



ACCOUNTABILITY REPORT 2017-2018

Department of Anesthesia,
Pain Management
& Perioperative Medicine

OFFICE OF EDUCATION

Anesthesia, Pain Management and Perioperative Medicine Vision and Mission

Vision

Responsive to the anesthesia care needs of our Maritime community while simultaneously providing international leadership in anesthesia education and research.

Mission

Serving the public good through excellence in anesthesia clinical practices, research and education.

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INTRODUCTION

This annual **Office of Education Accountability Report** outlines the department's education activities in relation to the predetermined targets described in the **Anesthesia, Pain Management and Perioperative Medicine Education Accountability Framework**.

The education accountability framework was developed in keeping with the department's commitment to transparency and accountability by a working group of education administrators and medical directors within the department. Through the process, the department articulated the value of measuring and reporting performance and productivity as it relates to education.

THE ACCOUNTABILITY FRAMEWORK:

- Describes the need for an education accountability framework within the department and university context
- Links educational resources to activities and short- and long-term results
- Identifies the most appropriate indicators of and current targets for education activity and production, and how to measure indicators and report results
- Outlines an iterative strategy for ongoing learning from results

A copy of the education accountability framework is available at:
<https://medicine.dal.ca/departments/department-sites/anesthesia/education/education-accountability-framework.html>

EXECUTIVE SUMMARY

The 2017-2018 Office of Education Accountability Report communicates the department's education activities with respect to established targets and goals stated in the education accountability framework, as well as those identified in the Office of Education priorities for the year. The information in this report includes educational activities and achievements from July 2017 – June 2018, and data from previous academic years for comparative purposes.

In summary, targets that were met, partially met, and those targets that were not met during the stated timeframe are outlined below.

AREAS IN WHICH THE DEPARTMENT **MET ITS TARGETS:**

- The department has an active mentorship program.
- Twenty-three per cent of anesthesia-specific learners assume leadership roles external to the department.
- The Office of Education continues to enhance the capability of programs and applications within the department for the delivery of Competency Based Medical Education (CBME) and improvement and dissemination of faculty, resident and teaching evaluations.
- All CaRMS deadlines were met.
- The Continuing Professional Development (CPD) program included 52 sessions in 2017-18. 96.3% of all planned sessions occurred and overall satisfaction was 4.6/5.
- The department's performance was especially favorable in postgraduate education delivery for anesthesia residents.
 - All residents fulfilled the research project requirements, completed required clinical rotations and maintained a procedure log.
 - 100% of available faculty guided and taught residents when asked.
 - All available residents attended scheduled seminars and workshops.
 - An active simulation program is offered within the residency program.
 - Overall program accreditation has been maintained, with Accreditation Survey documentation submitted for accreditation review in November 2018.
 - Residents indicated satisfaction as follows: academic teaching: 4.7/5; faculty teaching 4.6/5.
 - Two residents and three fellows completed an elective in Rwanda and five faculty participated in the teaching program.
 - All PGY5 residents completed the residency program.

(Cont'd)

AREAS IN WHICH THE DEPARTMENT **MET ITS TARGETS** (CONT'D.):

- Sixty-four non-anesthesia residents completed elective rotations in the department, all mandatory rotations were filled.
- All medical student elective rotations were filled, and a waiting list was maintained. The overall satisfaction rate among Med 4 medical students was 95%, Med 3: 91.3%, and Med 1 and 2: 93.5%
- There were 32 tutors/instructors who delivered 802 hours of teaching.
- Ten Dalhousie medical students applied to the Dalhousie Anesthesia Residency Program. This represents 66.7% of Dalhousie medical students who completed an elective in the department.
- All five fellows in 2017-18 reported satisfaction with their learning experience.
- Twenty-six faculty were invited to facilitate/present sessions at local, national and international forums.
- The promotion committee included six department members as per the identified target.

