



CBME Implementation and Evolution in Canada



Andrew K. Hall MD, FRCPC, MMed, DRCPSC

Vice-Chair Education, Associate Prof, Emergency Medicine, University of Ottawa
Clinician Educator Senior Consultant, Centre for Innovation in Med Ed, University of Ottawa
Chair CBME Program Evaluation, Royal College of Physicians and Surgeons of Canada
andrew.hall@uottawa.ca
@AKHallMD

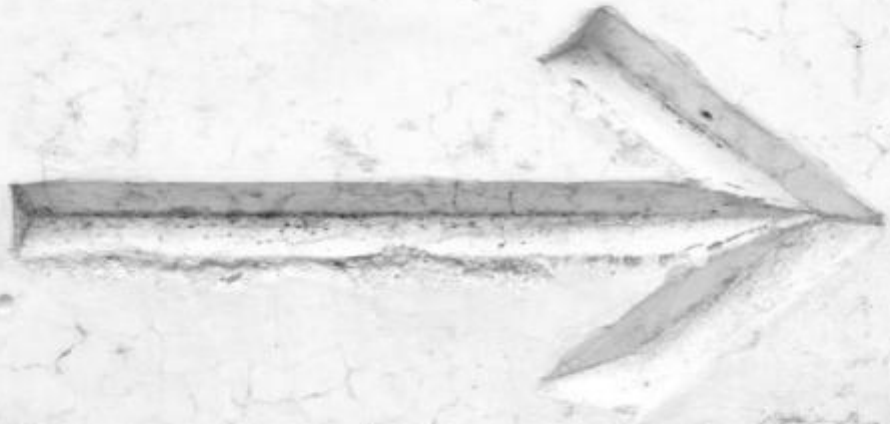


FINANCIAL DISCLOSURE

I have the following financial relationships to report with ACCME defined ineligible companies.

Name of Company	Nature of Relationship
Royal College of Physicians and Surgeons of Canada	Contracted Clinician Educator

I **will not be** discussing unlabeled/investigational uses of medical devices or pharmaceuticals during this presentation.



CBME in PGME Canada

Successes & Challenges

Next Steps in Evolution



Stages of Training



Specialty-specific EPAs and
CanMEDS Milestones;
Required Training Experiences



Residents Observed with
Coaching in the Moment



Observations Documented
(EPA Assessments + other)

