in pilot test and accessed at least one of the online modules (*target = 40*)
- 17** Undergraduate medical programs participated in the pilot test, and accessed the environmental scan, competency framework, gap analysis, curriculum and online modules (*target = 17*)
- 73** Targeted stakeholders participated in annual summit (*target = 30-35*)
- 45** Project committee members participated in committee meetings (*target = 47*)
- 1** Medical Council of Canada (MCC) accessed the curriculum evaluation framework and the repository of MCQs and OSCEs (*target = 1*)

⁴ Source: Program documents, committee meetings minutes, tracking log

2. SUAP Immediate Outcome 1.2: Targeted stakeholders and Canadians are equipped with the capacity (knowledge, skills and supports) to inform their decisions and actions related to substance use.

Out of all **undergraduate medical students** participating in the pilot...

80% reported gaining **knowledge**⁵ (*target = 50%*)

67% reported gaining **skills**⁶ (*target = 50%*)

91% reported intention to **use knowledge and skills**⁷ (*target = 50%*)

^{5,6,7}Source: Pilot Evaluation of AFMC UGME Pain Management and Substance/Opioid Use Disorder Curriculum: Findings from Post-Module Surveys. (n=98). Average percentage, across 6 topics, of percentage of participants who reported that they 'strongly agreed' or 'agreed' with the following statements: ⁵ Through this module, I gained new knowledge. ⁶ Through this module, I gained new skills. ⁷ I will apply what I have learned in this module to my work environment.

Contributions to SUAP outcomes

3. SUAP Intermediate Outcome 2.1: Targeted stakeholders use evidence-informed information on substance use to change policies, programs, and practice

Most undergraduate medical schools have **agreed** with the competencies developed during the project, have **reviewed** their curriculum against those competencies, **intend to improve** their curriculum and **use** the modules produced by the AFMC in collaboration with partners.

Target value (from PM & E)	Current Value	Source of information
100% of medical schools have agreed to competencies	100% of medical schools have agreed to the competencies.	Mid-project summit* (Oct 2019) and Medical School Engagement Tours* (10 in-person sessions in February-March 2020 and 7 virtual sessions in April to June 2020 and January 2021) * Those sources of information were prioritized because they were collected closer to when the competencies were developed and validated.
100% of undergraduate medical programs reviewed their existing curriculum against developed competencies to identify gaps	At least 41%* of medical schools have reviewed their undergraduate curriculum against developed competencies. <i>*Percentage is expected to increase as 5 other surveyed UGME Deans have stated that they plan to review the curriculum and the remaining schools expressed the same intention during the engagement tours.</i>	Survey of 12 UGME Deans (Dec 2020). Represents all respondents who selected "Yes" (7) to the following question: "Has your undergraduate medical education program reviewed its existing undergraduate curriculum against the developed competencies to identify gaps?"
100% of undergraduate medical programs are improving their curriculum	At least 70%* of medical schools have made or plan to make changes to their undergraduate curriculum. <i>* Percentage is expected to increase as it represents data from only 12 out of 17 UGME Deans. During the engagement tours representatives of all 17 schools reported that they plan to make changes to their undergraduate curriculum.</i>	Survey of 12 UGME Deans (Dec 2020). Represents all respondents who selected "Yes" (6) or "No, but we plan to" (6) to the following question: "Has your undergraduate medical education program made changes to its undergraduate curriculum related to pain management, opioid stewardship, and substance use disorder as a result of the Opioid Response Project?"
50% of undergraduate medical programs have decided to use the curriculum modules	At least 59%* of medical schools are likely to use the curriculum modules <i>*Percentage is expected to increase as it represents data from only 12 out of 17 UGME Deans. During the engagement tours representatives of all 17 schools reported that they plan to use the curriculum modules</i>	Survey of 12 UGME Deans (Dec 2020). Represents all respondents who selected "Definitely yes" (4) or "Likely yes" (6) to the following question: "Does your undergraduate medical education program intend to use the curriculum modules in its undergraduate program?"

