

## I. Executive Summary

The Royal College of Physicians and Surgeons of Canada (RCPSC) launched its Competency by Design (CBD) program in 2014 and has mapped out a staggered seven-year transition for all specialty programs in Canada. The plan includes implementing a more responsive and accountable postgraduate training model with explicit competencies for all trainees, coupled with more frequent and meaningful assessments. Using an iterative design, all specialty programs will individually transition to CBD at their own institutions over five phases of implementation. In doing so, the Royal College will be able to support all specialty programs across the country over a seven year time frame.

Queen's University has not only embraced the concept of Competency by Design, but in consultation with the RCPSC, is requesting formal permission from the Education Committee to proceed with plans that would allow all incoming Queen's residents to start their training using a CBME-based model by July 2017. This document outlines the rationale for an institutional approach as well as the steps Queen's University is proposing to take to facilitate the implementation and evaluation of this initiative.

The School of Medicine at Queen's University is proposing a large-scale competency-based medical education (CBME) model for postgraduate medical education (PGME) that outlines an accelerated transition process that will involve all twenty-eight RCPSC specialty programs at our institution. Beginning July 1, 2017, we propose that all trainees starting residency at Queen's University will do so in a CBME model that is consistent with, and complementary to, the RCPSC CBD program. By doing so, all specialty programs at Queen's will be transformed into more accountable and enriched CBME frameworks for postgraduate medical education delivery.

Using the existing Objectives of Training Requirements (OTR) and Specific Standards of Accreditation (SSA), as defined by the RCPSC; all RCPSC specialty programs within the School of Medicine at Queen's University are requesting permission to diverge from their Specialty Training Requirements (STR) in order to transition to CBME training models. During this transition process, all RCPSC specialty programs at Queen's University will move away from the current postgraduate year (PGY) model and adopt the RCPSC competence continuum stages. To facilitate this transition, stage specific entrustable professional activities (RC EPAs), corresponding assessment systems, and required resident training experiences (RTE) will be developed and implemented, and supported by an electronic Trainee Portfolio. This proposed accelerated path to CBME at Queen's University will follow the goals, vision, and process of the RCPSC CBD program.

Although the Queen's University Fundamental Innovations in Residency Education (FIRE) proposal is scheduled to begin on July 1, 2017, the proposal will have a staggered (progressive) termination (completion) date over a multi-year period. This is principally explained by the staggered implementation phases of the RCPSC CBD program. As each specialty program completes the iterative process of the RCPSC CBD project, the corresponding Queen's University specialty program will immediately adopt the new standards set out in the Competency Training Requirements (CTR), Required Training Experiences (RTE), Specific Standards of Accreditation (SSA), Pathway of Competence (PCR), and Integrated Guide to Curriculum and Assessment (Guide). As a result of the multi-year implementation strategy of the RCPSC CBD program with

the final specialty programs projected for 2020, the completion and/or integration of the Queen's FIRE proposal will follow in 2021, as illustrated in Figure 1 below.

The following are the specific outcomes that will define the success of this institutional FIRE proposal for the transition to CBME for all RCPSC postgraduate programs at Queen's University:

1. *Starting July 1, 2017, all incoming residents from all RCPSC specialty programs will start their training within the new CBME models as defined by the Stages of the Competency Continuum. Using the existing OTR and SSA, all programs will have developed, and be ready to implement, the use of stage specific EPAs, associated assessment strategies, and the necessary training experiences to satisfy the language, intention, and process of the Royal College CBD program.*
2. *Starting July 1, 2017, all Queen's RCPSC specialty programs will have the necessary infrastructure services required to support CBME curriculum delivery. This includes Education Technology (EdTech) IT services, faculty development support, an optimized CBME administrative structure (including a CBME leadership team within PGME) and use of available teaching and learning resources, adequate institutional program funding, a program evaluation strategy, a grounded resident promotions and appeal process, a comprehensive communication strategy involving all stakeholders, and a dedicated educational scholarship strategy to support the institutional transition to CBME in postgraduate medical education.*
3. *Upon each specialty program's completion of the RCPSC CBD program's iterative process (to be defined by the finalization of the RCPSC Document Suite), the corresponding specialty program at Queen's University will integrate what we have learned in the process of the transition to its delivery within the specialization. We will integrate the work based on the program's participation in the Queen's University institutional FIRE proposal.*
4. *An ongoing and effective partnership with the Royal College of Physicians and Surgeons of Canada that helps guide the transition process and enriches the implementation of the RCPSC CBD program across Canada over its seven-year implementation process.*