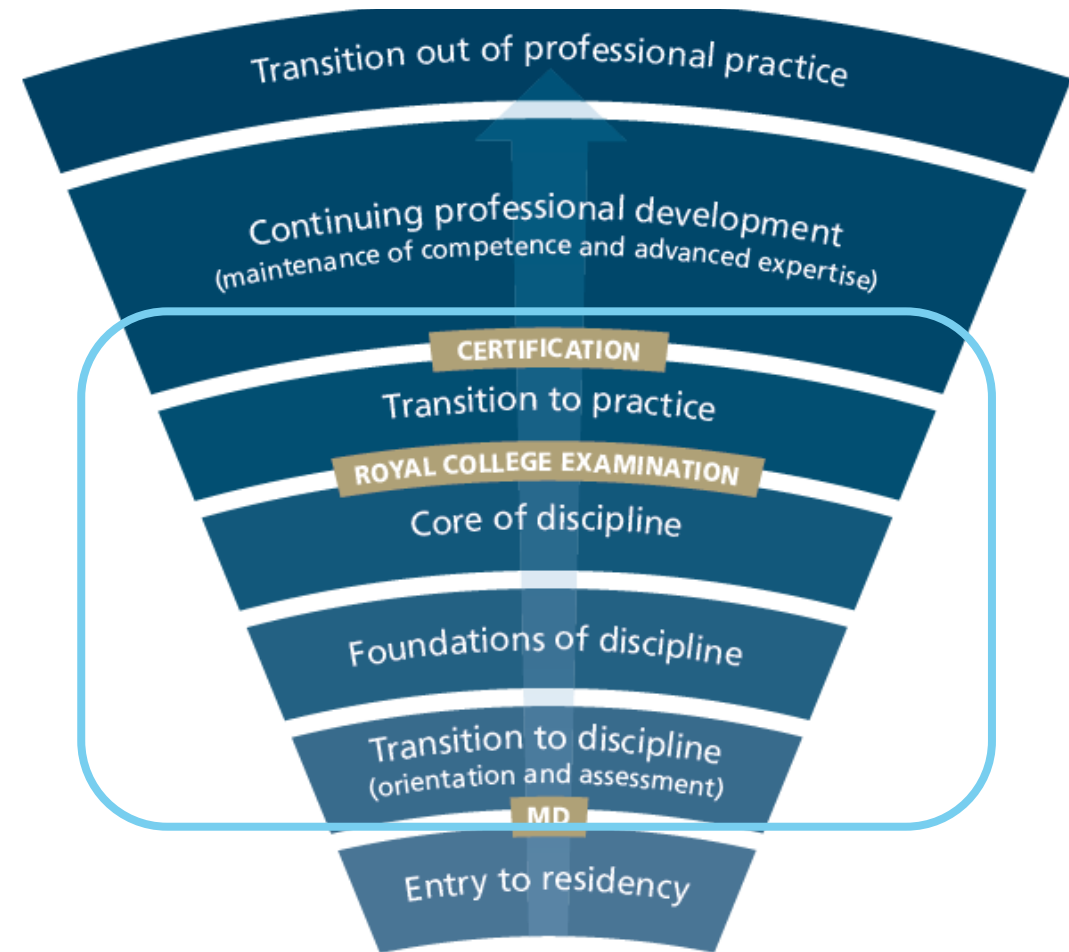


Committee Review with
Coaching over Time




Progress Between Stages

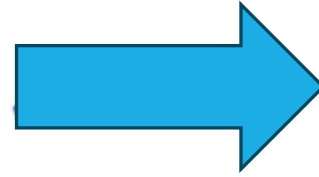
Competence by Design



CBD^{1,2} Competence Continuum




EPAs and CanMEDS
Milestones; Required Training
Experiences



Royal College Specialty Committees x 68!

- Specialty Committee Chair
- All Program Directors
- Regional Representatives
- Special Representatives





EPAs and CanMEDS
Milestones; Required Training
Experiences

Royal College Specialty Committees x 68!

- Specialty Committee Chair
- All Program Directors
- Regional Representatives
- Special Representatives



Specialty Document Suite:

1. Discipline EPAs w/ required assessment numbers and Contextual Variables
2. Required Training Experiences
3. *Assessment Scales/Forms*

*ENTRUSTABLE PROFESSIONAL ACTIVITIES
FOR EMERGENCY MEDICINE (2018)*

Emergency Medicine: Core EPA # 1

CI: Resuscitating and coordinating care for critically ill patients

Key Features:

The focus of this EPA is on leading a team of health care professionals, in the assessment, resuscitation, stabilization and ongoing emergency department care of a patient suffering from a life-threatening medical or surgical condition, including but not limited to:

- Shock
- Cardiorespiratory arrest
- Respiratory failure
- Severe sepsis

Observation plan:

Royal College Specialty Committees x 68!

EPAs and CanMEDS
Milestones; Required Training
Experiences

- Specialty Committee Chair
- All Program Directors
- Regional Representatives
- Special Representatives



Specialty Document Suite:

1. Discipline EPAs w/ required assessment numbers and Contextual Variables
2. Required Training Experiences
3. *Assessment Scales/Forms*

ENTRUSTABLE PROFESSIONAL ACTIVITIES
FOR EMERGENCY MEDICINE (2018)

Emergency Medicine: Core EPA # 1

CI: Resuscitating and coordinating care for critically ill patients

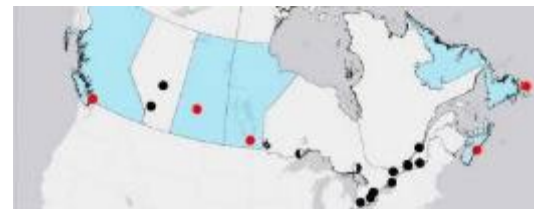
Key Features:

The focus of this EPA is on leading a team of health care professionals, in the assessment, resuscitation, stabilization and ongoing emergency department care of a patient suffering from a life-threatening medical or surgical condition, including but not limited to:

