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Implementation of Competency-based Medical Education (CBME) in University of Saskatchewan residency programs:

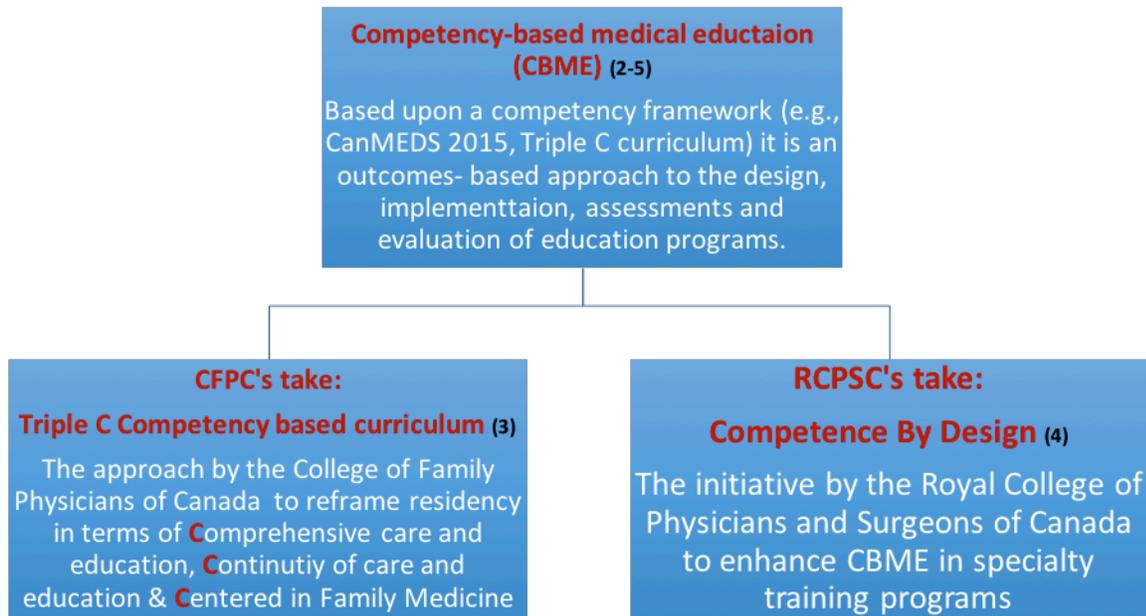
**Triple C curriculum in Family Medicine
 and
 Competence By Design (CBD) for specialty programs**

The following information will help develop shared and common understandings of CBME implementation in our residency programs across the organization. Many of us have been involved in different aspects of this work while others are new to this mode of residency education and there are ongoing questions. Please share this as widely as possible.

THE IDEA IN BRIEF

I. The overarching concept:

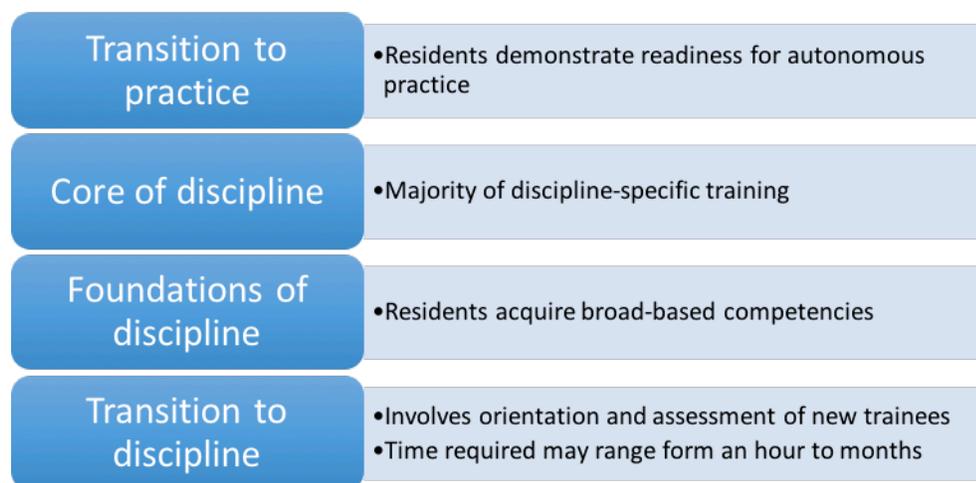
Competency-based education is rooted in the idea that the learner must demonstrate attainment or mastery of specified criteria in different domains (cognitive, affective and psychomotor) articulated in terms of behavioral outcomes, as opposed to teaching a learner to the learner's and teachers' best abilities in a given timeframe [1].



