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To: Residents, College of Medicine staff, faculty, program directors, program administrative assistants, SHA CEO & CMO, Ministry of Health, SMA, CPSS, RDoS, and U of S Provost

From: Anurag Saxena, MD, M.Ed., MBA, FRCPC. Associate Dean, Postgraduate Medical Education, College of Medicine, University of Saskatchewan

This newsletter is the tenth in the communication series from the PGME office to provide information on ongoing change efforts to implement competency-based medical education (CBME) in the specialty programs. The Competence by Design (CBD) initiative is the Royal College of Physicians and Surgeons of Canada (RCPSC) version for specialty programs and is a hybrid of CBME and time as a resource. Triple C Competency-based curriculum is the College of Family Physicians of Canada (CFPC) version of CBME implemented for family medicine residents.

Contents:

Message from Associate Dean, PGME: Dr. Anurag Saxena

This newsletter highlights the continuing steps to implement CBD at U of S and local innovations; dashboard for review of data (Dr. Thoma), local simulation integration (Dr. Turnquist) and coaching adoptions (Dr. Ulmer), resident perspectives (Dr. Patterson and Dr. Philipenko) and faculty development.

The local comfort with CBD "mode of education" is growing and we have noted an earlier identification of difficulties and appropriate timely interventions.

Our office is also engaged in studying implementation and its various aspects.

Thank you to all involved in local implementation and continuing success.

Anurag Saxena, MD, M.Ed., MBA, FRCPC.
Associate Dean, Postgraduate Medical Education, College of Medicine

A Competency-Based Medical Education Dashboard Project

Brent Thoma, MD MA MSc FRCPC DRCPSC; Assistant Professor of Emergency Medicine

Under Competence By Design assessment systems each resident will be observed, assessed and coached frequently. Within emergency medicine, residents in our first CBD cohort are each on track to receive >200 EPA-based assessments this academic year. When CBD is fully rolled out we anticipate that the residents in our 20 Royal College residency programs will receive ~50,000 EPA assessments *every year*. This data will need to be effectively organized and visualized to support our residents and our programs.[1]

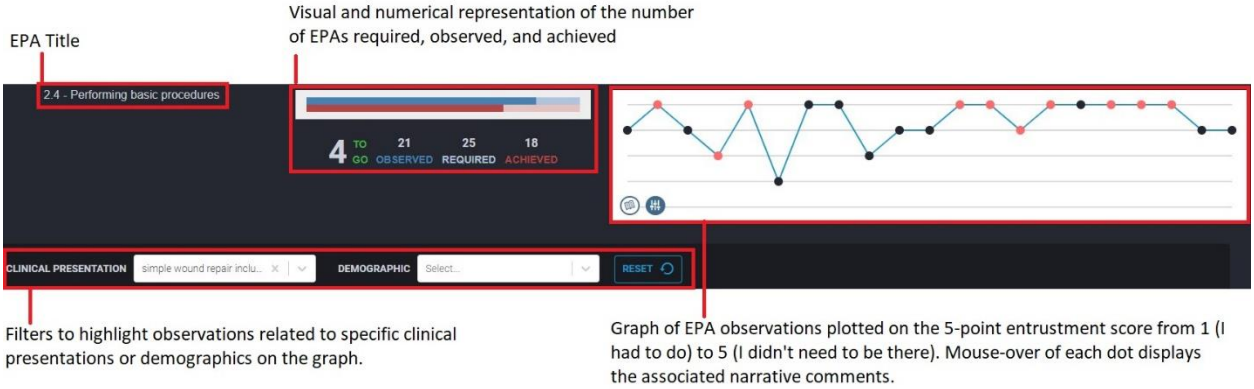
Learning analytics apply a variety of data analysis techniques to describe, characterize, and predict the learning behaviors[2] using large datasets.[3,4] Their analyses are generally presented in a 'dashboard' - "a visual display of the most important information needed to achieve one or more objectives" - so that "information can be monitored at a glance."[5]

The University of Saskatchewan emergency medicine program started a CBD Dashboard Project in 2018. We aim to manage our assessment data using a local database and dashboards to facilitate:

1. *Resident Learning*

The resident dashboard makes it quick and easy for residents to review their feedback while guiding them towards the EPAs that need to be observed. Visual representations of data provide an overall quantitative perspective and direct learners to EPAs that need further observations while also making it easy to review specific narrative feedback.

