Competence by Design: Resident Pulse Check Report

Executive Summary

Introduction

This report outlines the findings of a study that was undertaken collaboratively by Resident Doctors of Canada (RDoC) and the Royal College of Physicians and Surgeons of Canada (Royal College) to better understand resident physicians' experiences with the implementation of Competence by Design (CBD). The Resident Pulse Check study is based on the Royal College's Program Director Pulse Check study but was adapted specifically to the resident physician population.

The study involved an electronic survey conducted in the fall of 2021 to measure resident physicians' experiences with CBD implementation, and the level of implementation of critical components (key components) of CBD, including:

- Curriculum mapping
- Direct observation
- Workplace-based entrustable professional activities (EPA) assessment
- Coaching in the moment
- Coaching over time
- Electronic portfolio
- Competence committees
- Individualized resident stage-based learning plans

Resident physicians were asked questions regarding the benefits and challenges encountered with CBD implementation, as well the impact the transition to CBD has had on resident physicians' health and wellness.

The survey was open for one month. During this time, 649 resident physicians participated (15% of the targeted physicians[1]). Responses included representation from resident physicians across 13 institutions and from 37 of the 41 disciplines that had officially launched CBD at the time of the survey.

Key Findings

Overall Implementation

Survey respondents were asked the extent to which they agreed with the statement "Overall, CBD implementation is going well in my local program" on a five-point scale from strongly disagree to strongly agree. Overall, responses were highly variable, with 36% of respondents who strongly disagreed or disagreed with the statement, 37% who agreed or strongly agreed, and 26% who neither agreed nor disagreed. The distribution in ratings varied by discipline and institution.

Implementation of Key Components

The key components and their associated scales were constructed through a process termed Innovation Configuration mapping. The "key components" represent the unique parts of the innovation that make up the whole; in this case CBD (Hall & Hord, 2015). The scales for each key component represent the range in variations from idealized implementation of that component to non-implementation (Hall & Hord, 2015). Using this tool, it was possible to measure the fidelity of implementation, or the extent to which critical components of CBD were present in each program. Where a program best matched within the list of documented observable variations was indicative of where they fell on a scale that reflected the fidelity of the implementation (Hall & Hord, 2015).

Components reportedly implemented with higher fidelity	Components reportedly implemented with lower fidelity
Competence Committees Electronic portfolio	Coaching in the Moment Direct Observation Workplace-based Assessment Individualized Stage-Based Learning Plans

[1] Residents who were in programs that had officially launched CBD at the time of the study. Residents from Quebec institutions were not surveyed as they are represented by the Fédération des médecins résidents du Québec (FMRQ). The FMRQ has their own survey for residents and chose not to participate in this collaboration.

Like the overall rating of implementation, the level of key component implementation varied by discipline and institution.

Challenges

Respondents most frequently cited the challenge of having faculty complete EPA observations. Comments indicated that residents experienced situations where some faculty were too busy to complete them, some were unwilling or refused, and some faculty said they would complete them later but then neglected to do so, letting the EPA observations expire.

Residents also reported challenges finding opportunities to complete all the required EPA observations, whether it was that the EPA wasn't frequently encountered, that there was a lack of opportunity to be directly observed, or because of the large numbers of EPAs and contexts required by the EPA assessment plans.

Residents often reported feeling like the onus was entirely on them to initiate EPA observations and to track down busy faculty to complete EPA observations. Keeping track of all the EPAs and their specific assessment plans was also indicated as a challenge and created an administrative load that was time-consuming and cognitively demanding to manage.

Benefits

Receiving feedback was a commonly cited benefit of CBD. Resident physicians indicated that they appreciated frequent, in-the-moment feedback that is specific and targeted to inform their learning.

Clarity around learning requirements and expectations was also indicated as a benefit of CBD. Knowing what to expect and having a clearly defined learning path helped relieve feelings of uncertainty.

Resident physicians also commented that the documentation of experiences allowed them to track their progress and identify where there are gaps in their learning, allowing for a more intentional and focused approach to seeking out learning experiences.

Resident Wellness

Survey respondents were asked to rate how CBD had impacted their health and wellness on a 5-point scale, ranging from a strong negative impact to a strong positive impact. A large portion of the respondents indicated that the transition had resulted in a negative impact on their health and wellness, with 35% indicating it has had a small negative impact, and 38% indicating it has had a large negative impact. The stress from chasing faculty to complete EPA observations, the administrative burden, and the worry about achieving assessment requirements were the most frequently cited aspects of CBD causing a negative impact on health and wellness.

Fewer respondents reported that the transition had a positive impact, with 8% indicating that it had a small positive impact, and only 1% indicating that it had a large positive impact. The aspects of CBD having the greatest positive impact on health and wellness included clarity and awareness around expectations and progress, and feelings of being supported by the program.

Discussion

Variability in implementation

Overall Implementation

Overall, 36% of respondents disagreed with the statement that "Overall, CBD is going well in my program". This is in comparison to 63% who felt either neutral or agreed with this statement. When stratified by discipline however, there was significant heterogeneity in the level of agreement with this statement, with the percentage of those in disagreement ranging from 15% (Pediatrics) to 54% (Anatomical Pathology). Similarly, there were regional differences between institutions in level of agreement, with disagreement ratings by institution, ranging from 17% to 57%. These results suggest that there are contextual factors at each level (discipline, institution) that are playing a role in how CBD is being implemented, and there is a need to further analyze and evaluate what these specific factors are to identify opportunities for improvement.