The Opioid Response Project has the potential to make a big difference in the medical care provided to Canadians

The project is not yet at a stage where longer-term impacts are evident, but stakeholders said, almost unanimously, that they believe the project will make a huge difference in the care provided to Canadians in the long term. For maximum impact, the following things need to happen:

- The curriculum must be used properly by professors and clinicians who are also trained so they can reinforce students' learning. The faculty development tool aims to address this need, providing a background on the curriculum, the project's areas of focus, and tips to optimize feedback to learners
- Medical professionals must encounter the curriculum more than once (e.g., as students and as residents/physicians)
- The curriculum must have good uptake nationally and be incorporated into exams

Stakeholders experienced some unexpected outcomes

Some stakeholders explained that they learned more from their participation in the project than they expected.

One stakeholder noted that the COVID-19 crisis heightened the relevance of online modules, due to the increased need for remote learning.

One stakeholder felt that the process of working with the faculties of medicine across the country helped to strengthen the faculties' relationships with the AFMC.

One stakeholder found that UGME students' increased understanding of the opioid crisis as existing nationwide, not just in hot spots, was an unexpected outcome of the project.

Impact on UGME programs

Because the curriculum was officially launched in January 2021, many schools have yet to assess the impacts of the project on their undergraduate medical programs. Preliminary benefits are starting to be reported and they range from enhanced learning on the topic, to leveraged time and money, as well as students being better prepared to pass their qualifying exams.⁸

	Number of UGME Deans reporting benefits generated by the project
The project has enhanced learning about pain management, opioid stewardship, and substance use disorder at my undergraduate medical education program	6
Other*	4
None of the above	3
Undergraduate medical students are better prepared to pass their qualifying exams	2
The project has saved us time (i.e., by developing competencies, curriculum modules, etc. for us)	2
The project has saved us money (i.e., not having to invest resources in developing our own curriculum or translation)	2
We have developed better relationships with other undergraduate medical education programs	1
Faculty at my undergraduate medical education program are now more confident teaching about pain management, opioid stewardship, and substance use disorder	0

⁸ Source: Dec 2020 survey of UGME Deans (n=12), "What, if any, benefits have you experienced as a result of the Opioid Response Project? Select all that apply." Other responses provided reflect that the curriculum has not yet been evaluated by UGME schools.

Key issues, challenges and opportunities

This project did not experience major issues. The following challenges were experienced by a minority of stakeholders, but still provide valuable lessons and opportunities for improvement in Phase 2 of the project. Indeed, the AFMC has already begun building many of these learnings into Phase 2.

Challenges included issues with translation and inclusion of Francophones

The project experienced setbacks when the initial consultant's translation of the curriculum did not meet the requirements of French-language UGME programs. The AFMC responded by engaging a second consultant to re-do the translation, as well as by putting together a team of eight Francophones to complete an additional validation of the newly-translated French curriculum. Some stakeholders felt that the translation and validation process was rushed and resulted in extra work. One stakeholder explained, "I think there is always a struggle in developing content in one language that then needs to be distributed in two. There is never really a good way, at least in my experience, to natively build curriculum in both languages, without inconsistencies created between the content or duplication of a significant amount of effort."

While the project included Francophone involvement on committees and at schools in its early phases, some stakeholders felt that the involvement of more Francophones throughout the project would have been helpful and noted that they would appreciate opportunities to engage in discussions and meetings in French.

Some felt that the project should be more interprofessional

Some stakeholders felt that the project would have benefitted from greater involvement of other healthcare professions, including nurses, pharmacists, social workers, and more. While acknowledging that comprehensively involving other professions was not within scope of Health Canada funding for Phase 1 and would have made the project unmanageably large, stakeholders felt that some valuable perspectives were missed.

Some SMEs found the workload challenging

For some SMEs, the amount of time and work required by the project was more than expected. These SMEs also explained that it would have been helpful to understand where comments came from and the background of the reviewers, noting that weighted feedback would have helped them to understand it better and allocate their time more efficiently.