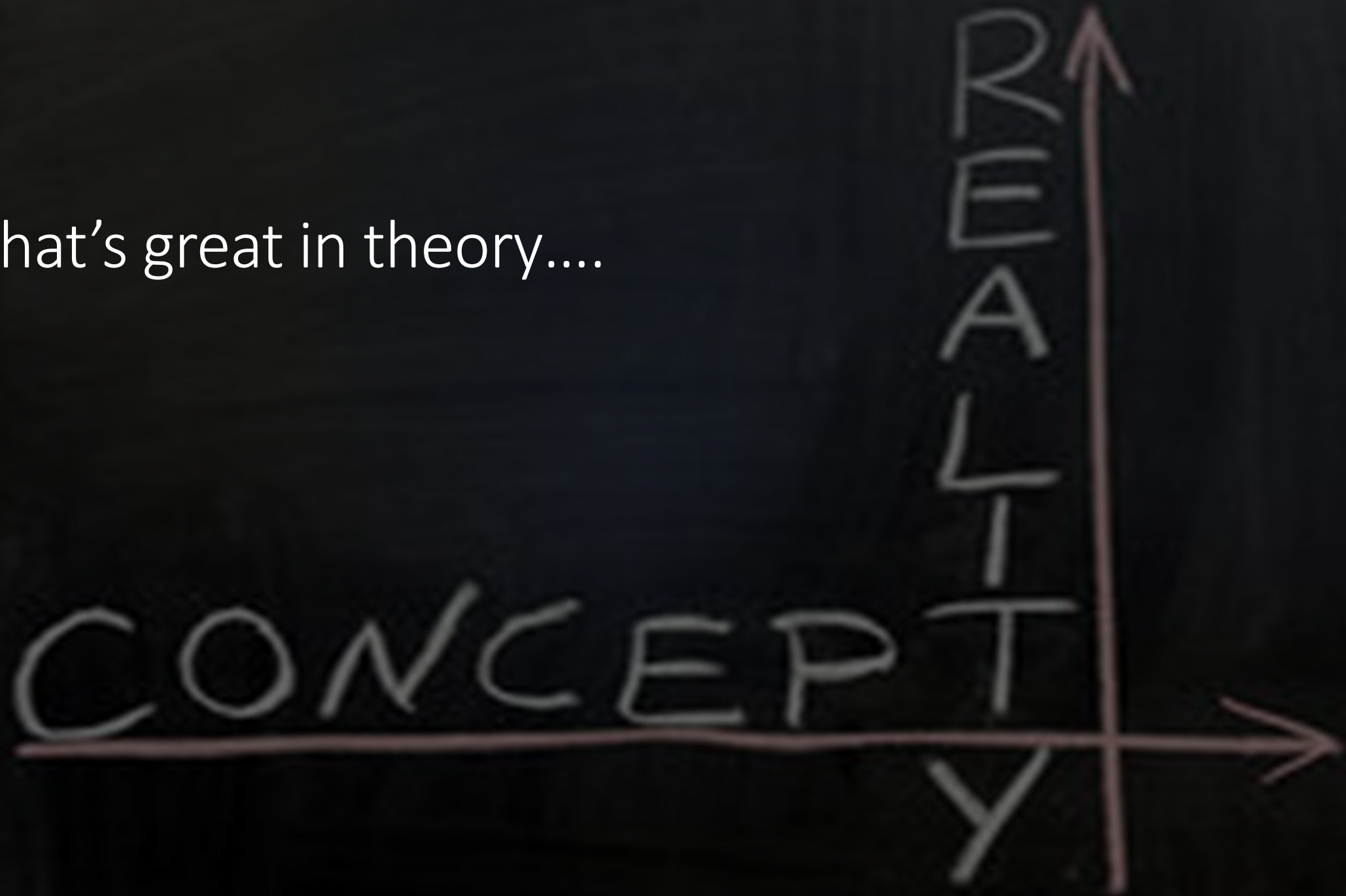
- Shock
- Cardiorespiratory arrest
- Respiratory failure
- Severe sepsis

Observation plan:

