CBME PROGRAM EVALUATION FORUM

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

CBME Program Evaluation Forum

Detecting smoke before the fire: How can CBME better identify and help the Resident in Difficulty?

Facilitators

Dr. Anna Oswald, Rheumatologist, Professor, University of Alberta, Clinician Educator, RCPSC. **@AnnaOswald2**

Dr. Andrew K. Hall, Emergency Doctor, Associate Prof, Queen's University, Clinician Educator, RCPSC. **@AKHallMD**

June 9, 2021

Introduction

What is the CBME Program Evaluation Forum?

- CBD program evaluation is occurring across many sites and organizations
- This forum is a space for all stakeholders to discuss, share and collaborate
- We aim to build a national community of practice with an aim towards adaptation-focused program evaluation

Learning Objectives

- At the end of today's session, participants will be able to:
  - Describe several evaluation strategies that could be used to evaluate Residents in difficulty
  - Use one or more of the key takeaways in their own evaluation strategy for Residents in difficulty.

Conflict of Interest Disclosures

- Dr. Anna Oswald
  - I have no relationships with commercial interests to disclose
- Dr. Andrew Hall
  - I have no relationships with commercial interests to disclose

Note: We are both edugeeks, love program evaluation and are Clinician Educators with the Royal College

Rules of Engagement

- Please take a respectful and collaborative approach
- We encourage the sharing of all ideas, including early drafts
- Please be respectful of other people's academic intellectual property
- If you hear a project idea that you like please contact the person/group who raised it
- Collaboration is encouraged; emails of attendees who are willing to share will be circulated after the meeting

Joining the Discussion

- We will take questions after the 3 presentations are done
  - To ask a question, please use the question box or “raise hand”
  - Please hold all verbal questions until the discussion section.
  - We will then call on you to speak, and unmute your line
- Group discussion:
  - If you wish to speak please use the question box or “raise hand”
  - When you finish speaking, please mute your line.
- We will be recording the presentations, but not the discussions.

Speakers

- Susan Glover-Takahashi, MA(Ed), PhD
  - Director of Education, Innovation & Research, PGME | University of Toronto
  - Associate Professor, Department of Family & Community Medicine
  - Associate Professor, Dalla Lana School of Public Health
- Rune Dall Jensen, MSc, PhD,
  - Assistant Professor, Institute of Clinical Medicine | Aarhus University
- Shelley Ross, PhD
  - Associate Professor, Department of Family Medicine| University of Alberta

Managing Residents In Difficulty Within CBME Residency Education Systems – A Scoping Review

Jonathan Pirie, MD, Med
Lisa St-Amant, HonBSc
Mariela Ruétalo, BA
Susan Glover Takahashi, MA(Ed), PhD

June 9, 2021

No disclosures

Background

- Transition to a CBME system requires changes in policy and practice around remediation

- We reviewed the literature in search of best practices for identification and management of residents in difficulty within competency frameworks

Methods

- Conducted a scoping review of literature published between 2011-2015, inclusive
- Articles identified from electronic databases: ERIC, Medline, EMBASE
- Search terms: “physician”, “trainee”, “residency”, “education”, “remediation”, “performance assessment”

Methods

- We screened article titles and abstracts for inclusion after calibrating for consistency

Articles meeting all criteria below were included for full-text review:

1. Must be about postgraduate medical education
2. Must be about residents in difficulty (discuss remediation and BOE cases)
3. Must offer information to inform structure and/or processes of competence. Processes include features of competence (e.g. CanMEDS Roles involved)

Methods

- A standardized form was used to extract data from included full-text articles
- We performed descriptive and summative content analyses of the data

Methods

- 129 articles from electronic literature databases: 33 duplicates excluded
- 96 article titles and abstracts screened for eligibility: 29 excluded
- 67 articles in secondary full-text screening: 19 did not meet criteria, 5 could not retrieve full text
- Result: 43 articles from the search were eligible for full-text abstracting

Results

Key findings :

- Many articles sought to identify and define deficiencies in a range of competencies, as a first step to early identification of residents in difficulty (N=19; 44%)
- Despite the increasing popularity of CBME systems globally, few articles explicitly discuss remediation and/or residents in difficulty within competency-based frameworks (N=6; 14%)
- Systems to oversee the promotion of residents year to year or phase to phase were rarely discussed (N=2; 5%)

Results

10 Themes Arising From Qualitative Analysis:

1. Identified residents in difficulty (n=19; 44%)
2. Defining and classifying resident deficiencies (n=10; 23%)
3. Improving assessment tools and/or methods for tracking the progress of residents undergoing remediation (n=8; 19%)
4. Individualizing or tailoring of the remediation plan/program (n=7; 16%)

Results

10 Themes Arising From Qualitative Analysis (cont'd):

5. Defining terms relating to remediation (n=5; 12%)
6. Demands of remediation on faculty (n=5; 12%)
7. Hidden curriculum (e.g. attending role modeling) (n=2; 5%)
8. Associations with past performance (e.g. past medical school performance) (n=2; 5%)
9. Pilot testing of plan/program (n=2; 5%)
10. Roles and responsibilities of players involved in remediation (n=2; 5%)

Conclusion

- While the findings are based in traditional, time-based education models, it still offers general principles to guide implementation of CBME-based systems for managing residents in difficulty

- Need for universities and programs to translate the findings around resident remediation, making them applicable and/or functional for their CBME frameworks