AREAS IN WHICH THE DEPARTMENT **DID NOT MEET ITS TARGETS**:

- 45% of anesthesia residents assume leadership roles internal to the department; the goal is 85%.
- Five of the seven PGY5 residents successfully completed the RCPSC exams.
- Attendance at education-related committee meetings fell short of the 80% attendance targets: Education Operational Committee: 69%; Fellowship Advisory Committee: 63%; CPD Advisory Committee: 61%; Residency Program Committee: 74%; Global Health Advisory committee: 67%.
- With the introduction of CBME, various evaluation and assessment tools have been implemented within the residency curriculum. Although evaluations are not at the desired 100% rate, new face-to-face evaluations opportunities, with high participation, have been introduced to support CBME. The 2017-18 frequency was 72% for ITERs, 72% for Daily Evaluation Cards, 76% Academic Advisor, 74% for ITARs, 86% for Direct Observation and 93% for other evaluations and assessments.
- The Anesthesia Global Outreach Course was not delivered during 2017-18.
- Of the 190 anesthesia faculty members, 12.6% (24) of faculty are professors, 14.7% (28) are associate professors, and 71.5% (136) are assistant professors. The targets are 15%, 30% and 40% respectively.

Develop Learners

INDICATOR: Mentorship

TARGET: An active, formalized mentorship program exists.

RESULT: The overall satisfaction for phase one (orientation) of the mentorship program was 4.2/5 for the orientation delivered in 2017-18.

Resident mentorship has three components: clinical mentorship, faculty–resident mentorship, and resident-resident mentorship. In 2017-18 there was a total of 31 faculty and 12 residents participating as mentors.

The academic advisor program, within the residency program, consists of 31 faculty, providing regular coaching, feedback and support to all anesthesia residents.

Based on the success of resident mentorship and expressions of interests throughout the department, a junior-senior staff mentorship program was re-introduced in 2017-18. To date there are 8 mentorship pairings.

INDICATOR: Leadership

TARGET: 85% of anesthesia-specific learners assume leadership roles internal to the department, e.g. chief resident.

RESULT: Fourteen of 31 residents were actively involved in committee work in 2017-18. This represents a total of 45% of the resident body. Of the 14 residents, several were active on more than one committee, occupying 25 positions/committee memberships.

INDICATOR: Leadership

TARGET: 15% of anesthesia-specific learners assume leadership roles external to the department.

RESULT: Seven residents were actively involved in committees and/or organizations external to the department. This represents 23.3% of the resident body.

CATEGORY 1: ALL LEARNERS

Utilize a variety of innovative learning methodologies

INDICATOR: Innovation

TARGET: Innovative methodologies are evident in needs assessments, curriculum designs, presentations, lectures and feedback processes.

RESULT: The Office of Education continues to enhance the capability of current programs and applications within the department. These applications included One45, IIS and ALSA which allow for accurate reporting on teaching, mentorship, administration and academic activities within the department.

Primary focus on the utilization of these tools has been in the implementation of core CBME and the improvement and dissemination of faculty, resident and teaching evaluations.

Engage in administrative functions/processes

INDICATOR: Management

TARGET: 80% attendance at committee meetings.

RESULT: The total percentage for educational committees is:

Committee	Number of Meetings	Attendance %
Education Operational Committee	1	68.75%
Fellowship Advisory Committee	4	63.33%
Continuing Professional Development Advisory Committee	2	60.71%
Residency Program Committee	7	73.57%
Global Health Advisory Committee	2	66.65%

CATEGORY 1: ALL LEARNERS

INDICATOR: Management

TARGET: 100% of faculty participate in various administrative processes when requested, e.g. CaRMS, medical school interviews.