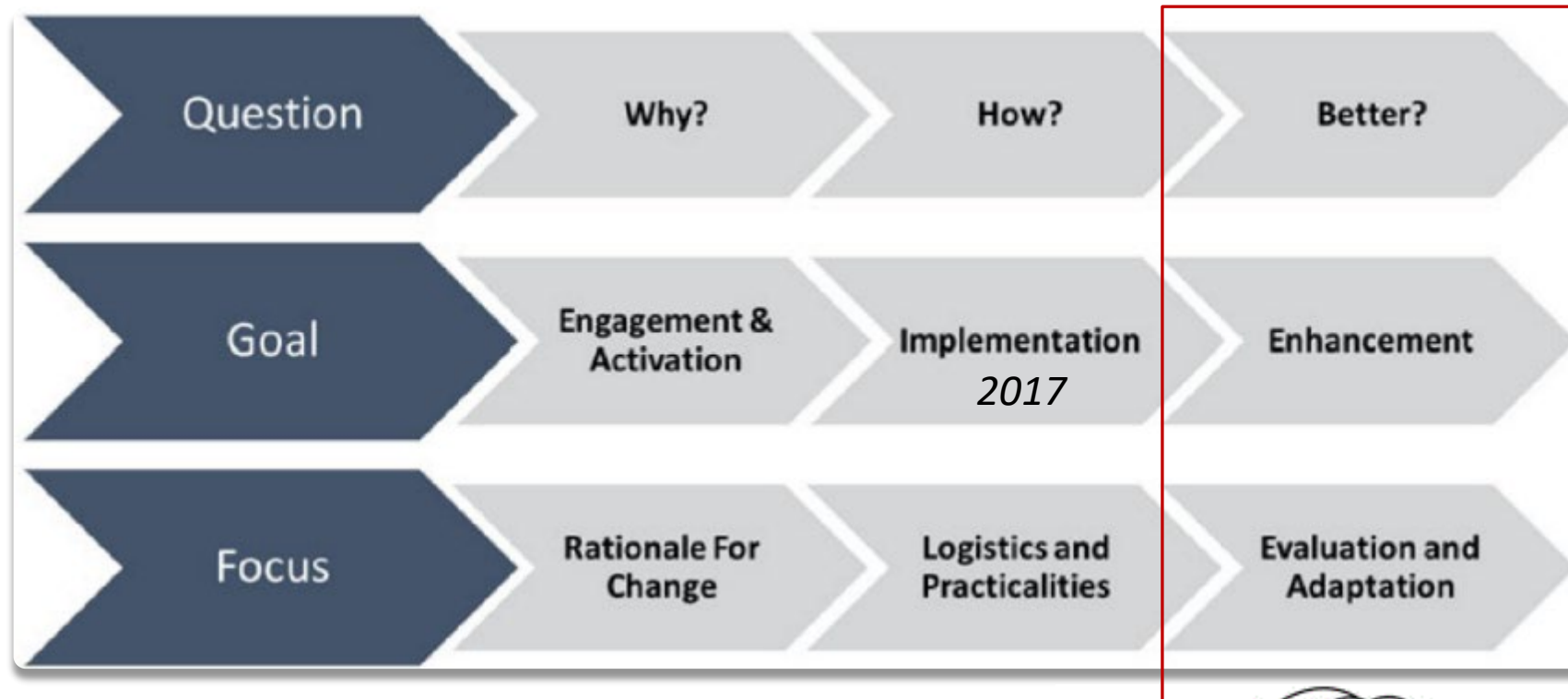
17 Universities / Medical Schools



That's great in theory....



CBME Implementation



► Hall, A., Woods, R., & Frank, J. (2019). Changing the culture of residency training through faculty development. *CJEM*, 21(4), 446-448. doi:10.1017/cem.2019.351

Evaluating Competence by Design as a Large System Change Initiative: Readiness, Fidelity, and Outcomes



Hall et al. *Perspectives on Medical Education* DOI: 10.5334/pme.962

ANDREW K. HALL 

ANNA OSWALD 

JASON R. FRANK 

TIM DALSEG 

WARREN J. CHEUNG 

LARA COOKE 

LISA GORMAN

STACEY BRZEZINA

SINTHIYA SELVARATNAM

NATALIE WAGNER 

STANLEY J. HAMSTRA 

ELAINE VAN MELLE

Key CBME Benefits



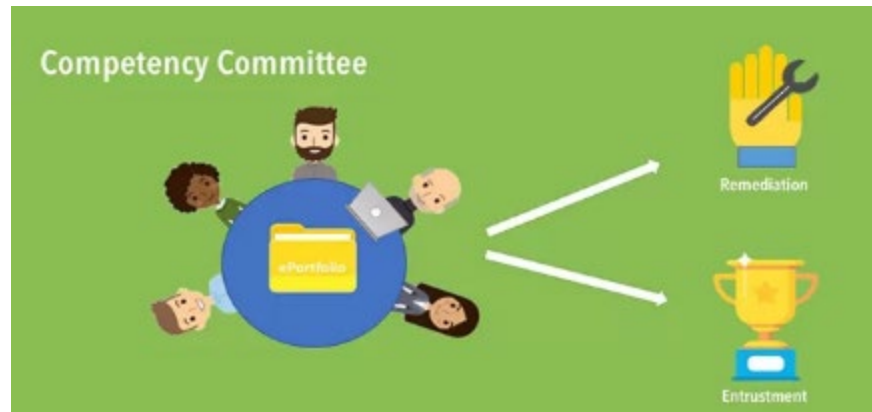
Clarity of expectations and individualization of training experiences



More resident observation and targeted feedback and coaching*



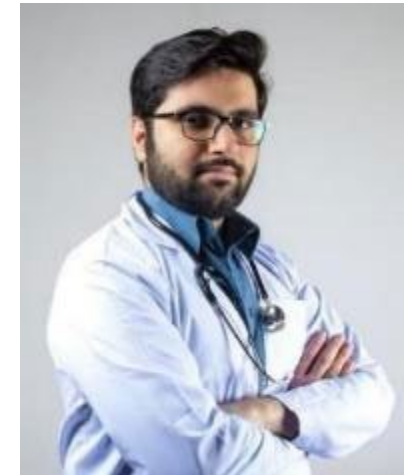
EPAs providing a framework and structure for training experiences