The COVID-19 pandemic has only had a small effect on project activities

The COVID-19 pandemic did not have much negative impact on project timelines and activities, except for the in-person consultations with medical schools and other organizations, that had to be moved to a virtual model.

In addition, the modules were reviewed to incorporate the impacts of the pandemic. The content includes reflective cases on how vulnerable people with pain, opioid use, and substance use disorder are further impacted during crises.

The AFMC has acknowledged that medical schools and faculty may now have conflicting priorities, which could cause delays in the integration of the curriculum and modules into UGME programs. The issue may be mitigated, however, by the opportunities presented by an online curriculum that allows any student to participate from home.

The project evolved with the inclusion of the PLEx perspective

One stakeholder felt that, early in the project, people's language sometimes reflected underlying biases and stigma around opioid use. Bringing the PLEx perspective into the project helped project stakeholders appreciate the insight provided by people with lived experience. As the project progressed, language used shifted from phrases like "addiction" to "substance use disorder".

Issues with contractors led to valuable learnings for the project

One stakeholder noted that some of the project's contractors did not include planned redundancies in their workplans. In one case, this caused a delay when a contractor fell ill and there was no plan in place to continue the work without them. The stakeholder explained, "We can't have one person holding mission-critical information." This has led to changes in contracting for Phase 2 of the project – contracts and subcontracts now require the inclusion of contingency plans for such events.

Updating the curriculum is considered key to ensure sustainability

Keeping the curriculum up-to-date was considered critical by stakeholders for sustainability of the project's impact; some interviewees noted that a plan to review and revise the curriculum (beyond the next three years) is important.

Stakeholders also felt that encountering the curriculum more than once (both in theory and in practice) was important to sustain impact. Ensuring uptake at medical schools, gathering and acting on feedback from schools and individual learners, and building in assessment (e.g. through inclusion in exams) were also strategies that stakeholders felt were important for sustainability.

Recognizing the importance of sustainability planning, the AFMC, in collaboration with the curriculum development team, has developed an evaluation and sustainability plan anchored in three pillars:

- Subject Matter Experts (SMEs) will review the content annually for up to 3 years post-launch at no extra cost.
- Medical schools voluntarily agree to collect and share data with AFMC for up to 3 years post-launch. Ongoing dialogues and the delivery of a summary of potential gaps in the UGME curriculum have also facilitated curriculum uptake by all medical schools. Overall, UGME Deans are open to collaborating to continually update the modules⁹.
- MCC is incorporating questions into its examinations and will report annually on exam results and effectiveness of MCQs/OSCEs for 5 years post-launch.

The AFMC will also offer free access to the modules through a hosted solution for all medical learners, other health professional learners, and the community members.

In addition, the AFMC is currently continuing this work at the post-graduate and CPD levels, which will reinforce and help to ensure the sustainability of the undergraduate educational curriculum.

⁹ Source: Dec 2020 survey of UGME Deans (n=12), "Is your undergraduate medical education program interested in collaborating to continually update the modules?"

UGME programs plan to integrate the curriculum and modules

A key factor for sustainability will be curriculum uptake by medical schools. With that understanding, the AFMC has been communicating with all medical schools about their plans to integrate the curriculum. UGME programs have been receptive to the curriculum and modules recently launched.

Almost all surveyed UGME Deans agreed that the curriculum is compatible, feasible to implement, and will enhance the quality of their undergraduate curriculum². Most also agreed that the curriculum will be integrated into their existing UGME curriculum. Changes already made include revision of existing lectures, augmentation of curriculum in the clerkship phase, and addition of small group sessions and exam questions. One Dean indicated that they are planning to incorporate learning objectives not directly covered in their undergraduate curriculum and another stated that their school will undergo a curriculum refresh project¹⁰.

When surveyed, UGME Deans did not point to any major or widespread barriers, with some indicating that possible obstacles include lack of incentive for students to complete the program, lack of capacity at the school level to manage and maintain the new curriculum modules, and the timing of curriculum release¹¹.