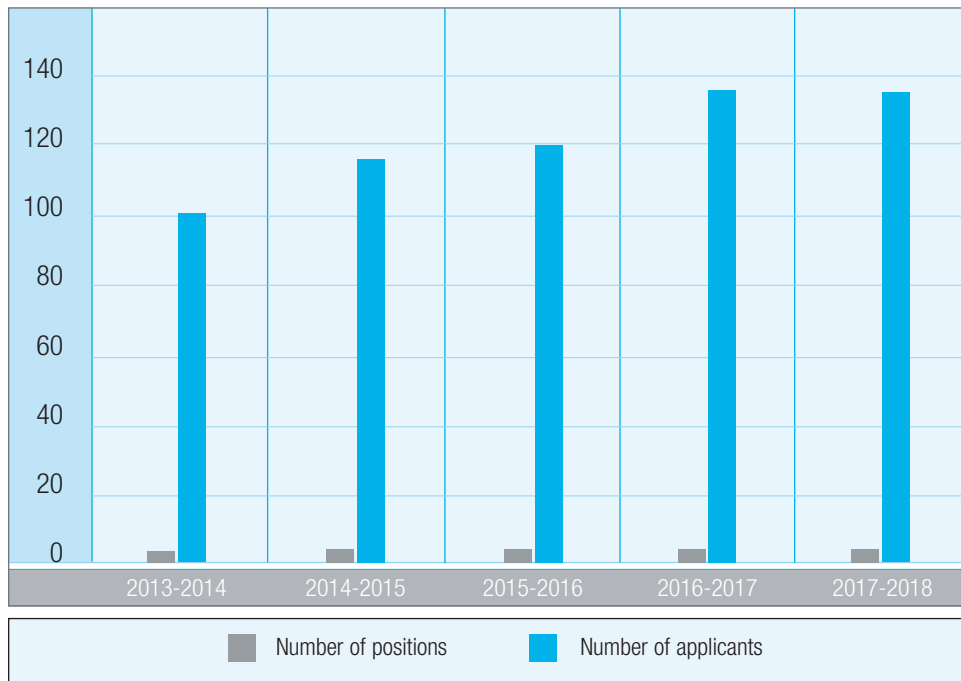
RESULT: 100% of all requests were met.

INDICATOR: Management

TARGET: 100% of CaRMS deadlines are met.

RESULT: All CaRMS deadlines were met. The department received 135 applications for the six positions.

TABLE 1: CaRMS Applicants



CATEGORY 2: CONTINUING PROFESSIONAL DEVELOPMENT

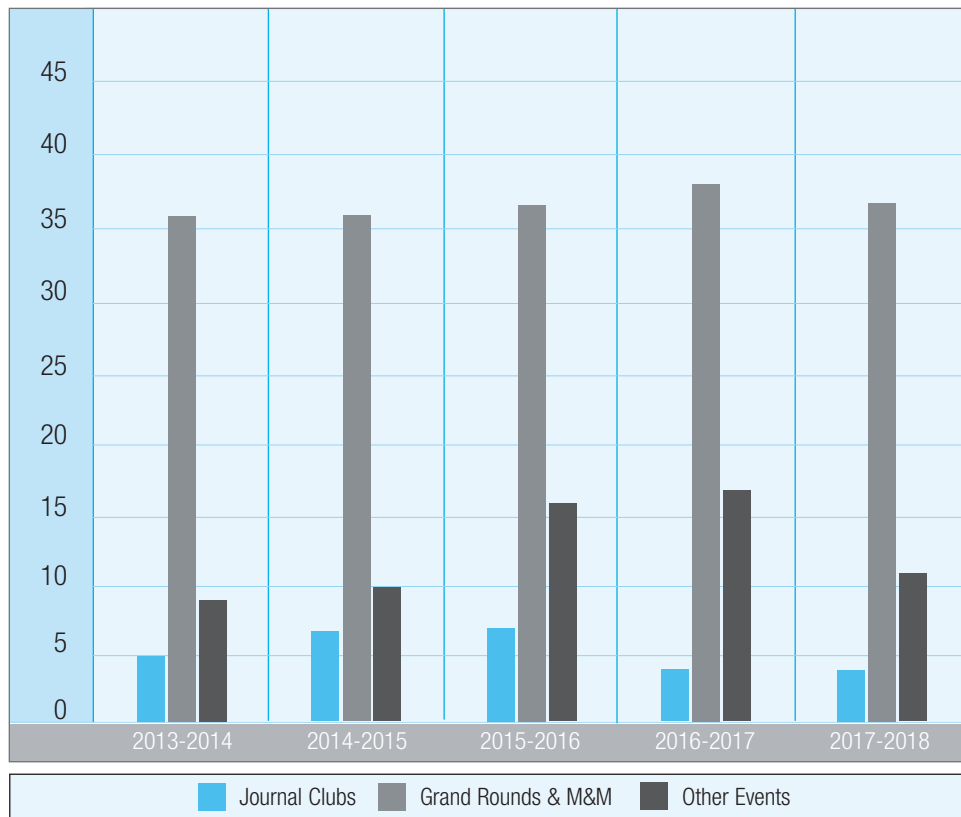
Engage in process of life-long learning, self-assessment and mentoring