In order to achieve the desired outcomes of success (listed above), a comprehensive strategic approach has been developed by the CBME leadership team within the Postgraduate Medical Education Office at Queen's University. The creation of a new Faculty Lead CBME and Project Coordinator CBME, along with direction from the decanal leadership (Dean, Vice-Dean Education, Associate Dean PGME), has been instrumental for the development and operationalization of multiple working groups. These include communications, assessment, program evaluation, faculty development, and education scholarship, and funding.

In addition, there are many overlapping mechanisms to ensure that all stakeholders affected by the CBME transition process at Queen's University are engaged in the institutional change process in meaningful ways. The key features, developmental process, and the overall timeline for the CBME implementation at Queen's University are provided in Figures 1-3 at the end of the executive summary.

At this time, many components of the necessary infrastructure requirements for CBME are in place or are at advanced stages of initial development. As well, the School of Medicine at Queen's University has numerous intrinsic strengths that support our institution's ability to meet the outcomes required for success. The most significant strengths of our institutional infrastructure include, but are not limited to:

1. *Leadership at the highest level from the Vice-Provost – Teaching and Learning of Queen's University, Dr. Jill Scott and by the Dean of the Faculty of Health Sciences and Director of the School of Medicine, Dr. Richard Reznick, a world-renowned competency-based medical education scholar and lead innovator for the first postgraduate competency-based program at the University of Toronto (Orthopaedic Program).*
2. *The full support of all major stakeholders in this change process, which includes: decanal leadership within the Faculty of Health Sciences and the Council of Clinical Heads; the Southeastern Ontario Academic Medical Organization (SEAMO); Affiliated Teaching Hospital administrations; the Vice-Provost (Teaching and Learning), the Centre for Teaching & Learning, Office of Continuing Professional Development (Faculty Development), and the Office of Health Sciences Education at Queen's University.*
3. *Significant infrastructure supports that include a core CBME leadership team within Postgraduate Medical Education to direct the change process (Faculty Lead, Project Coordinator, Director of Assessment, Education Scholars, plus numerous working groups), a stable and responsive academic funding structure with the Southeastern Ontario Academic Medical Organization (SEAMO), a state of the art Clinical Simulation Centre and medical school building, and significant expertise in assessment, faculty development, and Information Technology (IT) systems.*
4. *The experience and available collaboration from our colleagues in the Department of Family Medicine at Queen's University, who began their transition to a Competency Curriculum (CCC) in 2009, with associated EdTech assessment platforms, funding structures, faculty development, educational scholarship, and expertise in leadership that will assist with the institutional change process.*
5. *A collaborative partnership with the Royal College of Physicians and Surgeons of Canada, across many levels of the organization including the Decanal leadership, the Director of Specialty Education, the Director of Assessment, Education scholarship, specialty program committees and sub-committees.*

An undertaking this complex is necessarily accompanied by many challenges, but perhaps the biggest challenge is the organizational planning required allowing twenty-eight RCPSC specialty programs to successfully navigate the proposed change process. There is an absolute necessity to not only support our faculty, but more importantly to protect our learners' needs during this transitional time, and ultimately ensure that high quality patient-centred care at our institution continues to be a high priority. Our goal is for all stakeholders to be informed, educated, engaged, and protected, within our abilities, from any unforeseen, and unintentional negative consequences that could arise from this undertaking. To accomplish this, a comprehensive program evaluation strategy and innovation configuration has been developed and will be at the core of our implementation and evaluation process. To provide this protection to all stakeholders involved in this change process, we will be using multiple models for data collection, designing a systematic approach for obtaining feedback from all stakeholders, and understanding the continuum of individual program readiness. Figure 3 illustrates the systematic approach underway for faculty development at our institution.