Impact at BOE @PGME…*observations for studying*

1. *Timing of Identification*

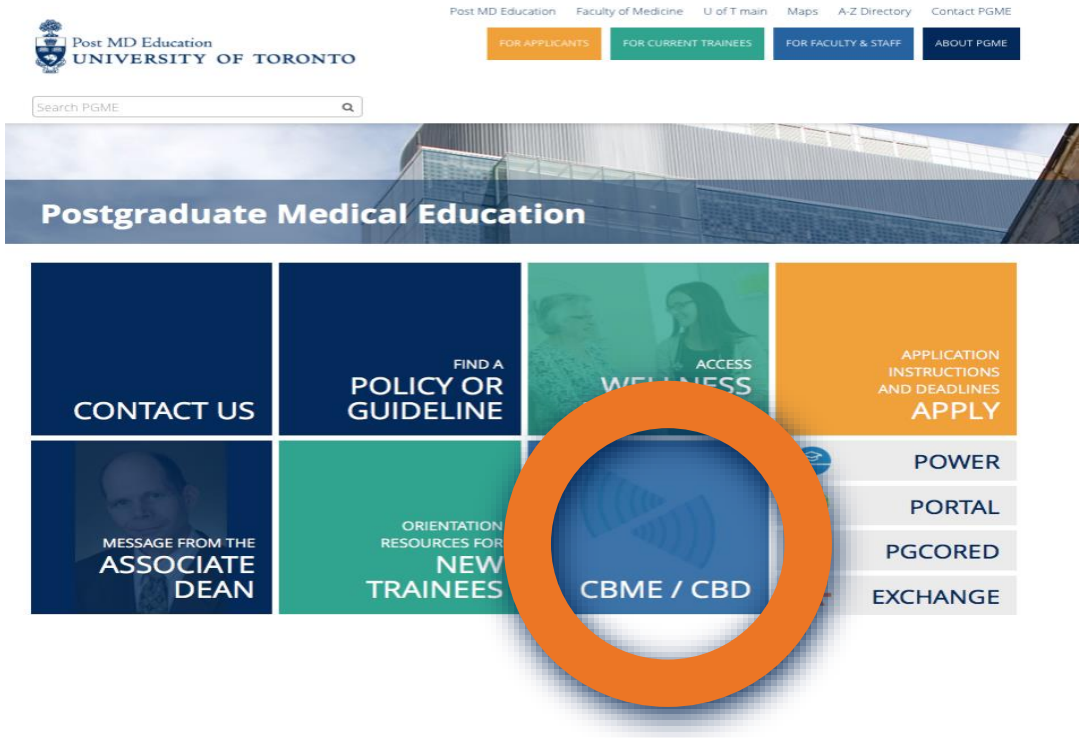
- FM
- Orthopedic Surgery
- Cohort study??

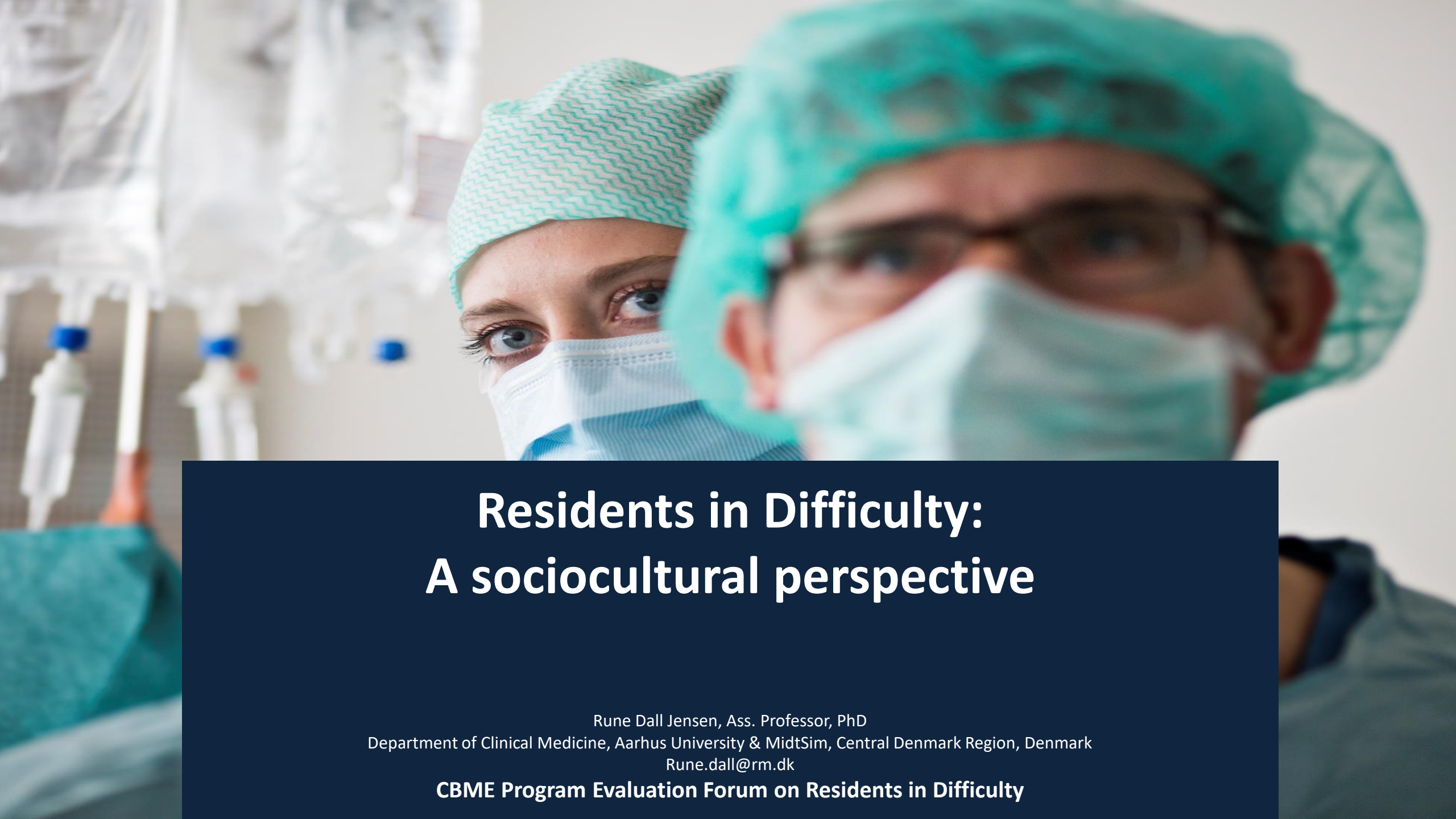
2. *Early signals in CBD by CCs*

3. *More information for individualized program*

1) BPEA full paper, including a complete list of references, can be found here
2) Scoping Review RID in CBME paper
3) Contact sglover.takahashi@utoronto.ca