Sources: [2-5]

II. Further elaboration and key words:

- a. **Not a paradigm shift:** CBME is not a paradigm shift but a deliberate articulation to ensure learners have acquired the competencies for practice. It ensures that the learning (content, experiences, supervision and feedback) and assessments are focused and individualized. The rationale for CBD is rooted in better patient care and social accountability.
- b. **The competence continuum in the RCPSC's CBD initiative:** Progressive acquisition of competencies is a continuum and is considered in four developmental stages during residency (although there are seven stages across the continuum of medical education). The following pictorial representation is modified from the RCPSC conceptual diagram [6].



- c. **Key words:** Since a comprehensive approach to assessments for acquisition of competencies is at the core of CBME, the concept of milestones has informed this work: [7-9]

Term	What is it?	Used for:
Entrustable professional activity (EPA)	<p>A key task of a discipline (specialty or sub-specialty) in a clinical setting that a supervisor can delegate to a resident who has demonstrated sufficient competence.</p> <p>EPA's are units of clinical activity that must be performed at each stage of the CBD competence continuum.</p> <p>EPA integrates multiple milestones from across different CanMEDS roles. The resident must accomplish this task.</p>	<p>Overall assessment.</p> <p>EPA's can be unpacked to determine, which specific milestones need further attention.</p>
Milestone	<p>Competency at a point in time. A marker of an individual's ability along a developmental continuum.</p> <p>Generic milestones are outlined in the CanMEDS 2015 competency framework. Each specialty will develop specialty-specific milestones.</p>	<p>Plan and design educational activities and teaching specific abilities.</p> <p>Monitor the progress of learners and if required, for early interventions.</p>
Competency	<p>Observable ability that develops through stages of expertise from novice to mastery</p> <p>Specific abilities as outlined in the CanMEDS 2015 competency framework across seven CanMEDS roles.</p>	<p>Plan and design educational activities and teaching specific abilities.</p> <p>Inform teaching/learning/specific areas that need to be attended to.</p>

BASIC APPROACH TO IMPLEMENTATION IN OUR RESIDENCY PROGRAMS

A. Distribution of the work between the national colleges and the local institutions:

- a. **Triple C curriculum (College of Family Physicians of Canada)**
 - i. The CFPC developed a set of outcomes describing competence at the point of entry into independent practice [10], the triple C curriculum in 2011 [3] and an implementation guide in 2013 [11].
 - ii. The implementation in the Family Medicine program is a local institutional endeavour.
- b. **CBD (Royal College of Physicians and Surgeons of Canada)**
 - i. A **CBD curriculum** (to include specialty-specific milestones and discipline-relevant entrustable professional activities [EPAs]) is being developed under the aegis of the RCPSC. This work is done by the specialty committee (to which the program directors belong) and educators and it takes about 1-2 years to be completed. The end product is "**Competency Training Requirements**," which will replace the current "Specialty Training Requirements." See also [5, 6].
 - ii. The implementation of CBD in residency programs is a local institutional endeavor.

B. Status of the programs:

- a. **Family Medicine:** The Family Medicine program has already fully adopted and implemented the triple C curriculum and are refining it further.
- b. **Specialty programs:** None of the RCPSC programs at the University of Saskatchewan has formally adopted CBD (as the implementation timelines for each specialty have been agreed nationally with RCPSC and specialties belong to different cohorts that will rollout at different times in the next five to seven years). The first programs that are highly likely to go live July 2017 include, Anesthesiology, Surgical Foundations and Internal Medicine.