Figure 1. A dashboard representation of the observations of a single Emergency Medicine Foundations EPA over time for one resident.



2. *Competency Committee Decision Making*

The Competency Committee dashboard makes it easy for Competency Committee members to review large amounts of assessment data quickly. The visuals provide an overall perspective and allow members to easily 'drill down' to review the specific narrative feedback. We hope this will make it easier to identify struggling residents, diagnose their challenges, and track their progress.

3. *Faculty Development*

A Faculty Development dashboard will be launched next month to support data-informed coaching of individual Faculty with the goal of improving the feedback that they provide their residents.

4. *Program Evaluation*

A Program Evaluation dashboard will be launched in June to track the observation of EPAs at the program level. We hope this will allow our program's leadership to identify challenges in their CBD implementation (e.g. EPAs that are not being observed frequently enough) so that steps can be taken (resident development, faculty development, providing feedback to rotations, curricular changes) to correct them early on.

5. *Research*

The research dashboard will allow assessments within the database to be exported in an anonymized, research-friendly format. We anticipate that this will eventually facilitate program-specific, specialty-specific, and PGME-wide research and scholarship by our residents and clinician educators.

Each dashboard is being enhanced through feedback from iterative focus groups of the emergency medicine residents and the Faculty that use them. If other PGME programs are interested, it will be relatively easy for them to utilize these dashboards that we develop at no additional cost. If you are interested in learning more about the dashboard project or in conducting research on competency-based medical education, please be in touch.

This project received funding support from the Office of the Vice Dean of Research and moral support from Postgraduate Medical Education. Research related to the project has been deemed exempt by the University of Saskatchewan Research Ethics Board.

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Simulation – Dr. Ali Turnquist PGME Simulation Co-ordinator

With the increased focus on competency-based medical education, simulation is playing an increasingly large role in both the training and assessment of our residents. PGME has been proactively working to ensure that our programs, students, and Faculty have the support that they need to implement new ideas and address these challenges.

New ideas such as the "gamification" of learning has opened up many doors within simulation. "Gamification" of learning means exploring ways to learn through the use of games and puzzles. In medical education we can use this approach to assess a learner's approach to teamwork, communication and problem-solving, while more easily controlling for medical knowledge. Locally, we will be testing out an escape room style game to introduce our new cohort of residents to our simulation lab as part of their boot camp happening in June. We are all very excited to see how this progresses as more and more literature comes out to support its use.

Our residency programs are continuing to build on their use of simulation. Simulation has enormous potential to supplement learning by providing exposure to rarely seen medical presentations, and allows hands-on practice and the development of leadership skills in a safe environment. Historically, we have used simulation as a tool for practicing certain aspects of medicine, without emphasis on grades or a "pass/fail" system. However, it is possible to use simulation for both low and high-stakes evaluation in order to standardize a clinical experience for testing purposes, or to assess a skill that may not be seen consistently in clinical practice. We expect that using simulation for both formative and summative assessments while ensuring the validity and acceptability of these assessments will be a challenge moving forward. I would encourage anyone interested in using simulation for assessment purposes to get in touch with the CLRC and myself so we can assist.

If you are interested in facilitating simulation within PGME, we have plenty of opportunities. All of our surgical programs, internal medicine, anesthesia and emergency medicine participate in RaPID (Resuscitation and Procedural Interdisciplinary Program) in first year. This exciting program exposes residents to simulation-based acute medical and surgical presentations, ultrasound training, and central and peripheral line access training. Faculty find these sessions fun to teach and it is vital we continue to have multiple disciplines involved in teaching the course.

It is strongly recommended that before incorporating simulation into your teaching practice you receive training on how to effectively use this unique educational modality. Through a partnership with KidSim in Calgary (http://www.kidsim.ca/asset.html), we offer the ASSET course multiple times per year in both Saskatoon and Regina. This 2-day course (which is eligible for CME credit) will introduce you to exploring learner frames and perspectives while practicing stating observations on the learner's communication, medical knowledge, and leadership style. Many

physicians have found that this course helped them in their day-to-day practice by introducing a communication style that allows difficult feedback to be given without creating defensiveness or conflict.