More defensible decision-making and earlier detection of trainees in difficulty



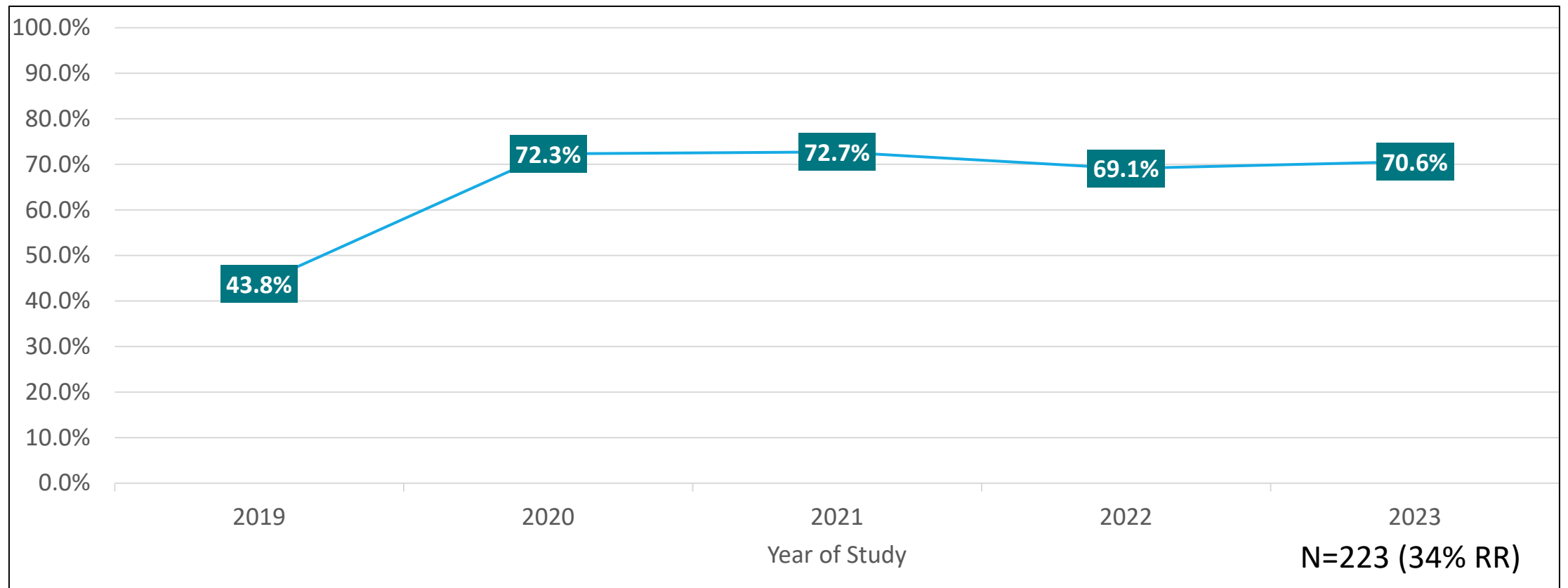
Novel approaches to teaching and assessment



More confident and explicit transitions to practice

Overall, CBD implementation is going well in my local program – by year of study

% of respondents selecting “agree” or strongly agree”



See Many, Do Many, and Teach Many

Lessons learned and new strategies for success: Evaluating the Implementation of Competency-Based Medical Education in Queen's Pediatrics

Amy Acker MD FRCPC¹, Kirk Leifso MD MSc FRCPC¹, Lindsay Crawford BA (Hons), BEd, OCT², Heather Braund BSc (Hons), BEd, MEd, PhD, OCT³, Emily Hawksby BComm, BEd, OCT¹, Andrew K. Hall MD, FRCPC, MMed DRCPC^{4,5}, Laura McEwen PhD^{1,6}, Nancy Dalgarno PhD, OCT^{7,8}, Jeffrey Damon Dagnone MSc, MD, FRCPC, MMed^{6,9}

¹Department of Pediatrics, Queen's University, Kingston, Canada

²Department of Radiology, Queen's University, Kingston, Canada

European Journal of Radiology 147 (2022) 110109



Contents lists available at ScienceDirect

European Journal of Radiology

journal homepage: www.elsevier.com/locate/ejrad



An adaptation-focused evaluation of Canada's first competency-based medical education implementation in radiology

Andrew D. Chung^{a,*}, Benjamin Y.M. Kwan^a, Natalie Wagner^b, Heather Braund^c, Tessa Hanmore^{c,d}, Andrew Koch Hall^e, Laura McEwan^f, Nancy Dalgarno^b, Jeffrey Damon Dagnone^g

*** better feedback, improved clarity of expectations**



Eight-year outcomes of a competency-based residency training program in orthopedic surgery

Markku T. Nousiainen^a, Polina Mironova^a, Melissa Hynes^b, Susan Glover Takahashi^b, Richard Reznick^c, William Kraemer^a, Benjamin Alman^d, Peter Ferguson^a and The CBC Planning Committee*

^aDivision of Orthopaedic Surgery, Department of Surgery, Faculty of Medicine, University of Toronto, Toronto, ON, Canada; ^bThe Office of Postgraduate Medical Education, Faculty of Medicine, University of Toronto, Toronto, ON, Canada; ^cFaculty of Health Sciences, Queen's University, Southeastern Ontario Academic Medical Organization, Kingston, ON, Canada; ^dDepartment of Orthopaedics, Duke University, Sick Kids Research Institute, Hospital for Sick Children, Toronto, ON, Canada

*** more efficient, faster training**

JAMA
Network | **Open**



Original Investigation | Medical Education

Association of a Competency-Based Assessment System With Identification of and Support for Medical Residents in Difficulty

