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Competence by Design (CBD): Overview

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COLLÈGE ROYAL
DES MÉDECINS ET CHIRURGIENS DU CANADA

Competence by Design
EXCELLENCE ACROSS THE CONTINUUM

CanMEDS 2015

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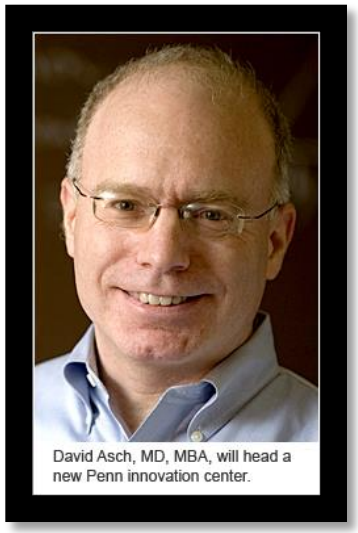
Why change?

Competence by Design

- 100 year old model of education
- Challenges in existing system
  - Potential for students to graduate with gaps in readiness-to-practice
  - Lack of transparency when demonstrating continuing competence
  - Criticism around the ad-hoc nature of medical education and lifelong learning
  - Difficulty in determining when new skills are needed throughout practice

Why change?

- Evidence suggests that where a physician trains determines the level of care that physician will provide throughout his/her career.



David Asch, MD, MBA, will head a new Penn innovation center.

Commentary

How Do You Deliver a Good Obstetrician? Outcome-Based Evaluation of Medical Education

David A. Asch, MD, Sean Nicholson, PhD, Sindhu K. Srinivas, MD, MSCE, Jeph Herrin, PhD, and Andrew J. Epstein, PhD, MPP

Abstract

The goal of medical education is the production of a workforce capable of improving the health and health care of patients and populations, but it is hard to use a goal that lofty, that broad, and that distant as a standard against which to judge the success of schools or training programs or particular elements within them. For that reason, the evaluation of medical education often focuses on elements of its structure and process, or on the assessment of competencies that could be considered intermediate outcomes. These measures are more practical because they are easier to collect, and they are valuable when they reflect activities in important positions along the pathway to clinical outcomes. But they are all substitutes for measuring whether educational efforts produce doctors who take good care of patients.

The authors argue that the evaluation of medical education can become more closely tethered to the clinical outcomes medical education aims to achieve. They focus on a specific clinical outcome—maternal complications of obstetrical delivery—and show how examining various observable elements of physicians' training and experience helps reveal which of those elements lead to better outcomes. Does it matter where obstetricians trained? Does it matter how much experience they have? Does it matter how good they were to start? Each of these questions reflects a component of the production of a good obstetrician and, most important, defines a good obstetrician as one whose patients in the end do well.

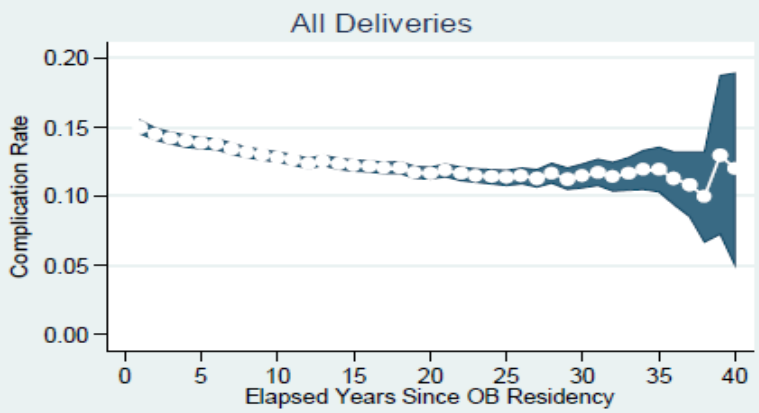
Editor's Note: A commentary on this article by T.J. Nasca, K.B. Weiss, J.P. Bagian, and T.P. Brigham

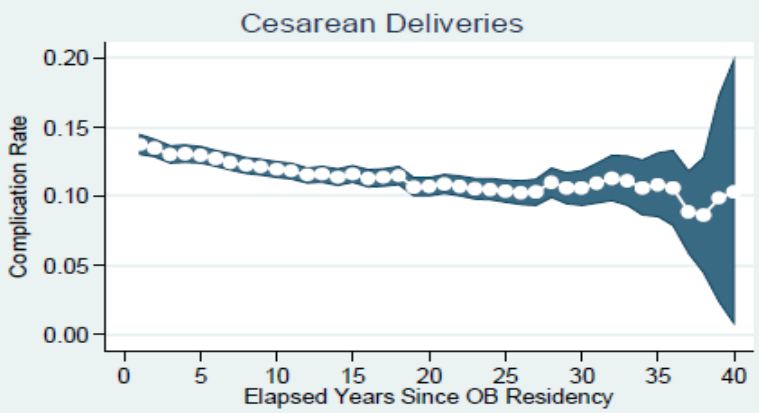
programs by actual patient outcomes is not only more patient-centered, it better