If any of the above interests you, please contact me, Ali Turnquist, at aliturnquist@gmail.com and I'd be happy to help get you involved.

Ali Turnquist, BSc, MD, CCFP-EM; Emergency Medicine Physician; PGME Simulation Co-ordinator
Assistant Professor, University of Saskatchewan

Coaching in the Moment: Dr. Brian Ulmer PGME CBD Educator

Competence By Design (CBD), with its framework of entrustable professional activities (EPAs) and milestones, is a model of learning based on performance/competencies as well as an evaluation process. CBD involves more than just "know how", it also requires trainees to "show how" and demonstrate ability "to do" independently. The framework emphasis informative feedback as the main driver to the learner. Defined objectives in real time clinical situations and simulation, should better promote positive coaching techniques.

To help educate both Faculty and Residents about coaching, we are pleased to have released in February 2019, an educational package consisting of 3 components for all Faculty and Residents. The package consists of an article reviewing coaching in medical education, the RCPSC presentation on coaching in the CBD model and finally a self-assessment survey that has questions about your understanding of coaching at this point in your career.

We hope this education package will be of use to improve your knowledge of coaching in the CBD model. In the future, we will be initiating other activities to help improve our understanding of coaching using the Competency Based Medical Education Model.

Resident Lead Advisory Council: Dr. Quinten Paterson, PGY-3 Emergency Medicine and Dr. Brianne Philipenko, PGY-3 Internal Medicine.

The Competence by Design (CBD) Resident Lead Advisory Council was created to allow for resident discussion and advocacy during the facilitation of CBD within each individual program. It is comprised of a PGME support team, one CBD resident lead from each specialty program as well as a medical student representative. Each CBD resident lead has the responsibility to help lead their program's residents through curriculum transition, and the advisory council provides a unique tool to aid in this important task.

There are two main avenues through which the council functions to ease the transition to CBD, the first being feedback to the PGME support team. Communication regarding resident engagement and education strategies, and identification of potentially useful resources that the PGME can provide to enable a smooth transition have proven invaluable.

The second avenue is through cross-specialty resident collaboration. The inherent concept of CBD being a resident driven learning model has led to many education initiatives and learning tools being created by residents at a program level. Sharing successes and failures of each program in their journey has allowed for early identification of potential issues and opportunities for growth as a group.

The CBD Resident Lead Advisory Council is also currently in the process of pursuing collective scholarship opportunities given the paucity of literature in the infancy of CBD.

We would like to thank the PGME and our programs for providing us with the opportunity to collaborate with our colleagues in this way.

Faculty Development: Everyday Bias for Healthcare Professionals.

Faculty Development is excited to offer a new workshop - Everyday Bias for Healthcare Professionals. Mitigating bias is an essential component for diversity & inclusion, which are important themes for the College of Medicine &, of course,

the healthcare of Saskatchewan people. There are numerous areas where this skill is beneficial: clinical decision-making, admissions, assessment, advising, curriculum development, co-worker relationships, & counselling to name a few.

Description:

In partnership with the AAMC, this workshop has been designed by Cook Ross, a consulting firm in the United States with 30 years of experience, including deep expertise in the role of inclusion & diversity in the workplace. Grounded in self-reflection, the workshop enables participants to examine how experiences & identities shape their biases. Participants develop awareness of their first impressions in order to improve decision-making in the workplace.

Learning Objectives:

- Explore how bias functions in the brain & its impact on decision-making
- Examine how experiences & identities shape our biases
- Develop the ability to closely inspect our first impressions for bias.

If you would like to arrange for this 2-hour workshop for your site, committee, department, or group, please contact Faculty Development - medicinefaculty.development@usask.ca or Sean Polreis (sean.polreis@usask.ca).

Medical Education Research and Scholarship Day -

Date & Time: June 7, 2019; 9:00 AM-3:30 PM; Posters and Oral Presentations

We will keep you informed of the developments and progress. In the meantime, if you have any questions, please do not hesitate to connect with us: pgme.cbd@usask.ca

For past issues and other CBE/CBME information, visit our PGME Competence by Design (CBD) and Competency Based Medical Education (CBME) website: https://medicine.usask.ca/residents/pgme.php