Shelley Ross, PhD; Natalia M. Binczyk, BMSc; Deena M. Hamza, PhD; Shirley Schipper, MD; Paul Humphries, MD; Darren Nichols, MD; Michel G. Donoff, MD

*** better identification and help for residents in difficulty**

Key CBME Challenges



**Fidelity & integrity
of implementation**



Burden of assessment



**Negative impact on
resident wellness**

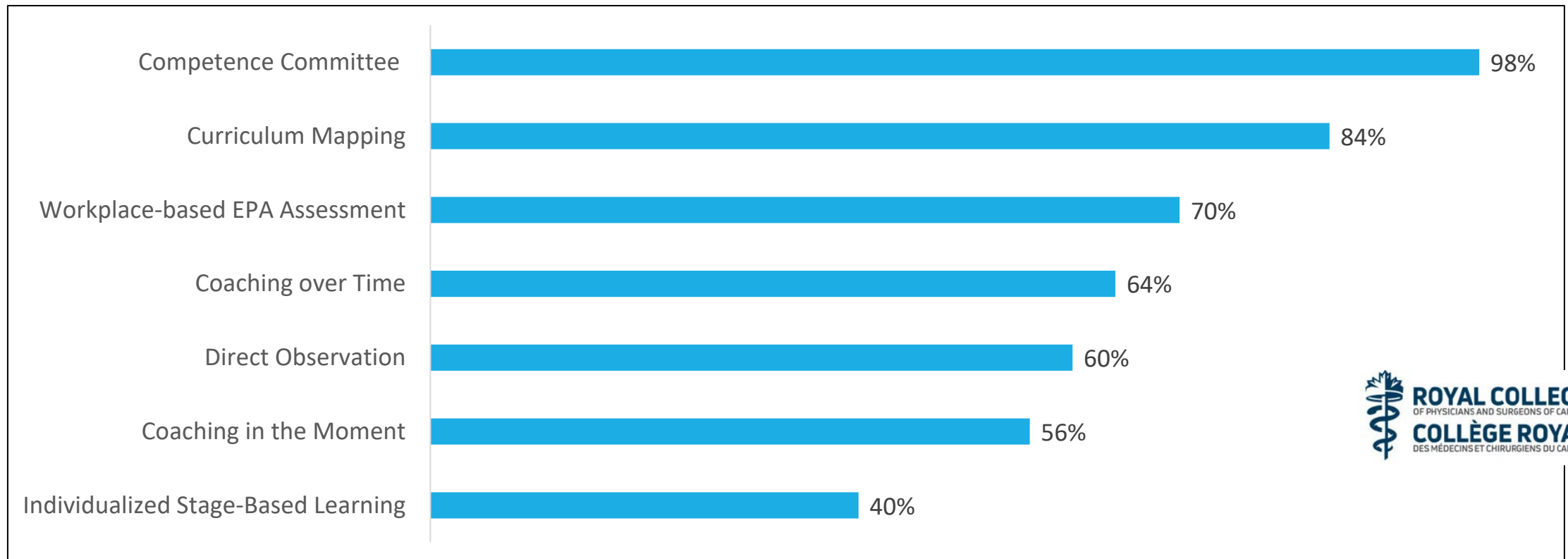


**Growth orientation vs
performance systems**

Fidelity and Integrity of Implementation:

Program Director Pulse Check - Level of Implementation

% of respondents selecting the 4th or 5th option on a scale with 5 levels (from non-implementation to ideal implementation)