Schools have also been generally receptive to the incorporation of either some or all online modules into their undergraduate curriculum. A few challenges mentioned include the length of modules and level of difficulty for pre-doctoral level. The need to assess the compatibility with schools' own learning management system was also mentioned by one UGME Dean³. Anticipating that need, the AFMC shared test modules beforehand, to allow schools to assess them against their learning system.

¹⁰ Source: Dec 2020 survey of UGME Deans (n=12), "Please rate the following statements? The curriculum is compatible to our existing UGME curriculum; It is feasible to implement this curriculum in the medical schools; The curriculum will be integrated into our existing UGME curriculum; The curriculum will enhance the quality of our UGME pain management and substance use disorder curriculum. ", Please explain the changes that you've made or intend to make, or the reasons you don't intend to make changes."

¹¹ Source: Dec 2020 survey of UGME Deans (n=12), "8. What, if any, barriers exist to ongoing use of the new curriculum and modules? Select all that apply." 14

The following are lessons learned from Phase 1 of the Opioid Response Project. The AFMC adopted many of these practices during Phase 1 and has incorporated them in plans for Phase 2.

1. **Funders and medical schools should consider using a collaborative approach** when new curriculum is needed to address urgent challenges facing the profession. Rationale: Phase 1 of this project demonstrated that a collaborative approach is a feasible, valuable, and efficient way of developing high quality curriculum and modules that can be used by all medical education programs (including those that might not otherwise have been able to develop and adopt new curriculum).

2. **Future collaborative curriculum development projects should:**
 - a) **Be managed by an impartial organization like AFMC that has strong capacity to coordinate and communicate** with medical schools, credentialing bodies, and subject matter experts. Rationale: impartiality and communication were perceived to be important for building support and buy-in; strong coordination was thought to have been important for keeping the project moving forward. Participants especially appreciated having clear and reasonable timelines and expectations.
 - b) **Develop curriculum at multiple levels** (undergraduate, postgraduate and continuing professional development). Rationale: The curriculum will have more impact if medical professionals encounter the curriculum more than once.
 - c) **Include elements that support uptake and implementation of the new curriculum**, such as school-specific gap analysis, development of assessment components for certifying exams, and creation of faculty development tools. Rationale: Uptake and implementation were identified as critical to achieving the desired outcomes.
 - d) **Incorporate sustainability planning** from the outset of the project. Rationale: The curriculum needs to be kept up-to-date to keep current with new thinking about the issue.
 - e) **Include PLEx early and often**. Rationale: Persons with lived experience are experts in their own care and experiences, so it is important to include their voice in any curriculum development project.
 - f) **Incorporate the perspectives of other health professions** in a way that does not make the project unmanageably large (e.g. a time-limited advisory panel, invited guest speakers from other professions, connection with other SUAP-funded projects that are doing complementary work with other health professions). Rationale: Other health professions can provide different and valuable perspectives on the issue.
 - g) **Engage a sizable group of Francophone representatives from the outset**. Rationale: Validation of translated curriculum and learning modules can be a demanding process and it often needs to happen quickly. This work is more feasible if it can be spread out across several people; in this case, a group of 8 worked well.
 - h) **Build in planned redundancies and contingency plans, at multiple levels, to ensure the project runs smoothly**. Rationale: Timelines are less likely to be interrupted if more than one person holds critical knowledge. Contingency plans keep the project on schedule if a contractor or subcontractor experiences illness or some other unplanned crisis.
 - i) **Use person-first, non-stigmatizing language consistently, in both the materials developed and in the process of development**. Rationale: reduction of stigma is a critical aspect of combatting the opioid overdose crisis. Person-first language acknowledges someone as a person before describing their health conditions¹². Examples include using “person who uses substances” instead of “addict.”