At the top of this list of stakeholders are the patients receiving patient care, and the trainees in the proposed and current systems. Throughout the transition process, additional attention and support will be given to the residents who are providing care to ensure that it is high quality. Increased assessments of resident trainees as part of the CBME curriculum, and a graduated

progression of residents through their training programs will ensure that attention will be provided to maintaining high quality patient care.

There are many other stakeholders whose participation, engagement, feedback, and skills are critically important to the success of this institutional transition to CBME. They include faculty educators, allied health care professionals, faculty program directors and CBME program leads, administrative assistants, decanal leadership within the School of Medicine, and the Faculty of Health Sciences, the Southeastern Ontario Academic Medical Organization, and Queen's University, Queen's affiliated teaching hospitals, the Royal College of Physicians and Surgeons' of Canada, and all those across Canada that are involved in the RCPSC CBD program.

Monitoring this transition is a key aspect of the plan for evaluation. Queen's will undertake a formal program evaluation in which, drawing from theory and practice, the key features of CBME will be identified and described. Referred to as an "Innovation Configuration Map" the end product will be used to assess the extent to which the 28 specialty programs are implementing CBME as intended. An overview of the initial elements is illustrated in Figure 2 below. This evaluation is a joint initiative with Queen's University (Dr. Denise Stockley seconded from the Office of the Vice-Provost Teaching and Learning) and the Royal College of Physicians & Surgeons of Canada (Dr. Elaine van Melle, Education Scientist). The expectation is that the findings will be relevant and will benefit all stakeholders involved in the RC CBD program. We anticipate this to be of particular interest to the Specialty Committees as they embark on their individual program transitions.

In summary, the School of Medicine at Queen's University is asking permission from the RCPSC Education Committee to have all twenty-eight-specialty programs transition to a CBME curriculum that is aligned with the RCPSC CBD program on an accelerated timeline. Starting with the July 1, 2017 cohort of resident trainees, and encompassing all of our twenty-eight specialty programs, our proposal lays out a plan for institutional change, infrastructure support, program evaluation, and a comprehensive communication strategy with all stakeholders that will bring transformative and meaningful change to the delivery of postgraduate medical education at Queen's University. We are committed to serving all stakeholders throughout the process of our transition and hope to enrich the CBD transition processes of institutions across Canada over the next seven years.

Figure 1: Transition Process for Queen's University Programs to the Finalized RCPSC CBD Implementation

