

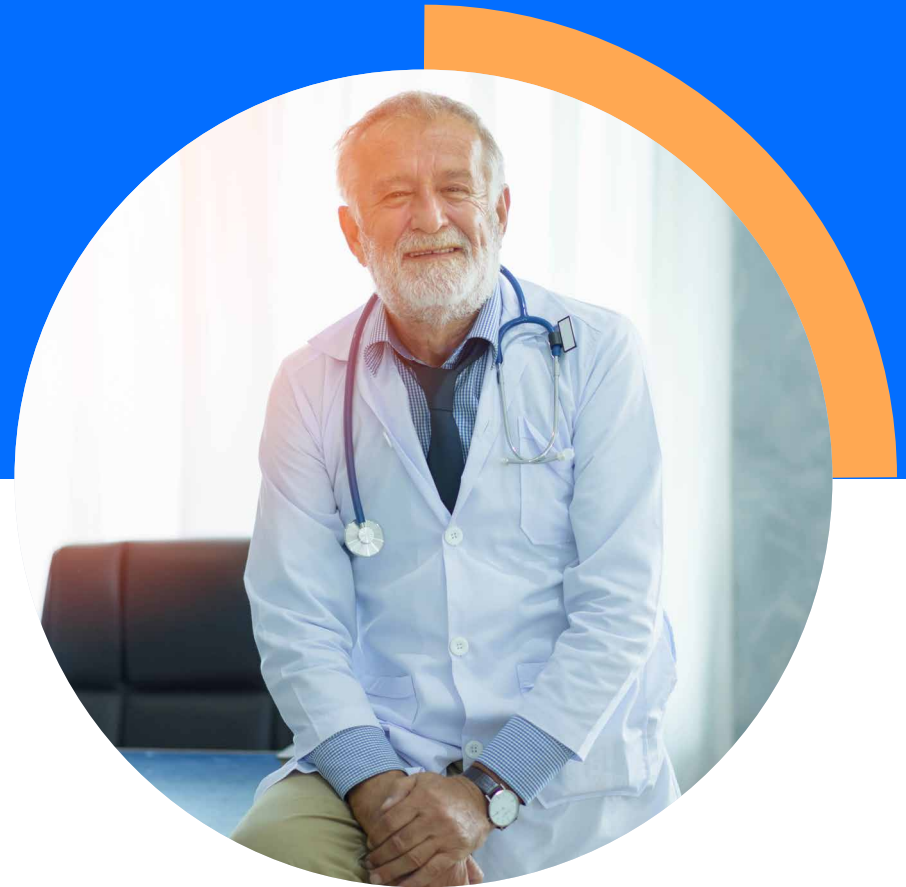
A SOLUTION TO COMPETENCY-BASED MEDICAL EDUCATION IMPLEMENTATION

CASE STUDY

The Background

In recent years, there has been a paradigm shift in the teaching and learning approach to medical residency programs. This new approach, known as competency-based medical education (CBME) is an outcomes-based approach to the design, implementation, assessment and evaluation of a medical education program using an organizing framework of competencies. One of the key aspects of the CBME curriculum reform were assessments.

These assessments are known as Entrustable Professional Activities (EPAs). An EPA is a key task that a competent resident can be trusted to perform without direct supervision. They incorporate specific milestones and are a measure of a resident's progress through specific stages of their program. Every residency program will have EPAs and associated milestones that will provide discrete markers of competence.



Interesting Facts

- In 2014, the Royal College of Physicians and Surgeons of Canada (RCPSC) initiated a change in the Canadian medical specialist training model. The new model, known as Competence by Design (CBD) was a transformational change designed to enhance CBME in residency training and specialty practice in Canada.
- The College of Family Physicians of Canada (CFPC) had already started implementation of their own version of CBD in 2009, known as the "Triple C Competency-based Curriculum."
- The schedule for the rollout of the CBD program, provided by RCPSC, started in 2017 across Canada's 17 medical universities, with the complete rollout across all programs set to finish in 2022.

“A traditional training in postgraduate medical education had focused on time-based training, which had one rotation after the next. Despite this, often, trainees would come out with underdeveloped skills. So learning was judged on time spent, and not necessarily on ability or their competencies.”

- Medical Resident

The Situation

Medical universities have very large and complex residency programs. McMaster University has over 1,400 medical residents and fellows in 59 different residency programs across a large geographic area.

McMaster University Postgraduate Program

1,200+ RESIDENTS

59 RESIDENCY PROGRAMS

200+ FELLOWSHIP

5 DISTRIBUTED RESIDENCY PROGRAMS

3 MEDICAL EDUCATION CAMPUSES

3 CLINICAL EDUCATION CAMPUSES

With such a major curriculum change and the need to manage it across all residency programs, two things were clearly needed to make the CBD rollout successful.

First, an organized departmental structure to ensure that the CBME implementation adhered to all aspects of the CBD program model.

Second, a robust electronic platform to manage the CBD program across the entire McMaster University postgraduate program.

With respect to the CBME curriculum, the specialist programs had to come together to discuss some key questions:

- What does a specialist need to know and be able to do in order to be successful independently?
- How to detect residents who need help, earlier?
- How will EPAs be assessed and monitored in the busy clinic environment?
- How will the learner's progress be monitored to meet the CBD program requirements?

The RCPSC offered a platform called MAINPORT ePortfolio to help physicians manage their learning and progress through the residency program. However, the platform did not meet the needs of McMaster University's Specialty and Family Medicine programs. There were two main reasons for this:

1. MAINPORT ePortfolio was not built with Family Medicine programs in mind.
2. The residency programs at McMaster were already using a well-defined, mature solution, LGI Education (MedSIS 3C)* for all their traditional (non-CBD) training programs. To have residents and staff relearn a new platform would be a painful process.