Questions





Residents in Difficulty: A sociocultural perspective

Rune Dall Jensen, Ass. Professor, PhD
Department of Clinical Medicine, Aarhus University & MidtSim, Central Denmark Region, Denmark
Rune.dall@rm.dk

CBME Program Evaluation Forum on Residents in Difficulty

Disclosure

- I have no conflicts of interest to disclose

What is known?

- 5-7 % of residents is in difficulty (Yao & Wright 2000; Paice 2009; Aram et al. 2013; Dupras et al. 2012)
- Across medical schools and specialties (Zbieranowski et al. 2013, Tabby et al. 2011, Dupras et al. 2012)
- Broad issue that covers all CanMed roles (Resnick et al. 2006, Adams et al. 2008, Long 2009, Dupras et al. 2012, Zbiernowski et al. 2013)
- Focus on the individual rather than the environment (Szymczak & Bosk 2012, Patterson et al. 2013)

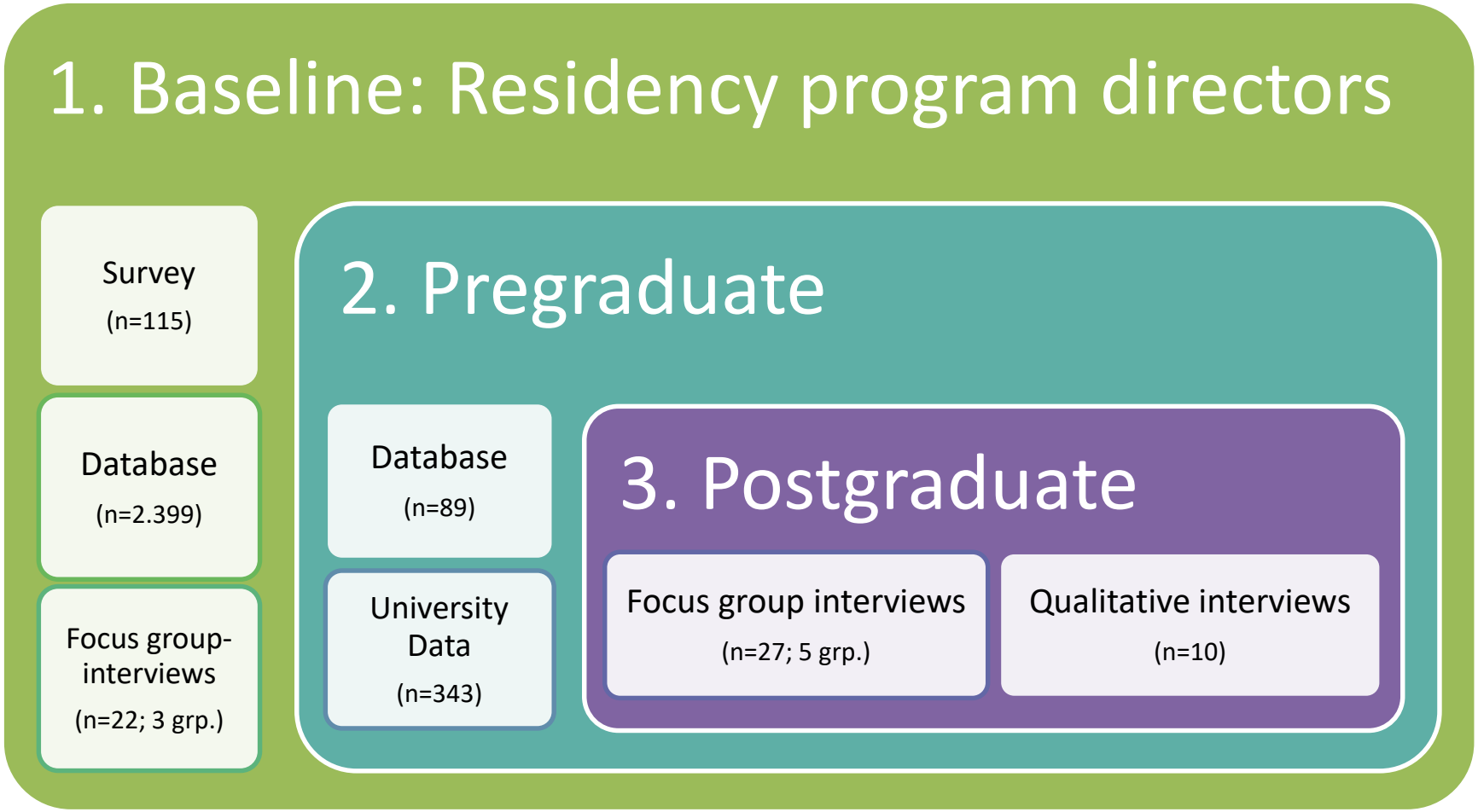
Aim of the research project

I. To examine prevalence and characteristics of residents in difficulty

II. To investigate transitions

III. Explore how medical residency training culture influence residents' risk of ending in difficulty

MULTI METHOD DESIGN

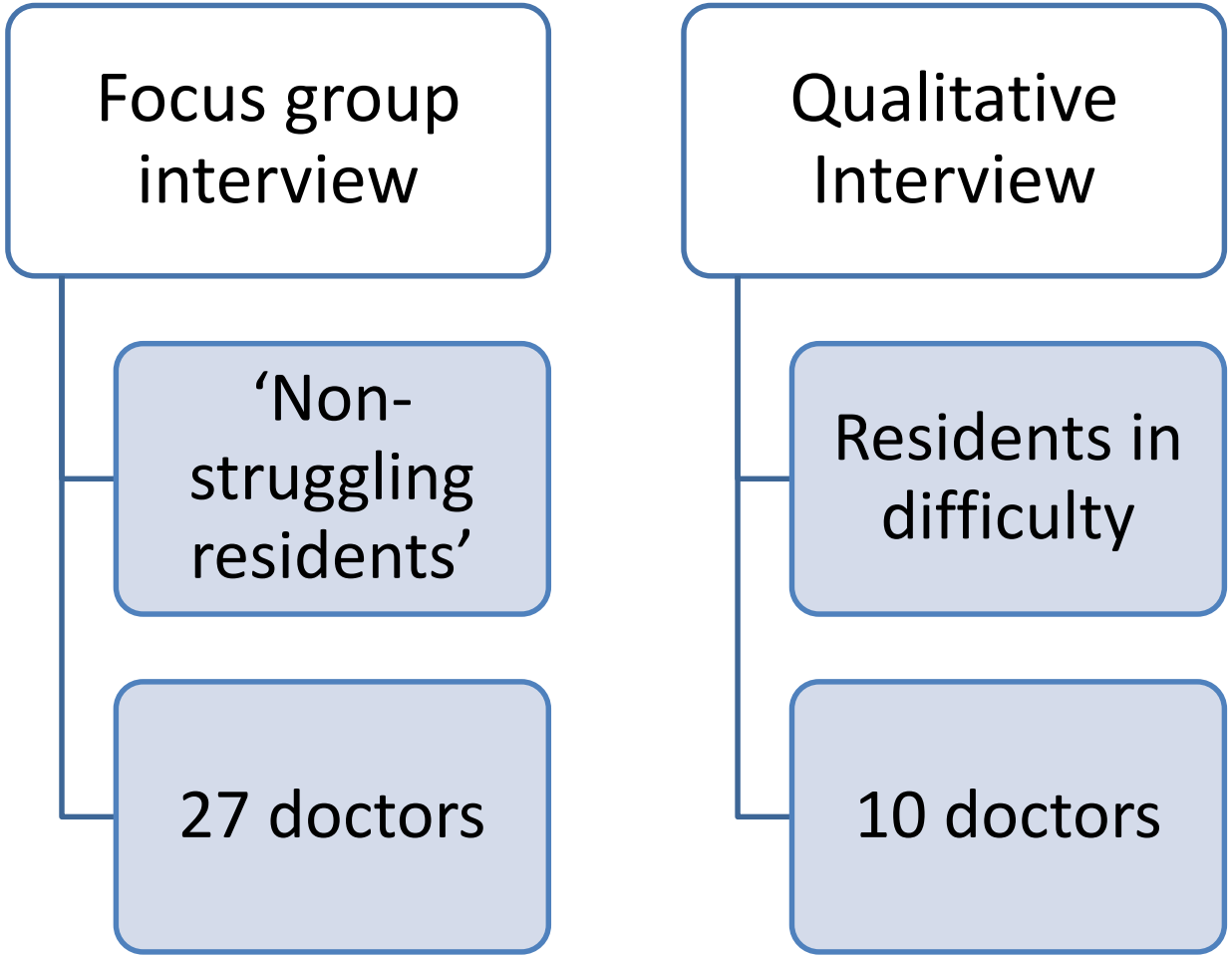


Study 3

SOCIOCULTURAL PERSPECTIVE

Rune Dall Jensen, Department of Clinical Medicine, AU