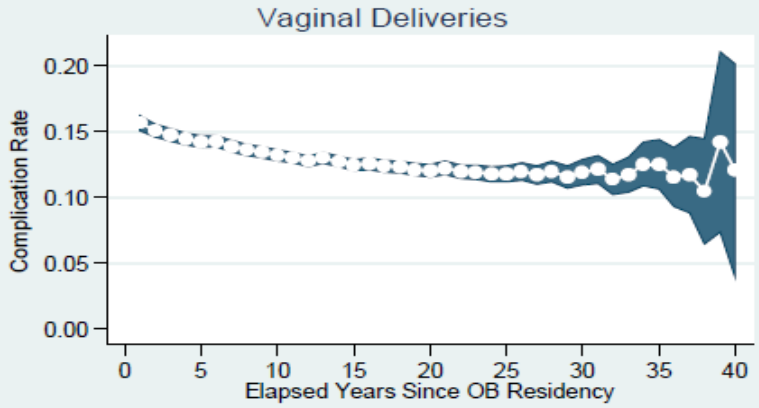
Does It Matter Where the Obstetrician Trained?

Why change?

We get better with time, but…





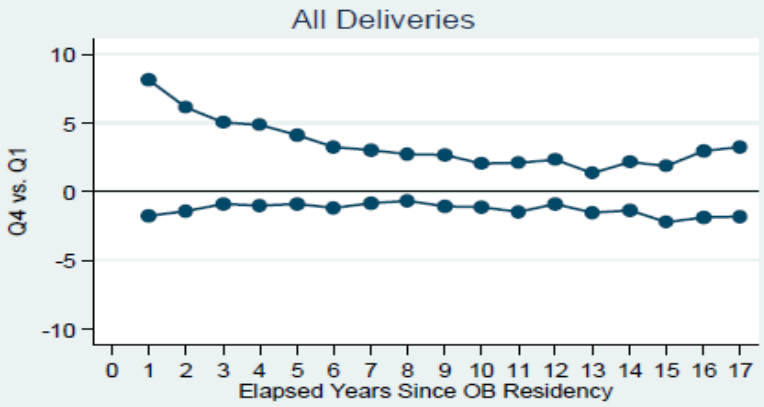


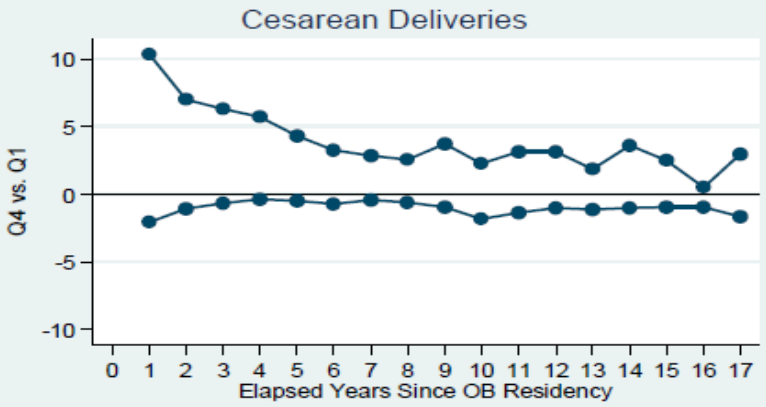
Maternal complication rates decline with experience:

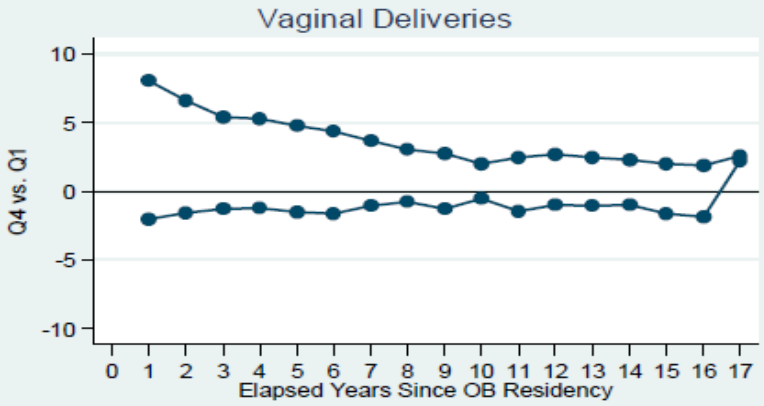
- Persistent declines in maternal complication rates through 30 years of experience
- No change when adjusting for survivor bias

Why change?