This required creating a new electronic platform in a short amount of time in order to adhere to the rollout schedule.

*The LGI Education solution was deployed under the name Logibec MedSIS 3C

The Challenges

1 A departmental structure was needed to coordinate all CBME-related curriculum and implementation issues, including:

- Participation on Royal College committees
- Dissemination of CBME communication
- Organization of CBME workshops
- Guidance for the electronic platform implementation
- Curriculum planning
- Faculty and learner development

2 An in-house electronic platform was crucial to manage CBD across all residency programs, with the following must-haves:

- Inclusion of the Specialty and Family Medicine programs
- Form automation: Assessment forms must be completed in real-time
- A mobile interface for convenience and ease of access
- A solution that works for all parties involved: learners, coaches, and competency committees
- Real-time monitoring and reporting of program requirements
- Minimal resources to manage it



“The form, the mobile interface is very straightforward. It taps into the residence learning path which taps into their schedule. It keeps them up-to-date contextually on how they’re doing.”

– Academic Coach

The Solutions

1 McMaster University coordinated all CBME-related curriculum and implementation issues by creating two key operational elements to organize and manage the CBD program rollout:

- The Postgraduate Program Office, consisting of:
 - CBME Faculty Lead
 - CBME Administrative Lead
 - Business Analyst
 - CBME committees
- Residency CBME groups, where each residency program was organized to have a:
 - Program CBME Faculty Lead
 - CBME Resident Lead
 - Competence Committee & Chair
 - Academic Coaches

The Business Analyst was a key role in the Postgraduate Program Office. This role had a strong knowledge of the RCPSC and CFPC requirements, to provide guidance in the development of an electronic platform that would meet the needs of the Specialist and Family Medicine programs.

2 Management of CBD across all residency programs was centralized on an advanced version of a LGI Healthcare Solutions platform already in use at McMaster University. The original, well-defined and mature platform was extended and enhanced to satisfy CBD requirements, and to include the Specialty and Family Medicine programs.

LGI Education* was built within ten months and provided the following:

- An intuitive platform with a quick onboarding process that many participants of McMaster University’s residency program were already familiar with.
- An inclusive solution that worked for both the RCPSC and CFPC.
- Real-time, automatic form building of all assessment forms based on templates. This allowed for instantaneous views of key information such as: Learner Summary Reports, Stage Reports, EPA Summary Reports, EPA Milestone Reports, and other real-time reports.
- A mobile interface which allowed for daily, direct observation. Instead of one assessment per block under the previous system, assessments could now be submitted daily via forms on the mobile interface, allowing for real-time CBME observations.
- A single solution that worked for everyone: learners, coaches, and competency committees. This allowed for a single source for all documentation, saving lots of time and resources.

*The LGI Education solution was deployed under the name Logibec MedSIS 3C

The Results

The solutions that were implemented at McMaster University provided outstanding results. To date, they have rolled out CBD across 26 residency programs with the help of their organizational changes and LGI Education*. According to program directors, learners and coaches, the onboarding of the new Student Information System platform was relatively painless.

Program directors note many advantages, including:

- LGI Education* offers “one-stop shopping” that is very beneficial for everyone.
- It allows for an opportunity to adjust how quickly a resident is progressing through stages or how much remediation might be required.
- Each resident can progress at his/her own rate and time- line, with the ability to promote themselves between stages.
- Residents may be able to transition to independent practice earlier.

Residents especially benefit from:

- The ability to view a breakdown of stages and EPAs in LGI Education at any time, with a spotlight on which EPAs and milestones need to be completed to progress, has really been a game changer.

Professors observe a variety of improvements, including:

- The high level of engagement from faculty and residents is extremely positive.
- Opportunities to develop leadership roles for faculty and residents is increased.
- More frequent feedback at every stage allows for earlier detection of and assistance for learners who are struggling.

This positive feedback from all stakeholders demonstrates the success of McMaster University’s implementation of CBME, aided by LGI Education*. The rollout of the CBD model will continue across other residency programs, based on the RCPSC schedule.

“At first we offered more training sessions than we normally do because there was the assumption that people would be desperate to have a training session. Due to unforeseen circumstances, it ended up that people learned on the fly and the solution turned out to be quite intuitive.”

– Program Director

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ABOUT LGI HEALTHCARE SOLUTIONS

A trusted healthcare technology partner

LGI Healthcare Solutions offers healthcare management solutions that help make healthcare organizations more efficient and improve the experience of healthcare teams.

With 40 years of experience and dedication creating innovative, best-in-class technology projects, LGI Healthcare Solutions is in a unique position to help healthcare organizations integrate innovation in a sustainable and measurable approach.

40

years of experience in healthcare IT

450

dedicated employees across Canada

320K

healthcare professionals and staff users

6M

of patients supported



“It is always a pleasure to work with LGI Healthcare Solutions’s team. Their staff always answers questions quickly and follows up to ensure the products work according to our needs.”

ESTHER BRIAND
Medical Archives and Appointments Control Centre Coordinator, CISS of Laval

“The platform LGI Education (MedSIS 3C) enabled our medical school to deliver on many accreditation items and achieve an outstanding and successful accreditation, receiving an unprecedented accreditation with compliance in all 132 standards.”

ASSOCIATE DEAN
Doctor of Medicine (MD) Program
University of Alberta

“Proper recording of the staff’s time in and out will give us accountability in addition to reducing the time wasted by nursing staff trying to find replacement.”

GILLES VERRIER
Interim Executive Director
for the Lions Housing Centres