Empirical data



Theoretical lens: Pierre Bourdieu

Illusio is ”the appeal that a field of practice […] can have on its participants and the ***investment that these participants capitalize in their participation […]***

“Thus the concept of illusio may explain how a learner’s immersion in a field of practice requires that the learner *buys into* the underlying logics of this particular practice.”

(Lund, Andersen & Christensen, International Journal of Medical Education. 2016;7:297-308)

Illusio interfere with the resident's identity

Findings

1) Conflicting expectations – Education vs. Production
2) From altruism to pragmatism
3) The organisational hierarchy and the residents
4) Coping with stress and system pressure: sharing expectations, adjusting standards or escape strategy

Findings

- Stress
- Time pressure
- Insecurity
- Lack of clarification of roles
- Lack of match of expectations
- Lack of network

Findings

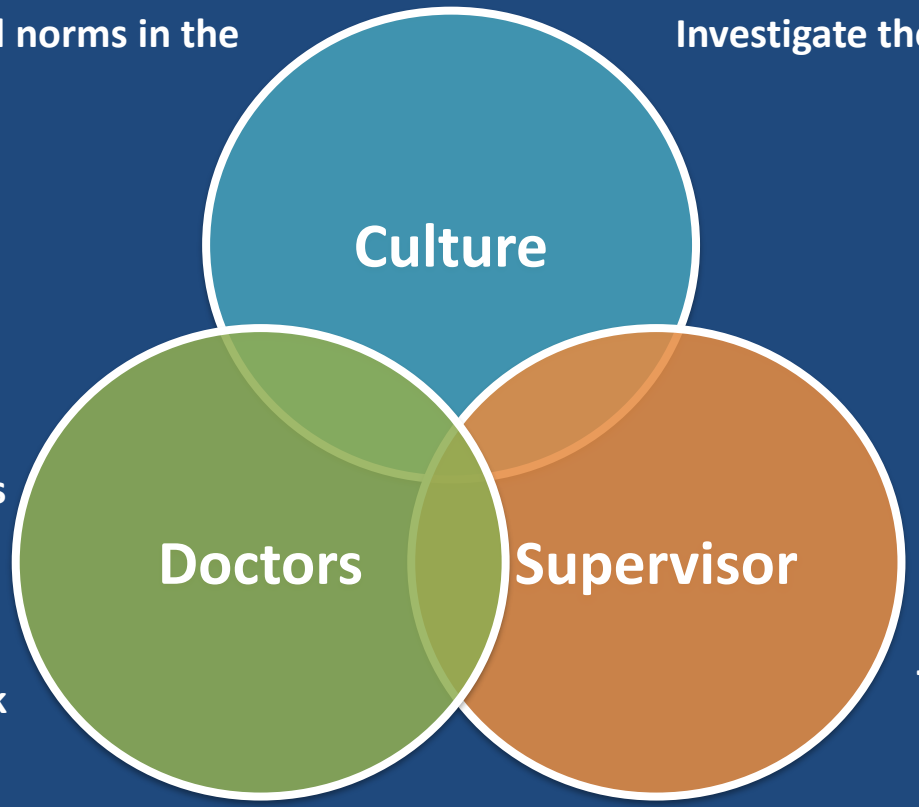
”Residents’ difficulties was a matter of illusio, that is, the (mis)match between legitimate explicit as well as tacit rules in the field of medicine (doxa) and the residents’ possibilities and dispositions (habitus) to appreciate those rules.”

