Resident Assessment Dashboards

Anesthesiology & Pain Medicine
UNIVERSITY OF TORONTO

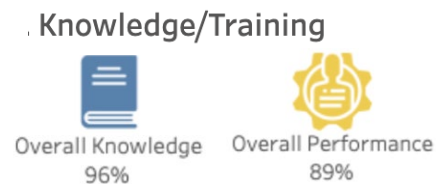ISSUE 2   DR ALEX BITE AND DR CELINE MESCHINO

What is Resident Dashboard?

As you know, the CBD curriculum relies on staff completing multiple low-stake evaluations of residents using two different evaluation tools: **Daily evaluations: Clinical Encounter Assessments (CEAs)** and **CBD-specific evaluations: Entrustable Professional Activities (EPAs).**

The *Resident Dashboard* is a data collection and analysis platform unique to U of T Anesthesia that collects all of the evaluations for each resident, and collates the data into usable averages for each resident and their respective cohort.

How is Resident Dashboard used?

Dashboard is an extremely valuable tool for residents, site coordinators and the Anesthesia Resident Competence Committee (ARCC). It is used to identify a resident's areas of strengths and areas for improvement, view anonymous comments from faculty, and compare a resident's performance to their cohort average.

Knowledge/Training

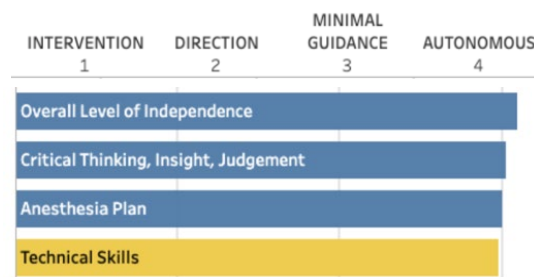Overall Knowledge 96%   Overall Performance 89%

The Dashboard is updated with results from completed CEAs half-way through each academic block so that residents have the opportunity to implement faculty feedback within the same rotation.

What are the components of Resident Dashboard?

In two separate sections, Dashboard collects evaluation data from the resident's CEAs and EPAs, and then analyses and displays information.

CEA Dashboard: Displays a resident's performance extrapolated from CEAs in the domains of clinical competency, knowledge and performance, and CanMEDS roles. CEA Dashboard is the only way residents can view staff comments, including actionable items for improvement, and their completed CEAs.

EPA Dashboard: Displays the number of each EPA completed and allows residents to compare their progress to others in their cohort. It displays comments associated with each EPA. Residents can use both Dashboard and Elentra to view their completed EPAs.

How can staff optimize giving feedback to residents on CEAs and EPAs?

Whether it is **CEA or EPA, staff are expected to complete at least one low-stake evaluation every day**. The more evaluations that are completed, the more representative they will be of the actual performance of both individual residents and the entire cohort. It is expected that a resident will have evaluations that are considered "outliers" throughout their residency. That is why it is vital to fill out an assessment daily, even if the day did not have a remarkable event. If every day is evaluated, these "one-offs" will not have a significant impact. On the other hand, if these occur repeatedly, then documentation of each event will allow appreciation of a recurring issue.

In fact, each assessment contributes to the metrics of resident performance. Resident evaluations undergo statistical analysis which is displayed on the Dashboard in several ways, including comparison to their cohort's historical performance. Each evaluation contributes to this analysis. If a resident has very few evaluations on a rotation, suddenly each day is over-represented in the average of their performance and potentially not representative of their true overall performance.