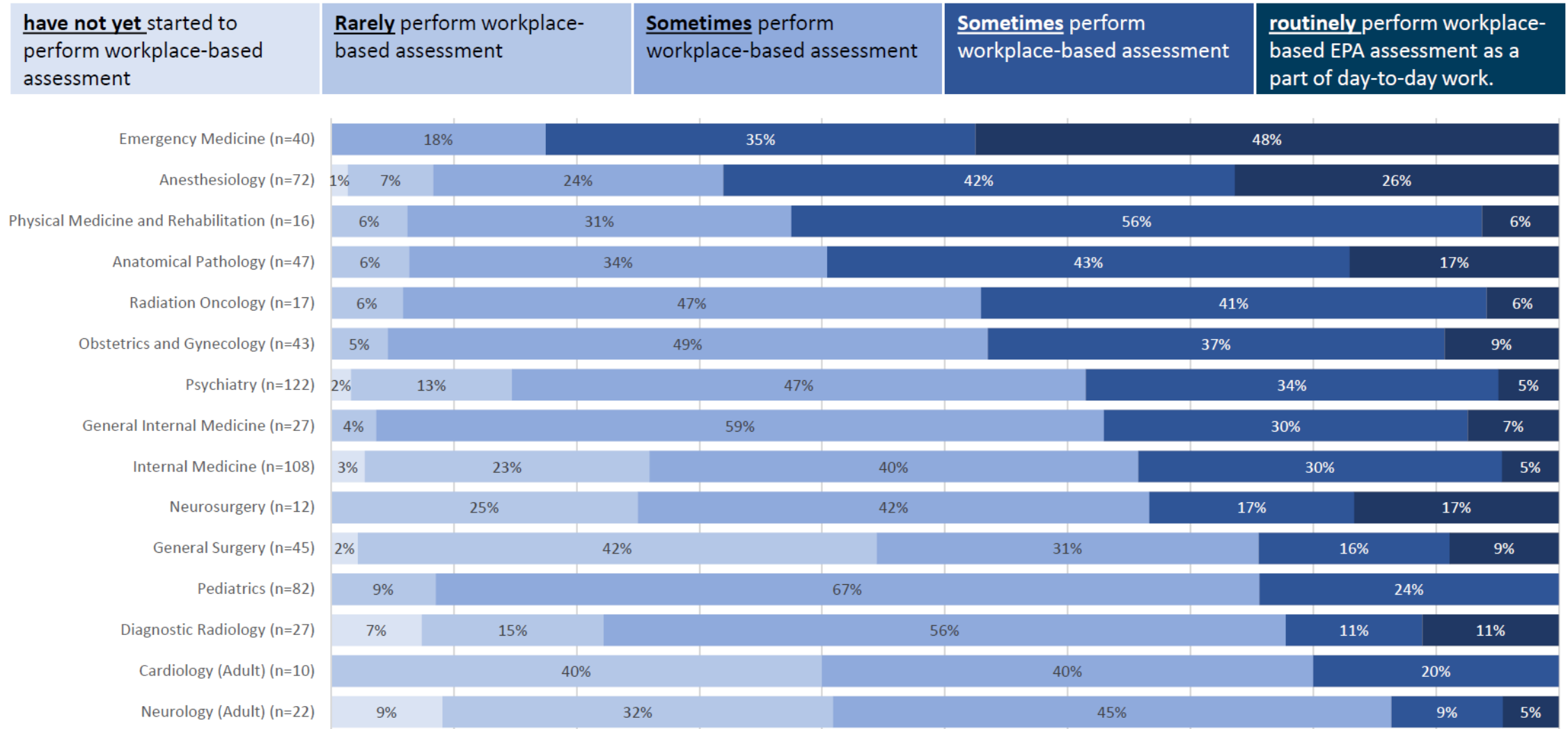


Unique Clinical Supervisory Environments

ex. work-place based EPA assessment



Workplace-based EPA Assessment – Level of Implementation by Discipline



Burden of Workplace-based Assessment

Research Report

Resident Perceptions of Assessment and Feedback in Competency-Based Medical Education: A Focus Group Study of One Internal Medicine Residency Program

Leora Branfield Day, MD, Amy Miles, MD, Shiphra Ginsburg, MD, PhD, and Lindsay Melvin, MD, MHPE

Academic Medicine, Vol. 95, No. 11 / November 2020

The Assessment Burden in Competency-Based Medical Education: How Programs Are Adapting

Adam Szulewski, MD, MHPE, PhD, Heather Braund, PhD, Damon J. Dagnone, MD, MSc, MMEd, Laura McEwen, PhD, Nancy Dalgarno, PhD, Karen W. Schultz, MD, and Andrew K. Hall, MD, MMEd

Academic Medicine, Vol. 98, No. 11 / November 2023

ORIGINAL RESEARCH

“The Most Crushing Thing”: Understanding Resident Assessment Burden in a Competency-Based Curriculum

Mary C. Ott, PhD
Rachael Pack, PhD
Sayra Cristancho, PhD

Melissa Chin, MD, MHS, FRCPC
Julie Ann Van Koughnett, MD, MEd, FRCSC
Michael Ott, MD, MHPE, FRCSC

Journal of Graduate Medical Education, October 2022

FÉDÉRATION DES
MÉDECINS RÉSIDENTS
DU QUÉBEC



Year 3 of implementation
of *Competence by Design*:

**Negative Impact
Still Outweighs Theoretical Benefits**

Observations on the day-to-day reality of CBD
and its progression since July 2017



Negative Impacts on Resident Wellness



Resident Pulse Check 2022

Resident Doctors of Canada



Médecins résidents du Canada

ROYAL COLLEGE
OF PHYSICIANS AND SURGEONS OF CANADA
COLLÈGE ROYAL
DES MÉDECINS ET CHIRURGIENS DU CANADA

Resident Wellness

73% of residents indicated that the transition to CBD had a **negative impact** on their health and wellness

What is impacting resident health and wellness?