Christensen M, et al. 2020

Recommendations

Clarify the value and norms in the departments

Investigate the match between doctor and department



Importance of role models

Nobody is perfect

Formalize network

Early detection of competences

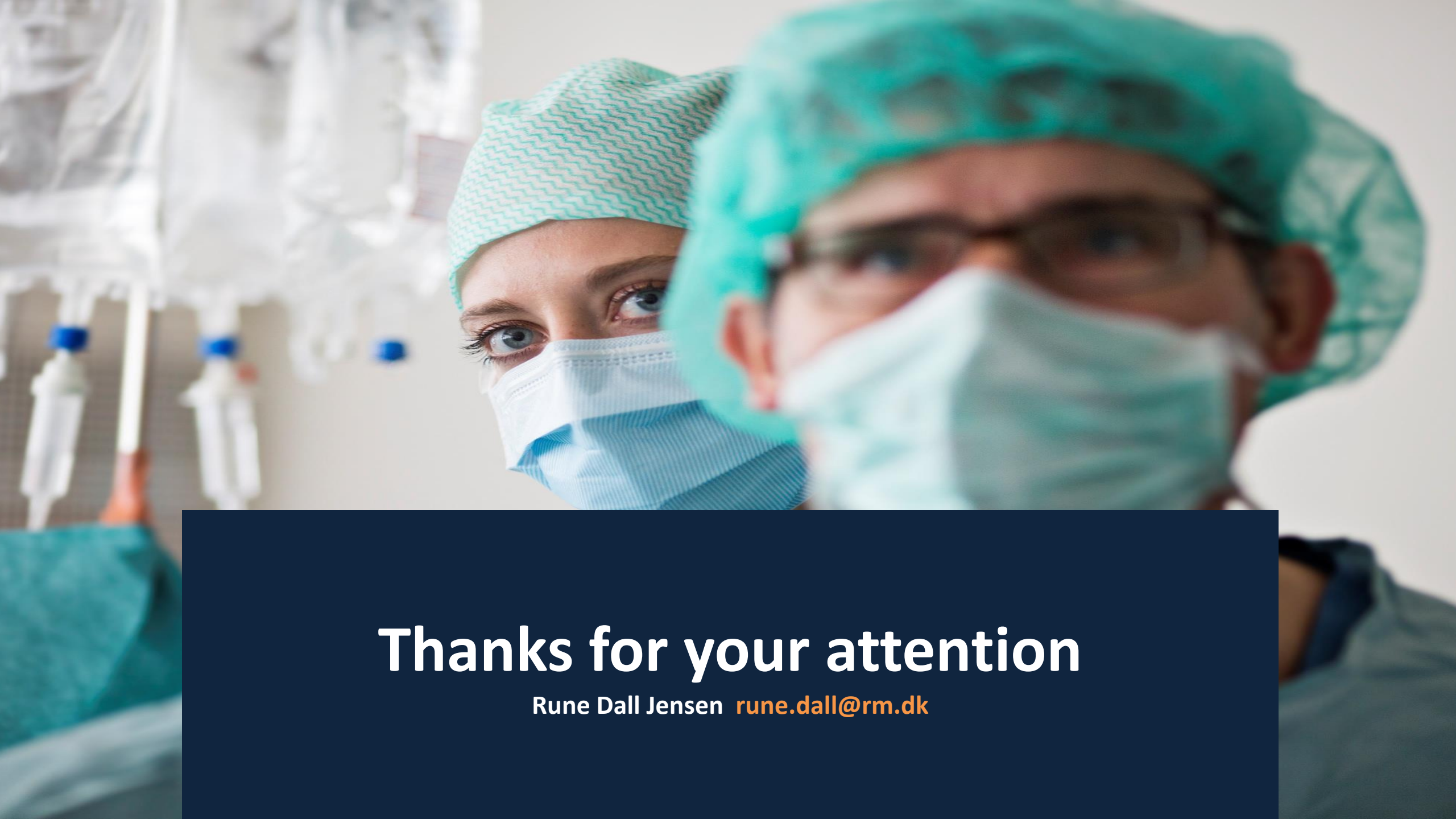
Feedback on performance and person

Training based on needs

Research group

Dr. Mette Krogh Christensen, Ass. Professor, PhD
Dr. Rune Dall Jensen, Ass. Professor, PhD

Ms. Karen Norberg, MSc
Dr. Lotte O'Neill, Ass. Professor, PhD
Dr. Signe Gjedde Brøndt, MD, PhD
Dr. Peder Charles, MD, Professor Emiritus
Dr. Lene S. Mortensen, MD, PhD,



Thanks for your attention

Rune Dall Jensen rune.dall@rm.dk

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Comparing trends in the detection of residents in difficulty before and after implementation of CBME

Shelley Ross

CBME Program Evaluation Forum:

Detecting smoke before the fire

June 9, 2021

Presenter Disclosure

- No conflicts of interest to disclose

- This research was partially supported by a Health Professions Education Scholarship Summer Studentship grant from the Faculty of Medicine & Dentistry, University of Alberta

- Some of the results discussed today were published in:

Ross S, Binczyk N, Hamza D, Schipper S, Humphries P, Nichols D, Donoff M. *Association of a competency-based assessment system with identification of and support for medical residents in difficulty*. JAMA Network Open 2018; 1 (7): e184581.

