CBME Data Governance, PGME, McMaster University

Determining a framework for data-driven quality improvement

Context and Summary

The implementation of competency-based medical education, and more specifically the Royal College of Physician and Surgeon's Competency by Design (CBD) framework, has been underway in post-graduate medical education at McMaster University since 2017. The transition of several programs in July 2020 represents the fourth cohort of programs to move to this new educational model. CBD, marked by a significant paradigm shift in assessment, now sees the progression of trainees determined by demonstration of competency across various stages of training. Quantitative and qualitative assessment data are housed in a proprietary system, MedSIS, and is accessible to many stakeholders, (trainees, faculty, program leads, academic coaches, Competency Committees, RPCs) to inform trainee reviews and progression decisions, identify early areas of concern requiring attention or possible remediation, as well as identify areas for improvement of the various elements of CBD and overall implementation strategy. This has introduced new considerations for the governance and management of trainee performance data. The following proposed governance model is intended to bring structure and process to the access and utilization of trainee performance data for the purposes of program evaluation and continuous quality improvement, research, as well as other collaborative academic pursuits.

An approved approach to data governance is required to enable the CBME Evaluation Committee to move forward with its intention to determine and steward data-driven decision-making that supports the effective implementation of CBD and optimization of the learning experience and outcomes. The Evaluation Committee will work collaboratively with CBME Implementation Committee to put forth recommendations to the CBME Executive Committee.

It is understood that any accepted data governance model would address the needs and interests of the notably varying program structures within PGME and align with any current or evolving McMaster policies and procedures and overall IT Strategic Plan.

Principles of Data Governance

1) ***Ethical, respectful, use of data***. Our mechanisms of governance must comply with all applicable privacy and security policies and explicitly and procedurally reflect PGME's core values and commitment to ethical behavior.

2) ***User-centered.*** Guidelines for data access and utilization must benefit the trainee directly or indirectly through program quality improvement or academic activities. Given the novel dataset and great potential for program enhancement, flexibility and program-level governance structures should be considered to avoid unnecessary delay of quality-improvement efforts.

3) ***Collaborative.*** Our data governance framework must actively enable collaborations between data owners and users, including the various CBME Committees, RPCs, RC programs and Family Medicine program.

4) ***Iterative*.** A logic model may articulate the short- and long-term goals and outcomes and ensure alignment with overarching strategic goals through review and reiteration over time.

Required Resources

The CBME Evaluation Committee will identify required resources for data management, analysis, sharing, and reporting. There are currently no assigned resources for data analysis or reporting. The MedSIS technologist has a limited role in this regard. Efforts are underway to enhance the capacity of the system to export data for specific queries and reporting cycles.

Proposed Distributed Governance Model

Each PGME program's RPC is responsible for governance of, access to, and quality of its program data. At the discretion of the RPC, this responsibility may be delegated to the Program Director or another member of the RPC. Any internal or external sharing of data for the purposes of program evaluation, quality improvement, program operational use or scholarship must be done in a manner consistent with the guidelines outlined below, ensuring that privacy and security guidelines are appropriately followed.

Guidelines for Usage of Program Data

Programs are best placed to make determinations about how their data are used and are encouraged to make use of their data to improve the educational experience for their trainees.

Sometimes, programs may wish to share data with other programs for mutual benefit.

In all situations where data are to be shared outside of the program for which they are collected, data should be deidentified at the earliest possible opportunity to protect the privacy of all parties. Where this is not possible, appropriate authorization must be sought from the relevant review boards (e.g., HiREB for scholarship activities or the **PGME Data Governance Committee for other activities)** before data are accessed. Note that simply removing trainee identifiers may not render data 'de-identified' as there may be other characteristics present within the data set that allow individuals to be re-identified (for example if a trainee is the only female in a training program).

Departments may access data from any program for which they are accountable in order to fulfil their mandate. Such usage still requires request forms to be completed and submitted for approval by the PGME Data Governance.

PGME may access data from any postgraduate medical training program for the purposes of fulfilling their mandate. No authorization request forms are required.

University standards for data security and privacy should be maintained at all times.

Approved by CBME Executive Committee November 25, 2020