…rates are predicted at certification







Initial complication rates predict later complication rates:

- Over time, the best and worst quartiles approach the mean.
- They do so gradually.
- They never get there, meaning that differences persist

Why change?

- Opportunity to make things better and ultimately improve **patient care**

"We do a good job now, but we can do a better job…We can always do better. We know in clinical practice…there is always a better way to do things, and I think [CBD] is a mechanism to achieve that next level of improvement."

James Wilson, MD, FRCSC
Associate Professor,
Department of Urology, Queen's University
Urologist, Kingston General Hospital

What is CBME and CBD?

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Competency-Based Medical Education (CBME)

CBME is "an outcomes-based approach to the design, implementation, assessment and evaluation of a medical education program using competencies as the organizing framework".

© 2009 Royal College and The International CBME Collaborators

Focus of CBME

CBME asks

- What abilities do **residents** need to demonstrate
  - at each stage of training
  - in order to enter independent practice

- How do **practising physicians** progress in competence to attain expertise?

What is Competence by Design (CBD)?

- Multi-year, transformational change initiative to introduce CBME to residency education and continuing professional development;
- Focused on the learning continuum from the start of **residency to retirement**;
- Based on a competency model of education and assessment; and
- Designed to address societal health need and patient outcomes.

Why CBD?

The CBD program will:

- Align with Future of Medical Education in Canada - Postgraduate (**FMEC-PG**) and the Future of Medical Education in Canada – Continuing Professional Development (**FMEC-CPD**)projects;
- Support the development, implementation, and evaluation of **competency-based**, learner-focused education and continuing professionals development (CPD); and
- Reflect, and respond to, the **world-wide movement** towards competency-based medical education.

New World: CBD

- Competence is about doing the right thing, for the context, at the right time
- **Leading to better patient care.**

The objective

The purpose of CPC is to improve the health of Canadians by preparing medical specialists to meet the changing needs of their patients.

Question Period

ASK

Stages, Milestones and EPAs

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Competence Continuum

CBD[1,2] Competence Continuum

[1] Competence by Design (CBD)
[2] Milestones at each stage describe terminal competencies

Milestones and EPAs at each stage of progression

- **Milestone -** A defined, observable marker of an individual's **ability** along a developmental continuum
  - Used for planning and teaching
  - Based on CanMEDS Roles
- **Entrustable Professional Activity (EPA)** - An essential **task** of a "discipline" that an individual can be trusted to perform independently in a given context
  - Used for assessment
  - Encompasses multiple milestones

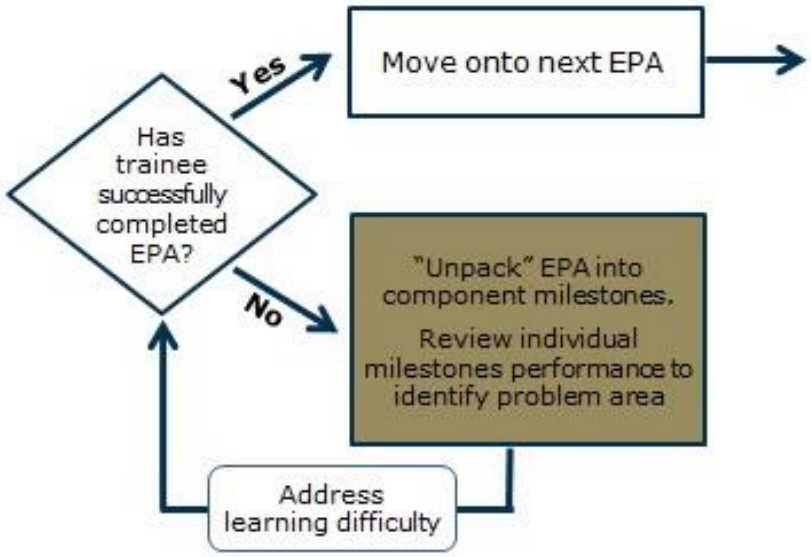
Teaching and Assessing with Milestones and EPAs

- Educators will use milestones to design educational activities and teach specific abilities.
- Once the skills/attitudes required to meet the milestones have been taught, educators can assess achievement using an EPA.
- If the EPA is successfully performed, then all the skills which make up the various milestones within the EPA have been learned and competence has been demonstrated.