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Acknowledgements

Some of the content in this talk comes from work completed in collaboration with the following people:

Natalia Binczyk

Oksana Babenko

Shirley Schipper

Deena Hamza

Mike Donoff

Paul Humphries

Darren Nichols

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Paul Humphries

Darren Nichols

Background: CBME

- CBME has been adopted by multiple programs worldwide
- Not everyone is convinced
- Need program evaluation data
- Need outcomes data

Background: Family Medicine approach to CBME

- Overall curriculum guide =

  Triple C* Competency-Based Curriculum

  **comprehensive, continuous, centered in FM*

- Assessment guideline =

  CRAFT: Continuous Reflective Assessment for Training
  (aka: learner-centered programmatic assessment of residents)

- Our local version =

  CBAS: Competency-Based Achievement System

CRAFT: Continuous Reflective Assessment for Training

(aka: learner-centered programmatic assessment)

Learn	Assess	Decide
Observe Document Feedback	Review Reflect Adjust	Adapt Update Report

Approach to program evaluation

- Multiple elements to overall program evaluation: learning analytics, interviews, focus groups, questionnaires

- Today I will share results from a project that compared pre-CBME implementation data to post-CBME implementation data
  - Secondary data analysis of archived resident assessment data from multiple cohorts

What data was included?

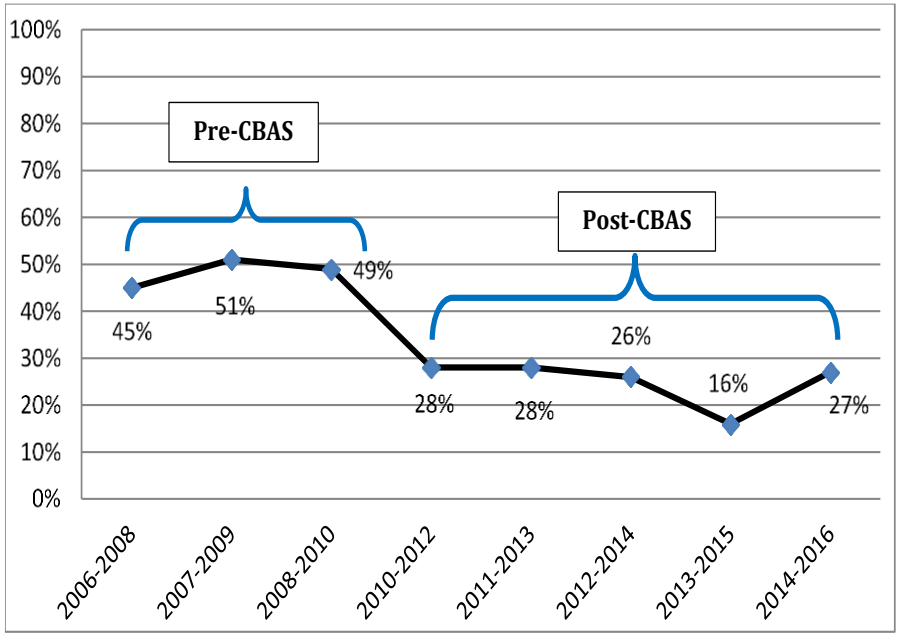
	Pre-CBAS cohorts (2006-2008)	Post-CBAS cohorts (2010-2014)
Total residents	163*	295^
Sex, No. (%)		
Female Residents	81 (49.7)	144 (48.8)
Male Residents	81 (49.7)	151 (51.2)
Age, No. (%)		
Residents <=30 years old	72 (44.2)	163 (55.3)
Residents >30 years old	90 (55.2)	128 (43.4)
Training status, No. (%)		
Canadian Medical Graduates	105 (64.4)	243 (82.5)
International Medical Graduates~	57 (35.0)	52 (18)

*One case missing age, sex, IMG/CMG status information; ^Four cases are missing age information;
~ International Medical Graduates attended medical school outside Canada

NOTE: Due to the difference in proportions of IMGs, all analyses were carried out with IMGs removed from the dataset (to control for the possibility that the IMGs may be skewing the data); in those analyses, all findings remained significant. Given this result, we present all results below with the full dataset.

Trends in percentages of residents who received a flag (less than satisfactory on a competency domain) on a summative assessment pre- vs post- implementation of CBAS.