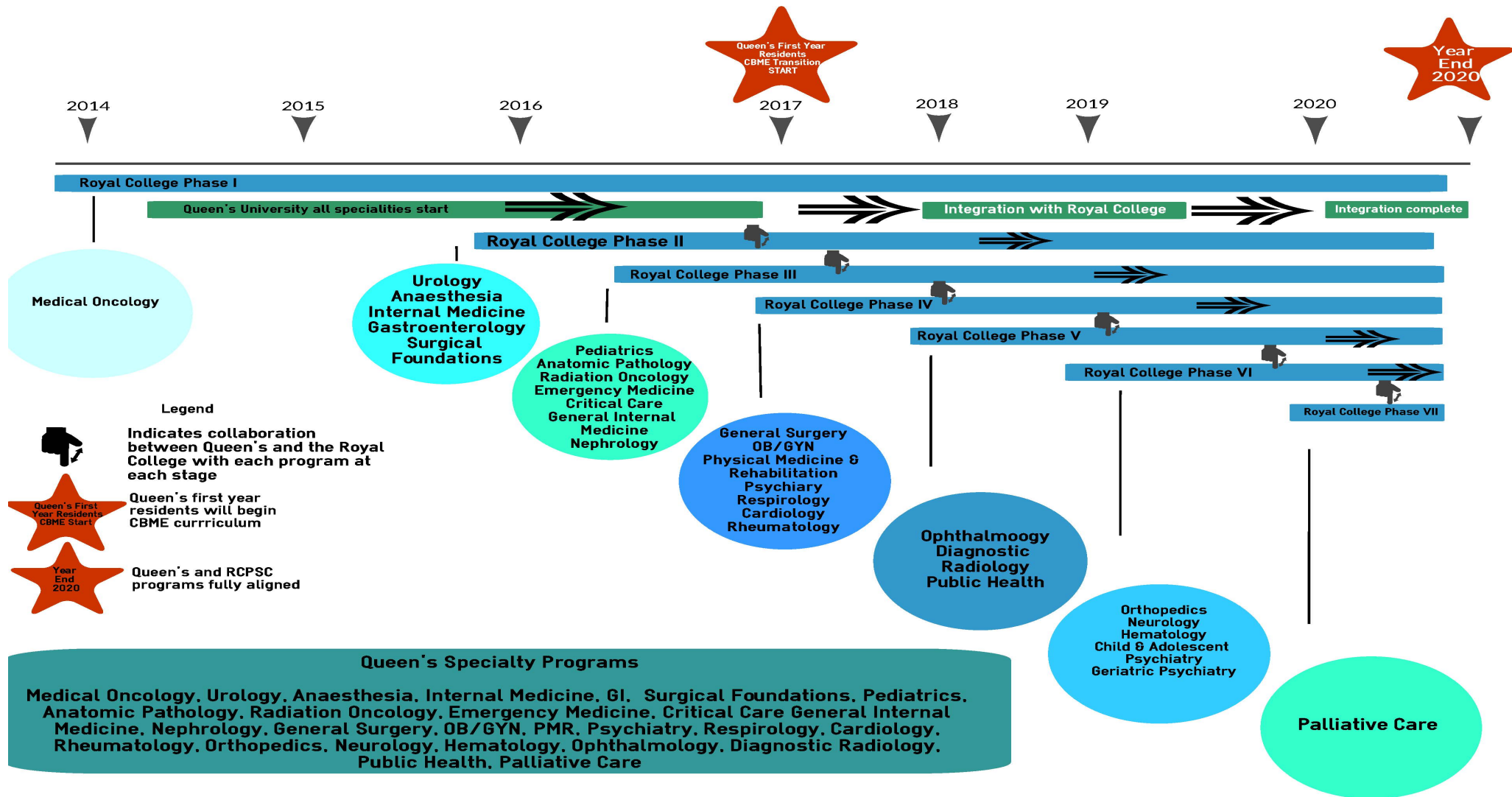




Figure 2: Key Features of Queen’s University’s CBME: Blending Theory and Practice

## Key Features of Competency-based Medical Education: Blending Theory and Practice

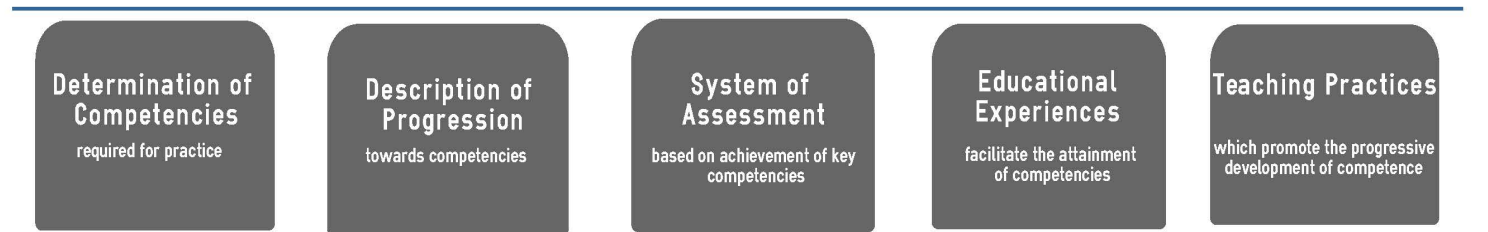
*CBME is an outcomes-based approach to the design & implementation of a medical education program.*

Feature: Competencies required for practice form the basis for the planning and delivery of all curricular elements.