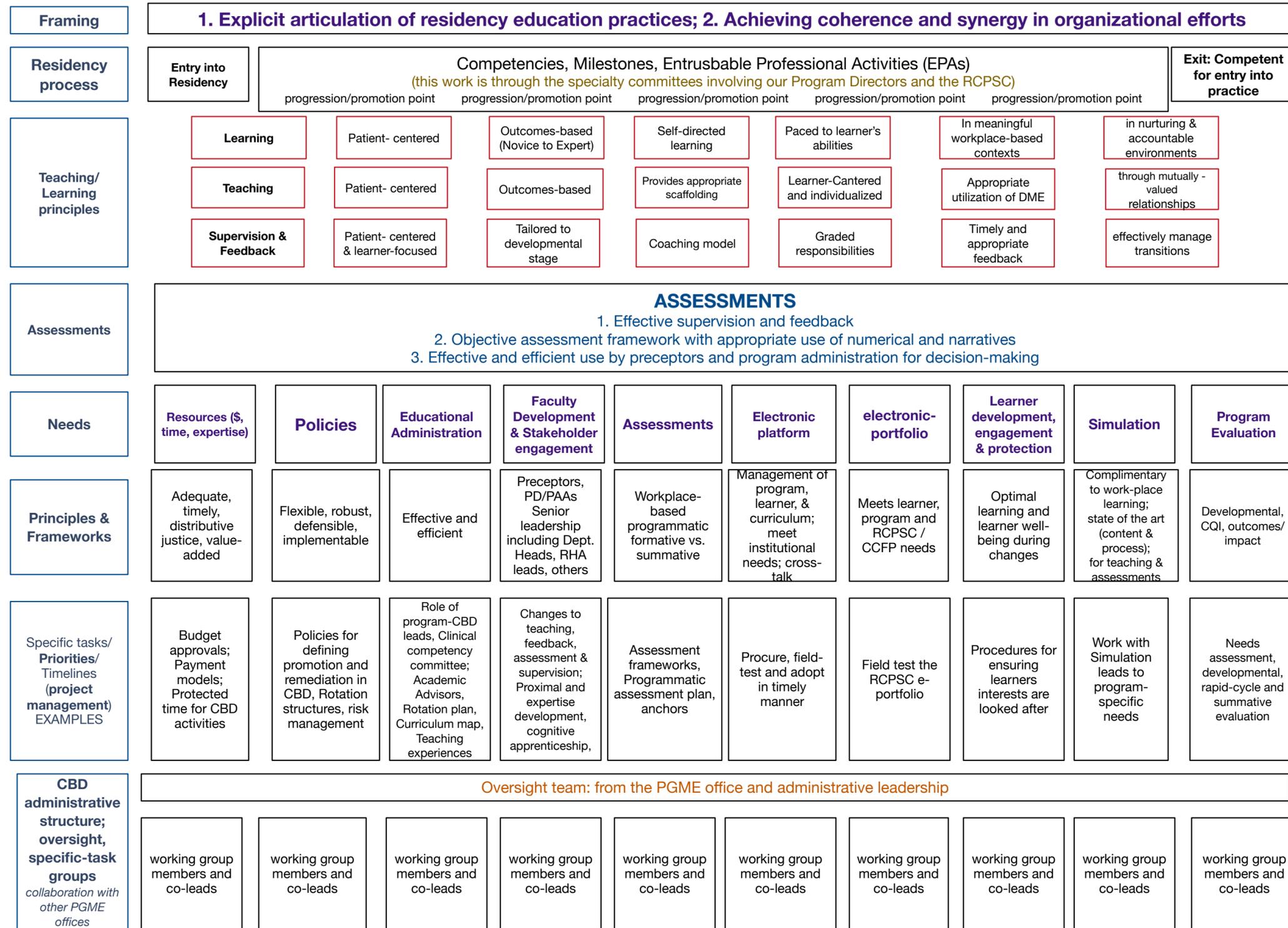
C. Implementation principles, strategy and framework: CBD implementation through the PGME office and programs/departments at our institution has three underlying **principles**:

Guiding Principle	Examples of Actions
Collaborative endeavor: between various internal stakeholders at different hierarchical levels and across sites and across academic and administrative leadership.	<ol style="list-style-type: none"> 1. Family Medicine programs at different sites work together. 2. Family Medicine to inform CBD implementation.
Distributed leadership model: utilizing wide expertise in the system and aimed at enhancing organization-wide ownership.	Working group addressing CBD implementation has stakeholders from different programs, learners and administrative leadership.
Change mechanisms tailored to developmental readiness: We have deliberately not adopted a uniform prescribed approach (one size fits all) to change but utilized what would work best for each program and stakeholder group based upon their developmental readiness .	<ol style="list-style-type: none"> 1. Program Directors working with the RCPSC to develop EPAs and specialty-specific milestones and assessment methods. 2. RCPSC led workshop on CBD aspects (Nov 05)