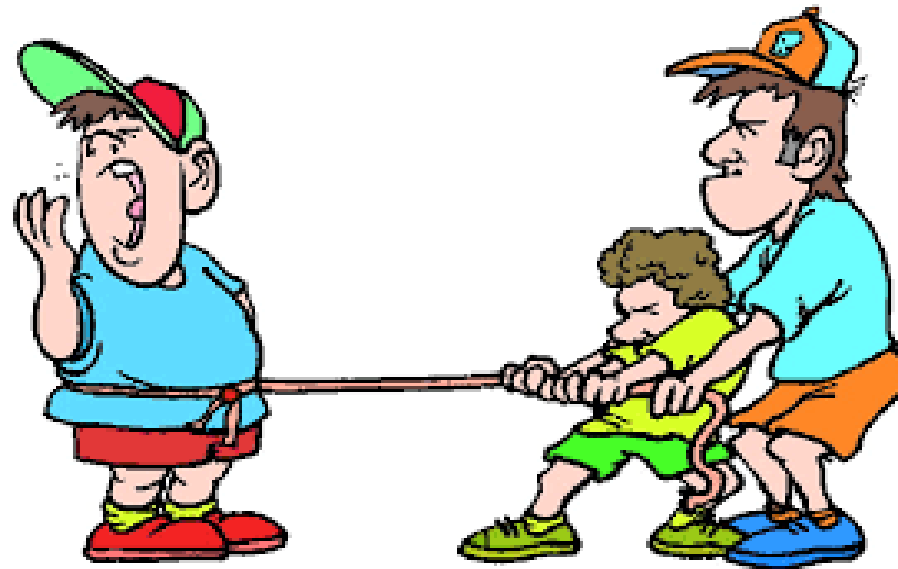
- Stress from chasing staff to do EPAs
- Concern about achieving requirements
- Administrative burden
- Preoccupation with EPAs
- Concerns around utility/validity of CBD/EPAs
- Cognitive load
- Evaluation/performance anxiety

Performance vs Growth Orientation



Performance oriented systems:

“you need to demonstrate competence 10 times in the workplace before you can progress to the next stage”



Growth mindset talk:

“we want you to embrace challenge and failure as an opportunity for learning”

Assessment as tick-boxing



Advances in Health Sciences Education
<https://doi.org/10.1007/s10459-024-10318-2>

RESEARCH

Dual purposes by design: exploring alignment between residents' and academic advisors' documents in a longitudinal program

Shiphra Ginsburg^{1,2} · Lynfa Stroud^{3,4} · Ryan Brydges^{2,4,5} · Lindsay Melvin^{4,6} · Rose Hatala^{7,8}

“Over time, residents’ writing shifted away from intrinsic roles, patient care and improvement towards what AAs focused on, including getting EPAs (entrustable professional activities), studying and exams. For EPAs, the emphasis was on getting sufficient numbers rather than reflecting on what residents were learning.”



CBD 2.0

Reduction in burden of assessment

Heavy



Light



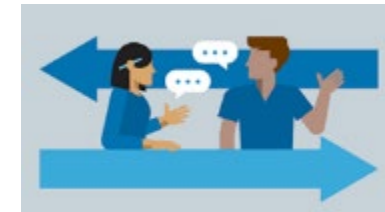
Increased flexibility without loss of accountability



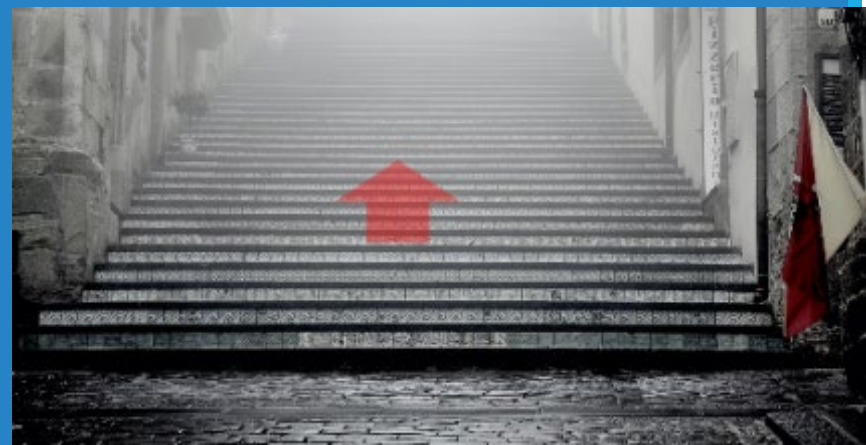
Programs of assessment, not just EPAs



Assessment for coaching!



CBME in Canada is Evolving!



What have we learned?

- Benefits: transitions, feedback, data, progression, focus on education
- Challenges with fidelity of implementation
- Burden of assessment and threat to resident wellness
- Assessment processes driving performance orientation



What's the path forward?

- ❖ Reduction in burden of assessment
- ❖ Increased flexibility without loss of accountability
- ❖ Programs of assessment, not just EPAs
- ❖ Assessment for coaching!

Andrew K. Hall

andrew.hall@uottawa.ca

@AKHallMD