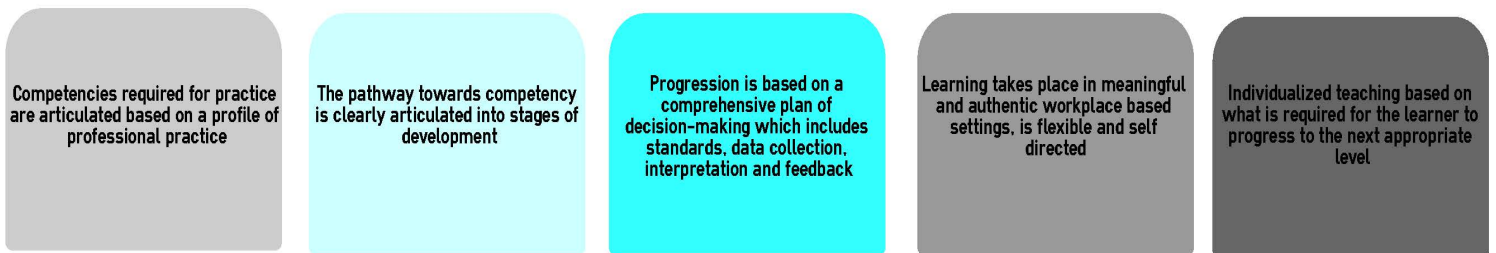
Assumption: Focus on competencies required for practice allows for individualized and progressive development of competence and therefore residents who are better prepared to enter into practice and provide quality patient care.

Conceptual Framework: Constructive Alignment--Curricular components working together create meaningful learning experiences. Biggs, 2003

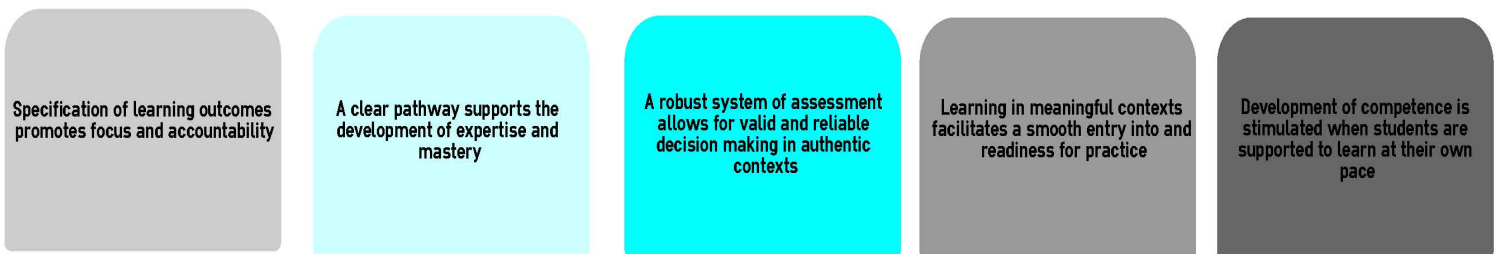
### Curricular Components



### FEATURES



### ASSUMPTIONS



### CONCEPTUAL FRAMEWORKS

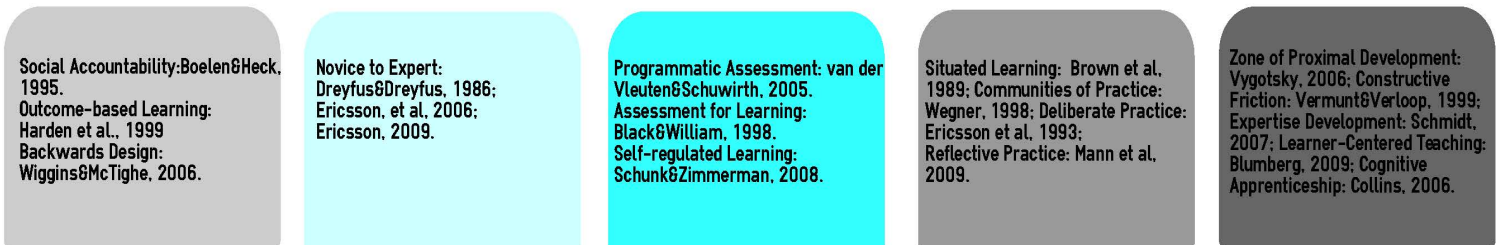


Figure 3: Faculty Development CBME Sessions