CBD implementation is informed by theoretical frameworks [2, 5, 6, 11] and local and national experiences. **The implementation of CBD at our institution - which is transforming itself with the journey towards our Dean's vision, "the best small medical school in Canada" - will be affected by new learnings, changes in stakeholders and evolving context.** The key challenges are concertive action, coherence-making, keeping the team(s) aligned and energized and not suppressing creativity and adaptation. The framework for implementation has **ten workflow streams** (See figure 1). The implementation activities are managed by **project management** methods. The launch and ongoing course corrections are informed by **program evaluation** at multiple stages, including an initial needs assessment done a few months ago.

Competency By Design (CBD): Conceptual Framework for Implementation at the University of Saskatchewan Residency Programs

Leading and Managing Change: Adapted to organizational and program readiness
AIM: Organization-wide ownership
Frameworks: 1. Kotter's framework; 2. Complexity Science; 3. Appreciative Inquiry; 4. CQI
Operational Approach: Project management



Organizational communication:
 Timely
 Continuously answer: Why?
 Ensure a sense of calm, generate conversations, promote engagement and ownership

v5: May 05, 2016, with input from the CBD working group
 v6: May 23, 2016, with input from the CBD working group
 v7: August 15, 2016, with input from additional consultation
 Anurag Saxena

REGULAR COMMUNICATIONS

Future regular communications will address the progress and specific issues.

If you would like to discuss any aspects regarding CBME with the PGME office, please contact us through any of the following modes.

Emails: anurag.saxena@usask.ca; betty.rohr@usask.ca; maureen.lumbis@usask.ca;

Telephone: 306-966-5557.

For more information on CBD: <http://www.royalcollege.ca/rcsite/competence-design-e>

For more information on Triple C:

<http://www.cfpc.ca/ProjectAssets/Templates/Resource.aspx?id=3078&terms=triple+C>

<http://www.cfpc.ca/ProjectAssets/Templates/Resource.aspx?id=6306&terms=triple+C>

REFERENCES

1. Palardy, J.M. and J.E. Eisele, *Competency Based Education*. The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 1972. **46**(9): p. 545-548.
2. Frank, J.R., et al., *Competency-based medical education: theory to practice*. Med Teach, 2010. **32**(8): p. 638-45.
3. Tannenbaum, D., et al., *Triple C competency-based curriculum. Report of the working group of postgraduate curriculum review - Part 1*. 2011, The College of Family Physicians of Canada: Mississauga, ON.
4. RCPSC: The Royal College of Physicians and Surgeons of Canada. *Competence by Design*. 2016; Available from: <http://www.royalcollege.ca/rcsite/competence-design-e>.
5. Ten Cate, O. and F. Scheele, *Competency-based postgraduate training: can we bridge the gap between theory and clinical practice?* Acad Med, 2007. **82**(6): p. 542-7.
6. RCPSC: The Royal College of Physicians and Surgeons of Canada. *Implementation of CBD*. 2016; Available from: <http://www.royalcollege.ca/rcsite/cbd/implementation-cbd-e>.
7. Frank, J.R., L. Snell, and J. Sherbino. *CanMEDS 2015: Physician competency framework*. 2015; Available from: <http://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e>.
8. Ten Cate, O., *Nuts and bolts of entrustable professional activities*. J Grad Med Educ, 2013. **5**(1): p. 157-8.
9. Ten Cate, O., *Entrustability of professional activities and competency-based training*. Med Educ, 2005. **39**(12): p. 1176-7.
10. Allen, T., et al., *Defining Competence in Family Medicine for the Purposes of Certification by the College of Family Physicians of Canada: The New Evaluation Objectives in Family Medicine*. 2010, The College of Family Physicians of Canada: Mississauga, ON.
11. Oandasan, I. and D. Saucier, *Triple C Competency-based Curriculum Report-Part 2: Advancing Implementation*. 2013, The College of Family Physicians of Canada: Mississauga, ON.