Metric Values:
Your average: 3.6
All-time (current and historic) Year 2 cohort's average: 3.6
All-time (current and historic) Year 2 cohort's Standard Deviation: 0.2

Program Benchmark:
Appropriate for level: Score > (All-time Year 2 cohort's average - 1SD)
Not meeting expectation: Score <= (All-time Year 2 cohort's average - 1SD)

Comments on the Dashboard, in both the CEA and EPA sections, are displayed verbatim as staff have written them. The more specific the feedback, the more actionable and useful it is to residents. Generic comments such as *"read around cases" a*re less useful than specific comments such as *"read about different approaches to successful spinal anesthesia for technically challenging patients."*
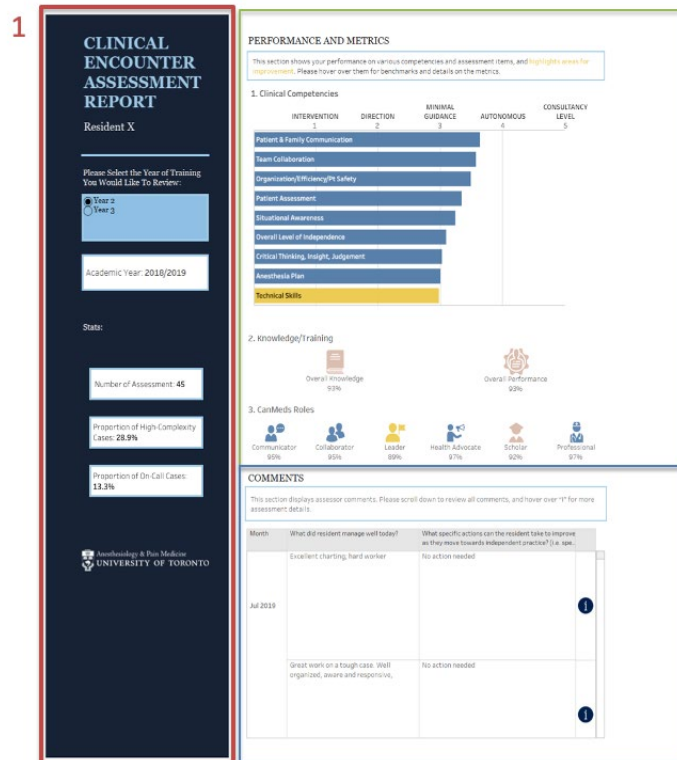
Take Home Points

1. Dashboard is a data platform that collects, analyzes and displays data from CEA and EPA assessments so that residents, site coordinators and the ARCC can guide resident progress by identifying strengths and actionable areas from improvement. It is the only way CEAs and EPAs can be viewed simultaneously and analyzed for progress over time.

2. Dashboard relies on a large denominator of evaluations to be able to provide a holistic picture of both individual resident performance and performance of the entire cohort. Outlier evaluations can only be identified and contextualized if there is a large enough sample of daily evaluations. **Every** daily evaluation is important and needed for accurate analysis of overall performance.

3. Comments from staff are anonymized and inserted directly into the Dashboard verbatim from CEAs and EPAs. Commenting specifically on strengths and actionable items for improvement will be most useful to help guide a resident's learning plan and improve their performance in all clinical domains.

CEA Dashboard:

1. Left Side Bar

- This side bar displays different data points and filters for the resident.
- Residents can filter by year of training to view evaluations from various years.
- Residents can also see total number of assessments, proportion of complex cases and proportion of on-call cases.

2. Performance and Metrics

- **Clinical competencies:** The resident's average from all evaluations is compared to the cohort average. If their average across assessments is greater than one standard deviation below the mean, the competency is flagged in yellow for "needs improvement".
- **Knowledge and performance:** This metric is not compared to the cohort average, but to a program-set benchmark. A resident is expected to be rated as "appropriate for level" over 95% of the time. If they are at 90-94%, they will be flagged in beige as "needs improvement". If they are below 90%, they will be flagged in yellow as "significant gaps identified".
- **CanMEDS roles:** As above, this is compared to a benchmark of 95% and flagged in similar colours to the Knowledge and Performance section.

3. Comments

- Anonymous comments from staff are displayed verbatim according to the categories on the CEAs.
- Residents can hover over the "i" icon to view the entire CEA attached to the comment.