INDICATOR: Ongoing lifetime learning

TARGET: An active CPD program inclusive of grand rounds, journal club, internal workshops and seminars exist.

RESULT: 52 CPD sessions occurred in 2017-18, addressing department needs.

TABLE 2: Continuing Professional Development Activities



CATEGORY 2: CONTINUING PROFESSIONAL DEVELOPMENT

INDICATOR: Ongoing lifetime learning

TARGET: 90% of planned CPD sessions occur.

RESULT: 96.3% of the planned CPD sessions occurred..

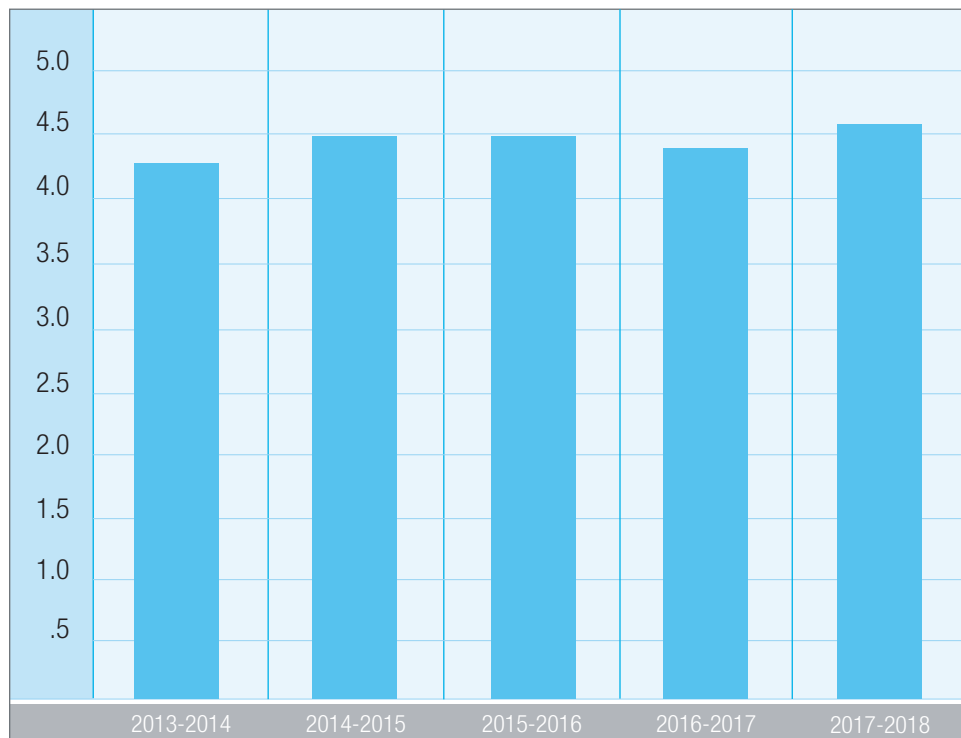
Disseminate, apply and translate new and innovative medical knowledge and practices

INDICATOR: Learner satisfaction

TARGET: 90% of participants indicate satisfaction with CPD sessions.

RESULT: The overall satisfaction rate for CPD sessions during 2017-18 was 4.6/5.0.