¹²Canadian Centre on Substance Use and Addiction. *Overcoming Stigma Through Language: a primer*. Accessed Feb 19, 2021. <https://www.ccsa.ca/sites/default/files/2019-09/CCSA-Language-and-Stigma-15-Substance-Use-Addiction-Guide-2019-en.pdf>

Appendices

A. Evaluation Questions

B. Contributors

C. Methodology

Appendix A: Evaluation Questions

Topic	Mandatory Evaluation Questions	Data Sources / Methods
Continued Need	Does the project meet a demonstrable need?	Review of documents (incl. environmental scan, competencies, curriculum framework), and pilot evaluation reports Deans Survey
Contributions to Health Canada SUAP Outcomes	What are the project's key contributions to the Health Canada SUAP outcomes?	Performance indicators Stakeholder interviews Review of pilot evaluation reports PLEx and residents/physicians feedback forms PLEx and residents/physicians follow-up surveys
Unintended Impacts or Outcomes	Were there any unintended impacts or outcomes?	Stakeholder interviews Review of committee meeting minutes Review of pilot evaluation reports
Efficiency/Economy	How much did it cost to deliver this project? <ul style="list-style-type: none"> ▪ Total resources allocated to the project for fulltime staff, casuals, and contractors. ▪ Total planned expenditures ▪ Total actual expenditures ▪ Cost per FTE (total FTEs divided by actual expenditures) ▪ Total number of outputs produced (knowledge products and learning opportunities) ▪ Ratio of FTEs to outputs (total outputs divided by total FTEs) What steps did your project take to ensure the best use of resources? Were resources sufficient to complete activities and outputs? What was the project's reach? (e.g. how many people did the project reach?)	Tracking log Review of committee meeting minutes Stakeholder interviews Tracking log
Key issues, challenges and opportunities	What challenges arose during the project? How have they been addressed? What opportunities arose?	Tracking log Documents (e.g., summary of tour of medical schools) Stakeholder interviews Review of committee meeting minutes Review of pilot evaluation reports
Collaboration	How effective was the approach to collaboration across organizations? <ul style="list-style-type: none"> ▪ % of schools agreeing to the competencies ▪ % of schools using the curriculum or the modules ▪ Perceived benefits and drawbacks of collaborative approach ▪ Diversity of residencies collaborating 	Tracking log Stakeholder interviews Review of committee meeting minutes Deans survey
Sustainability	What elements of the project will be sustained beyond the SUAP funding period? What is already in place to support sustainment of these elements? What else is needed?	Tracking log Stakeholder interviews Review of committee meeting minutes Deans survey Review of pilot evaluation reports

Contributors to the project

This initiative was led by the Association of Faculties of Medicine of Canada (AFMC) with funding from Health Canada through the Substance Use and Addictions Program (SUAP). Partners were involved in the project in the following capacities:

- Overall Reviewers
- Subject Matter Experts
- Module Reviewers
 - Experts
 - Cultural, Indigenous and Equity, Diversity and Inclusion
 - Learners
 - Interprofessional
 - Patient/Public
 - French Reviewers
- Consultants
 - Curriculum Design, Development and Evaluation
 - Project Evaluation
 - Environmental Scan
 - Medical Editing
 - Medical Council of Canada MCQ OSCE Developers
 - LearnFM MCQ Development
- Committees
 - Project Oversight Committee
 - Undergraduate Curriculum Expert Committee (UCEC)
 - Transition Advisory Committee (TAC)
 - Faculty Development Working Group

Appendix C: Methodology

Survey

Details of the survey methodology are provided in the table below:

Overall survey response	
Total # responses	12
English	10
French	2
Distribution details: Email Survey	
# Emails sent	17 (14 EN, 3 FR)
Response rate	70% (number of emails sent, divided by the number responses)
Survey timeline	November 25, 2020 to January 25, 2021

Interviews

The evaluation set out to conduct 10-15 interviews with project stakeholders. Ultimately, interviews were conducted with 14 individuals from November 2020 to February 2021. Interviewees were selected to ensure representation of a diversity of project stakeholders across roles, organizations, and language.

	Number of individuals
Contacted	23
Completed	14
Declined	4
No response	5