Milestones and EPAs

Unpack Milestones

- If a trainee is struggling with an EPA, the teacher can break the EPA down into its component abilities (milestones) to help determine where further guidance or teaching is needed.



Benefits of Milestones and EPAs in residency

- Link clinical activities with learning and assessment,
- Clearly defined targets for acquiring competency and meeting standards throughout training,
- Better preparation to serve patients and communities, and
- Provides the foundation for pursuing mastery of skills and abilities throughout practice

Question Period

ASK

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CanMEDS 2015

CanMEDS 2015: What's New

CanMEDS 2015

CanMEDS 2015: the foundational project of CBD focused on updating the existing framework which was last updated in 2005.

- More emphasis on overall coherence
- Simpler, more direct, language
- Integration of **Patient Safety, Physician Wellness, eHealth and Handover** concepts
- Introducing **generic milestones** (meaningful markers of progression) along the continuum within each CanMEDS Role

Cohorts 1 & 2 Disciplines Adopting CanMEDS 2015

CanMEDS 2015

Disciplines adopting CBD as part of Cohort One and Two are using the updated CanMEDS Framework and CanMEDS Milestones to:

- Better integrate concepts like patient safety into their curriculum,
- Develop specialty-specific milestones and Entrustable Professional Activities (EPAs).

CanMEDS 2015 Special OTR Addendum

CanMEDS 2015

- Revised CanMEDS content is intended to help improve training and enhance care.
- Proposed CBD rollout spans 2014-2022
  - 2022 too late to introduce the new important elements of CanMEDS 2015
- Balanced solution to incorporate content without over burdening stakeholders

CanMEDS 2015 Special Objective of Training Requirements (OTR) Addendum

CanMEDS 2015 Special OTR Addendum

CanMEDS 2015

The OTR Addendum applies to all disciplines beginning their transition to CBD in 2016 & beyond.

- To be released on July 1, 2016 - to become part of each programs' standards thereafter.
  - Each program will have 1 year to incorporate the content - responsibility of the Program Directors.
- Feature only the major NEW CanMEDS content.
- Will not affect general accreditation standards.
  - Surveyors will focus on how the OTR addendum has been integrated into training.
  - Programs reviewed after July 1st, 2017 will be expected to demonstrate integration

Question Period

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CBD Proposed Rollout

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Change to CBD Rollout for Cohort One

First group of CBD adopters began work in Fall 2014 (Cohort 1)

- Medical Oncology, and Otolaryngology – Head and Neck Surgery.
  - To field test aspects of CBD in 2016
  - Likely to fully adopt CBD in 2017

Second group began work in 2015 (Cohort 2)

- Anesthesiology,
- Forensic Pathology,
- Gastroenterology,
- Internal Medicine,
- Surgical Foundations, &
- Urology.
  - Likely to fully adopt CBD in 2017

We anticipate all remaining disciplines will adopt CBD in planned waves, as per the Cohort schedule

Proposed CBD Rollout Schedule: All Residency Programs

2016 (Cohort 3)	2017 (Cohort 4)	2018 (Cohort 5)	2019 (Cohort 6)	2020 (Cohort 7)
Neurosurgery	Gen. Surg.	Orthopedic Surg.	Dermatology	Colorectal
Cardiac Surg.	Plastic Surg.	Vascular Surg.	Ophthalmology	Gen. Surg. Onc.
Pediatrics	Obs/Gyn	Neuro. Path.	Diag. Rad.	Thoracic Surg.
Anatomic Path.	PMR	Neurology	Medical Gen.	Interventional Rad.
Gen. Path.	Nuclear Med.	Hem. Path.	Public Health	Palliative Med.
Radiation. Onc.	Psychiatry	Hematology	Peds. EM	Pain Med.
Emerg. Med.	Respirology	Peds. Hem/Onc	GREI	Developmental Peds.
CCM	Cardiology	Peds. Surg.	MFM	Neuro. Rad.
GIM	Rheumatology	Clin. Pharm/Tox	Gyne/Onc	Peds. Rad.
Nephrology	Geriatrics	Forensic Psych	ID	Occupational Med.
	NPM	Child/Ado. Psych	Med. Micro.	Endo. and Met.
	CIA	Geriatric Psych.	Med. Biochem.	
		Adolescent Med.		

What Does CBD Discipline Rollout Mean?