A. Overall percentage of total residents with at least one flag by cohort.



B. Percentage of residents within each cohort by numbers of flags.

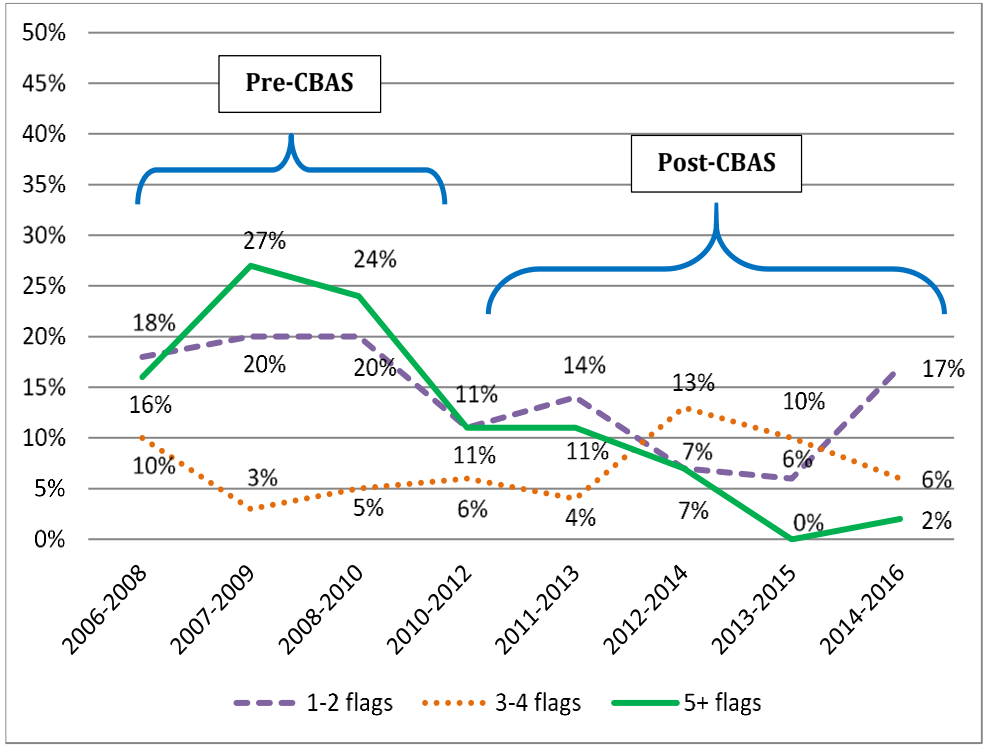
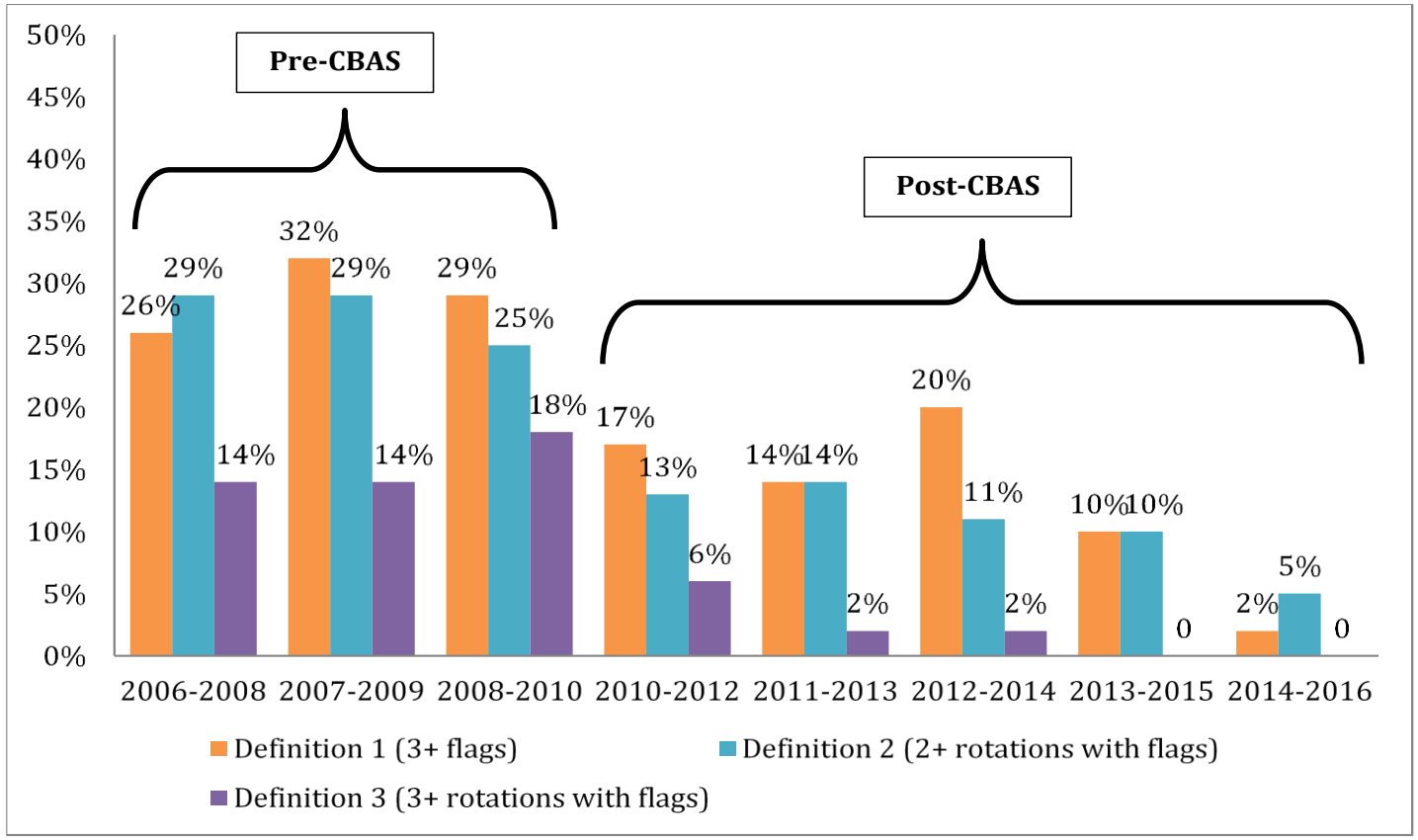


Figure 2. Trends in percentages of residents who meet criterion for designation of “resident in difficulty” pre- vs. post-implementation of CBAS.

