Teaching the Triple C curriculum

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The implementation of the College of Family Physicians of Canada's Triple C Competency-based Curriculum is creating exciting changes in how to best teach family medicine residents.[1,2] The impetus to redesign residency training comes from a number of fronts. Family physicians are managing sicker patients than in the past. The knowledge needed to practise safe, effective medicine is rapidly expanding. The time to train a family physician is short—just 2 years. Training methods must therefore be effective and efficient. In addition there is an international move toward competency-based medical education. This makes sense—residency training is no longer primarily time based. To graduate, residents must now demonstrate their competence in the roles, knowledge, skills, and attitudes believed to be critical to being a good family physician. The Triple C Competency-based Curriculum supports development of just such a physician. It is comprehensive training producing physicians with a range of skills who are able to work in any setting.[3] It has continuity built in—continuity of patient care so residents learn how to establish effective long-term therapeutic relationships, continuity of curriculum with the deliberate layering-on of increasingly sophisticated approaches to patient issues, and continuity of supervision to form the foundation for good role modeling and reliable assessment of competency.[4] It is family medicine–centred. Learning, where possible, is done in the family medicine setting, based on the educational theory that learning is most effective if done in the context in which the knowledge will be used.[1,5] Teaching is done by family physicians or family medicine–knowledgeable specialists, allowing for role modeling and relevant teaching.

Assessment of competency

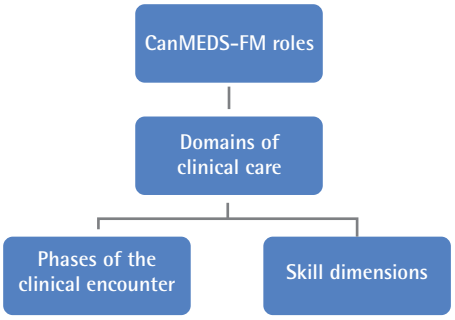
There are 4 related frameworks used to gauge competency—the CanMEDS–Family Medicine (CanMEDS-FM) roles, domains of clinical care, phases of the clinical encounter, and skill dimensions. What are these and how are they related? The 4 principles of family medicine form the foundation for all these frameworks but the CanMEDS-FM roles (family medicine expert, communicator, collaborator, health advocate, manager, scholar, and professional) are now used to structure family medicine training objectives and evaluations.[1] Adopting these 7 roles in family medicine unifies medical education across Canada. All undergraduate medical schools and Royal College of Physicians and Surgeons of Canada residency programs use the CanMEDS roles. With family medicine now using CanMEDS-FM roles (which have been modified from the CanMEDS roles to reflect the special skills, knowledge, and attitudes that family physicians need), medical educators in all areas can now use the same language and together research the best ways to teach and assess competency in these roles.

Domains of clinical care describe the type of patients or settings for which residents are learning to provide competent care.[3] This is a fundamental organizational shift that supports a competency-based educational system (ie, instead of studying *pediatrics* [a term that describes a young patient population] residents will become skilled in *care of children* [a competency]).

Residents are also expected to become competent in various skill dimensions (the patient-centred approach, communication, selectivity, clinical reasoning, physical examination, procedural skills, and professionalism). They will become competent in the phases of the clinical encounter (history, physical examination, hypothesis generation, investigation, diagnosis, procedure, management and treatment, referral, and follow-up).[6] These frameworks can be envisioned as relating to one another in a hierarchy starting from the meta-competencies of the CanMEDS-FM roles at the top, moving down to the increasingly specific competencies in phases of the clinical encounter and skill dimensions (**Figure 1**).

The Triple C Competency-based Curriculum is the way of the future and will set the standards for how family medicine residents are educated and assessed. But how do we as busy family physicians actively

Figure 1. Hierarchy of frameworks for assessment of competency



CanMEDS-FM—CanMEDS–Family Medicine.

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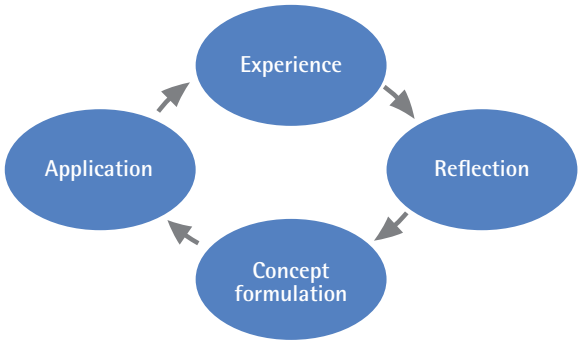
engage in teaching Triple C while also ensuring safe patient care, maintaining relationships with patients, managing an office, and much more?