Key Component Implementation

The extent to which key components of CBD were implemented, as experienced by respondents, was also highly variable. Certain components, such as competence

committees and electronic portfolios had high fidelity, meaning that ratings from respondents indicated complete or close to implementation as intended. Conversely, components such as coaching in the moment, work-based EPA assessment, and direct observation were less likely to be rated as being completely implemented, indicating that these components had a lower level of fidelity of implementation. In the initial implementation, it was likely that programs were focused on implementing critical operational components of CBD, such as competence committees and electronic portfolios. However, less structural elements, such as coaching in the moment, may require more of a sustained focus on faculty development now that critical functional elements are in place.

Reasons for the incomplete implementation, and low fidelity of implementation, are suggested in the challenges section of the report. For instance, residents reported that it was often a challenge getting faculty to complete EPA observations in a timely fashion. This challenge can be connected to the incomplete implementation of components such as direct observations, workplace-based EPA assessment and subsequent coaching in the moment. Further exploration of how the challenges are connected to the implementation of key components could help identify opportunities for targeted interventions that lead to improvements.

Like overall implementation, there is a large amount of variability in the degree to which key components of CBD have been implemented across disciplines and institutions. Some disciplines and institutions are well on their way to achieving ideal key component implementation, as experienced by resident physicians, while others appear to be slowly progressing or struggling with implementation. This variability could be a reflection of how closely aligned to CBD a discipline or institution was prior to beginning the transition, rather than an indicator of implementation success versus non-success. For instance, some disciplines may have already had some of the components of CBD (e.g. direct observation, coaching) as part of their daily routine prior to the implementation of CBD. Variation might also be related to the phased roll-out of CBD that resulted in differing start dates by discipline, or the early adoption of aspects of CBD by some institutions. Again, a further look into why this variability exists and what factors contribute to the differing levels of implementation will be key to determining how and where to offer support or to help make any necessary adjustments or adaptations.

Impact on Health and Wellness

Previous work has identified that CBD is having an impact on resident physician health and wellness (e.g., FMRQ reports, Program Director Pulse Check reports, RDoC's National Resident Survey and focus groups, etc.). This survey provided the opportunity to ask resident physicians directly about the nature of this impact and what the driving factors were. Findings from the study confirmed that the transition to CBD has had a negative impact on health and wellness for many respondents.

Once again, there was substantial variability in the results between disciplines and between institutions, and there are likely a variety of reasons for, or factors contributing to, this variability. The narrative comments, however, identified the following seven common themes as having the greatest negative impact on health and wellness in relation to the transition to CBD:

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

The consistency in some answers, and the level of detail provided by residents to characterize these themes, offers not only opportunities for further investigation, but also for direct action. Finding ways to help alleviate the stress, worry, and workload associated with CBD implementation is a primary focus of on-going discussions around CBD. The information gathered from this study will help to inform these discussions and identify ways to improve the resident physicians' experience.

Embracing the Benefits

Results from this study not only reveal the challenges with CBD, but also provide an opportunity to highlight successes with the fidelity of implementation, as well as some signals of the integrity of implementation. Narrative comments indicate that some resident physicians are experiencing benefits with CBD implementation. Harvesting and sharing these benefits and positive experiences may offer an opportunity for understanding what aspects or strategies of implementation have

allowed for some resident physicians to experience a more fruitful transition than others.

Limitations

While attempts have been made to ensure that the results from this survey are reflective of resident opinions across Canada, there are several limitations. The response rate for this survey was 15.1%. While this rate is similar to previous RDoC surveys and is satisfactory, it does mean that there are many residents who did not provide their unique experiences and perspectives. It is unknown if the group of residents who have responded differ from those who have not responded, raising the possibility of selection bias.

Additionally, this survey was conducted at a time when the impacts of COVID-19 were significant and when issues with physician wellness, healthcare capacity, and training site limitations were widespread for a variety of reasons. The issues are complex, and the solutions are not straightforward, and in some cases, challenges may have been exacerbated by the COVID-19 pandemic.

One Piece of the Puzzle

The Resident Pulse Check study is one of many initiatives and evaluations taking place across Canada to better understand the resident physician experience with CBD implementation. Acknowledging that this study is only one piece of the puzzle, the findings from this study are being reviewed in conjunction with data from other sources as plans for how to move forward are considered and adopted.

Both RDoC and the Royal College take the health, wellness, and education of residents very seriously and are committed to working both independently and collaboratively to improve the resident physician training experience. The following section highlights some of the next steps that are being considered and acted upon by the two organizations.

Next Steps

The Royal College plans to:

- Increase the focus on resident wellness in CBD through further investigation and collaboration.

- Further characterize the reasons for differences in the implementation between disciplines and institutions with the purpose of identifying areas for process improvement and implementation support.
- Target key components that have been identified by residents as having lower fidelity of implementation.
- Immediately initiate the development of strategies that address challenges identified by residents with the dual intent of improving the fidelity of implementation and resident wellness.
- Continue to develop and action plans for addressing challenges with workplace-based assessment.

RDoC plans to:

- Convene a team of resident content experts to thoroughly review and analyze data from this survey and other sources for the purpose of gaining a well-rounded picture of the resident experience of CBD.
- Develop a position paper on CBD that will inform advocacy on strategies to improve the resident experience of CBD.
- Prioritize strategies that have the greatest potential to increase resident well-being while maximizing opportunities to advance their medical education.

Together, the organizations plan to:

- Recognize the importance of collaboration both for resident education and resident wellness. Both organizations share in this important and common goal.
- Conduct serial administration of the survey to assess for change over time, evolution of novel challenges, and for effect of any implemented changes.
- Collaborate on projects/interventions that work to improve the resident experience (both educationally and psychologically).

For a copy of the full report, please email educationstrategy@royalcollege.ca