Three definitions of resident in difficulty (increasing strictness of criteria) are presented

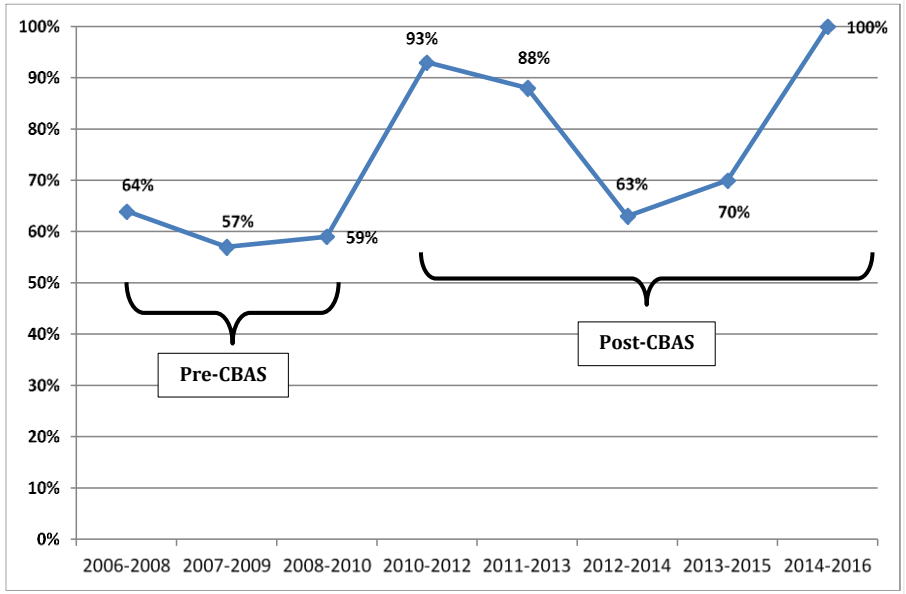


Comparison between trends over time

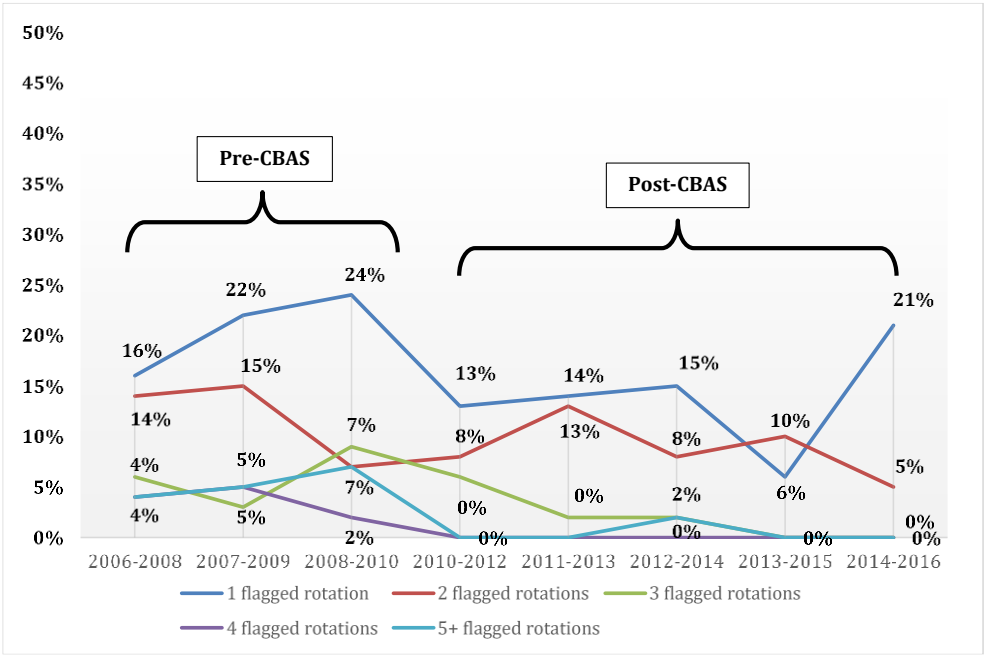
Trends in documentation that flags were addressed

Trends in percentage of residents who had flags on >1 rotation

Figure 3. Trends in residents with flags whose files include documentation that the flags were addressed with the resident.



C. Percentage of residents within each cohort by numbers of flagged rotations.



What does it all mean?

- Implementing CBME (including changes to assessment) = earlier detection & better help for residents who have encountered difficulty
- Process of flagging residents did not change – how flags were addressed changed
- Key benefit of CBME: transparent assessment throughout rotation + culture of feedback
  - "catch & release": catch problems early, discuss & fix in place, carry on without interruption/disruption

Future directions (program evaluation/research)

- Continued tracking of assessment data & changes to patterns/trends
- Regular check-ins with residents, educators, admin, and PD for CQI
- **Big dream**: funding to examine what our graduates do in practice (data from charts, patients, support staff, & docs re: specific outcome variables of CBME)

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Thank you

Questions? Please email me at:

sross@ualberta.ca

QR code for Ross et al, 2018

Thank you to our presenters!

Next up: Questions and Discussion

Questions for Presenters

- Please use the hands up function, and we will call on you to speak.
- We encourage you to also put questions in the question box; we will try to answer outstanding questions after the webinar.

- Presentations
  - *Managing Residents in difficulty within CBME residency educational systems*
    - *Susan Glover-Takahashi, PhD*
  - *Residents in difficulty: A sociocultural perspective*
    - *Rune Dall Jensen, PhD*
  - *Comparing trends in the detection of Residents in difficulty before and after implementation of CBME*
    - *Shelley Ross, PhD*

Open Program Evaluation Community Discussion

- Please use the hands up function, and we will call on you to speak.
- We encourage you to also put questions in the question box.

- Relation to own evaluation projects
- Thoughts and considerations
- Strategies for moving evaluation community forward

Upcoming Event

- **Program Evaluation Summit**
  - Monday, October 18th – 10:00AM-2:00PM EST
  - Call for abstracts soon to come.

Next Steps

- Please respond to our survey and email sign up sheet

- This event is an Accredited Group Learning activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, and approved by the Royal College Continuing Professional Development Unit. You may claim a maximum of 1.5 hours (credits are automatically calculated).

Thank you!