A helpful framework in thinking about effective adult learning is Kolb's experiential adult learning model (**Figure 2**).[7] We know that adults learn best in an environment that teaches them things they believe are relevant, is hands on, and allows time for reflection and feedback.[5] Kolb's learning cycle captures these ideas, taking a resident from a hands-on, relevant experience (eg, managing a patient with hypertension) to reflection ("Hmm ... I know nothing about the management of hypertension!"), to formulating some concepts about that experience ("I have learned through reading and talking to my preceptor that there are different classes of antihypertensives") to applying a management plan. In this example, residents progressively build on their knowledge and skills in managing hypertension, as they go around this cycle with each new patient with hypertension they see. They would go from knowing nothing about hypertension treatment to appreciating the different classes of antihypertensive medications, to choosing a medication class based on a patient's concomitant conditions, to critically appraising the literature about different antihypertensive medications, to applying their increasing knowledge about the patient into the management plan (eg, costs of medication and availability of a drug plan).

Figure 2. Experiential adult learning model



Data from Kolb.[7]

How can you teach Triple C?

Experience. Be deliberate about who the resident

sees in the clinic, keeping in mind the Triple C concepts of comprehensiveness and continuity. Try to have residents see a variety of patients so they can develop different skills. Be aware that some important skills are developed in non-patient experiences (eg, communicating and collaborating effectively with allied health care professionals and specialist colleagues, showing professionalism by being engaged and effectively involved in meetings). Provide continuity of teaching—if your resident just saw a patient with hypertension, and you discussed some important management strategies, have the resident see the next patient with hypertension who comes in so they can apply that new knowledge. For continuity of care, if they have seen a patient or a patient's family member before, make sure they see that patient or family member at subsequent visits. If that patient is being seen by a different professional and the resident can attend that visit, have the resident do that. Have the resident go with you on a house or hospital call if they know the patient. This lets them learn about interpersonal, family, multidisciplinary, and geographic continuity of care, respectively.

Reflection. Provide time and encouragement to reflect. Try to build a bit of time in the day for the resident to think about their patients. Be explicit and think out loud (and thereby role model) when you are reflecting on patient care.

Concept formulation. This is where your input is golden. Think of how Triple C is family medicine–centred and the role modeling involved in that concept. This is where you can really give residents a sense of what it means to be a family physician and give them information they cannot get out of a textbook. Differential diagnoses and lists of possible treatments are easy to get from a book or Web resource. Talk to residents instead about your reasoning—why, of the differential diagnoses, you think it is this particular diagnosis; how you can use time as a diagnostic and therapeutic tool, but only once you have ruled out other dangerous diagnoses (ask the resident for his or her differential diagnosis, what the most dangerous possible diagnosis is, and how he or she ruled the dangerous diagnosis out); why you have prescribed this antihypertensive medication out of that long list of potential medications for the patient, given this background knowledge of the patient; the practical tips you have learned with management strategies ("This drug is not covered and is very expensive—even though it's the best choice, this patient can't afford it. Let's think of something else"); why you are referring the patient now and why it is emergent, urgent, or elective; how this type of patient makes you feel and how you have learned to turn this type of relationship into a good therapeutic relationship. There are endless examples of knowledge you can give to residents that they cannot get anywhere else.

Application. The best tool to effectively and safely help residents apply their newfound knowledge or skills is feedback. Reinforce what they are doing well; correct what they are not doing properly. When they then go on to their next experience they will carry forward that correct knowledge. You will have to do some direct observation—part of a clinical encounter, an observed interaction with your nurse, an overheard telephone triage. Provide feedback about a range of activities, roles, and skills, and ideally also document it (ie, in a field note). Over time and through the input of different preceptors, each small reflection of competency will help to build up a picture of the resident's overall competency as an emerging family physician.

Doing the above helps teach the Triple C curriculum and promotes adult learning. It also gives residents what they need from you as a preceptor. A recent review of family medicine residents' feedback about their preceptors at Queen's University in Kingston, Ont, over the past 5 years revealed these top 5 things that residents want from their preceptors: interest in them as learners, enthusiasm and availability, clinical reasoning discussions, feedback, and preceptors pushing them as learners (K. Schultz, unpublished data, 2011). By providing residents with these and using the Triple C curriculum you will help create the next generation of competent, caring family physicians.

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Competing interests
None declared

TEACHING TIPS

- Use an experiential adult learning model to provide the residents with experience, allow them time for reflection, help them formulate concepts, and apply a treatment and management plan.

- Recall the "continuity" and "comprehensive" components of Triple C when training residents in the clinic. Have them perform follow-up visits with patients they have already seen. Have them see a variety of patients, and have them participate in settings such as staff meetings and collaborative care discussions.

- Encourage reflection and provide time for residents to reflect. Help residents with concept formulation by explaining your reasoning when treating a patient. Make direct observations of the residents' work and provide feedback, preferably in the form of field notes.

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