Creation of new version of specialty specific documents in CBD format

Royal College approval of new version of specialty standards

Training programs begin applying new standards to a group of residents

Residents trained under new standards interact with Royal College

Residents trained in CBD system enter CPD

Program faculty teach and assess using CBD standards

PGME offices and programs apply CBD policies and procedures

Competency-Based CPD

April 2015 invitational Competency-Based Continuing Professional Development (CPD) Summit

- 105 CPD leaders, regulatory authority reps, assessment experts & medical education scholars
  - rationale for competency-based CPD;
  - potential role of the CanMEDS Framework and competency milestones and EPAs in clinical practice and lifelong learning;
  - the complexity of assessment within a specialist's scope of practice; and
  - the implications for the MOC Program.

Competency-Based CPD: Next Steps

- Continue discussion, collaboration and engagement; seek and incorporate input and feedback
- Develop and share white papers
  - Scope of Practice & Competency-Based CPD
  - Assessment & feedback within a Competency-Based CPD System
  - Rationale for transitioning to a Competency-Based CPD System
  - Transition to Competency-Based CPD: Roles & Implications for Learners, CPD Providers & the Health System
- Collaborate to create a process roadmap which provides options for moving forward and reflects the needs and guidance of the CPD community and practicing physicians

Question Period

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ePortfolio

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ePortfolio

Technology Vision – MAINPORT ePortfolio

To enable and support learning, assessment and continuous professional development across the lifelong learning continuum.

Working Together to Develop Technology Solutions

- Clickable **prototype** of MAINPORT ePortfolio being developed
  - Will showcase the ***vision*** of data entry processes and assessment workflows
  - To be shared with partners to inform discussion and guide next steps

Next Steps: work with our partners to examine opportunities to create technology solutions which are usable and practical at the local level

Question Period

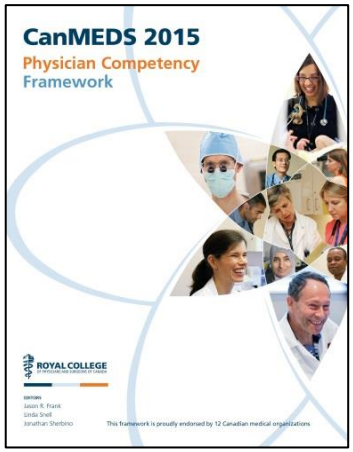
ASK

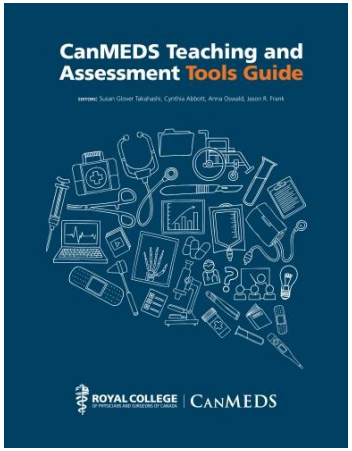
Summary

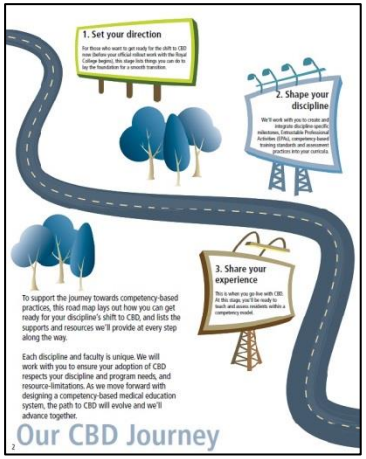
- **Why?**
  - To enhance patient care and better prepare learners for independent practice
- **How?**
  - Stages, milestones, EPAs, CanMEDS, technology solutions etc…
- **When?**
  - Starting in residency
  - Discussions around competency-based CPD just beginning

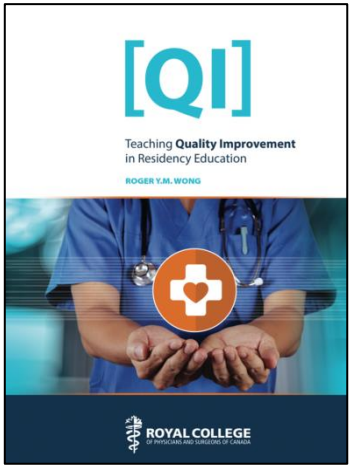
CanMEDS and CBD Resources

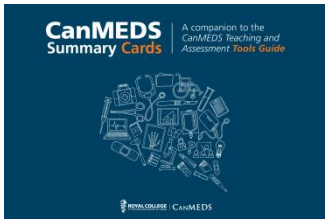
Visit us at www.royalcollege.ca/cbd/resources/











CanMEDS: Introduction for **Clinical Teachers** – Video Series

Your Input Matters

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