TABLE 3: Learner Satisfaction with CPD



CATEGORY 2: CONTINUING PROFESSIONAL DEVELOPMENT

Provide leadership for an international course on global outreach in anesthesia

INDICATOR: Faculty engagement

TARGET: At least 33% of course faculty are from the department when the global outreach course is hosted at Dalhousie.

RESULT: The Anesthesia Global Outreach Course was not held during 2017-18. Two faculty members from the department are co-directors in the planning of the event, which is scheduled to be delivered in Boston, MA during 2018-19.

INDICATOR: Learner and faculty engagement

TARGET: Develop medical education programming in low-resource settings.

RESULT: Developed the Vital Anesthesia Simulation Training (VAST) by Anesthesia Global Health Fellow, and delivered in Rwanda.

CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

Develop, deliver and evaluate educational programs

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of residents are engaged in or have completed a research project.

RESULT: All residents fulfilled the requirements of their research project.

Develop, deliver and evaluate educational programs/Facilitate student, residents and other health professional learning in an atmosphere of respect for diversity

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 75% of available residents attend scheduled seminars, workshops, etc.

RESULT: 100% of available residents attended scheduled seminars and workshops. Attendance at sessions was 63.4%, which allows for excused absences of on-call responsibilities, post-call, study days, conference leave and vacation.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of residents complete required clinical rotations.

RESULT: All residents completed required clinical rotations.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of faculty guide and teach residents when asked.

RESULT: 100% of available faculty guided and taught residents when asked.

CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: An active simulation program is available.

RESULT: An active simulation program is maintained with the residency program with 6 sessions offered in transition to practice and 12 sessions offered within the foundation curriculum. Additionally, simulation sessions delivered included arterial and central lines, ultrasound, advanced airway management, CanNASC and OSCE. Clinical rotation simulation sessions continue to be delivered in the pediatric anesthesia, obstetrical anesthesia and regional anesthesia.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: Accreditation is maintained.

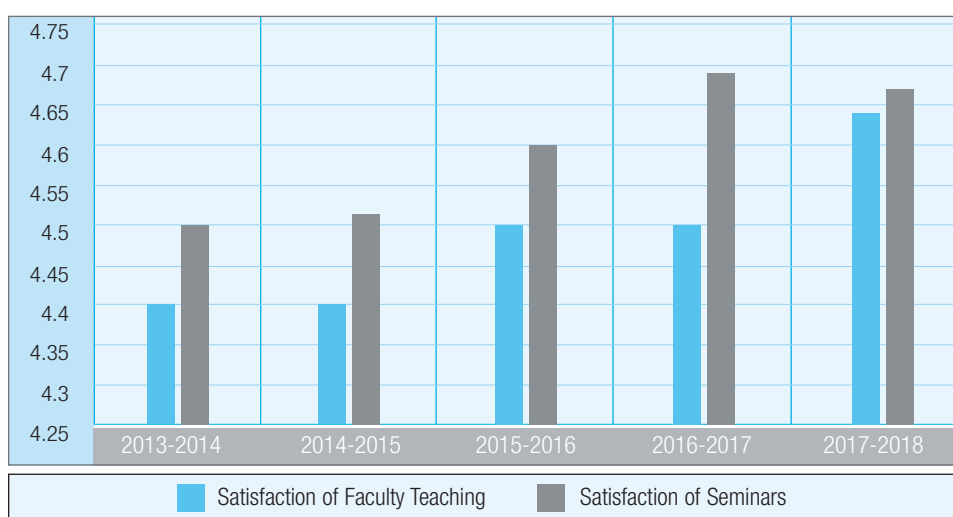
RESULT: Full accreditation is being maintained. Accreditation Survey documentation were submitted to the Royal College of Physicians and Surgeons for accreditation review in November 2018.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 80% of residents indicate satisfaction with their program inclusive of Wednesday afternoon academic sessions.

RESULT: Residents indicated satisfaction as follows: academic teaching: 4.67/5; faculty teaching 4.64/5.

TABLE 4: Seminar and Faculty Teaching Evaluation



CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: Curriculum is reviewed and updated every two to three years.

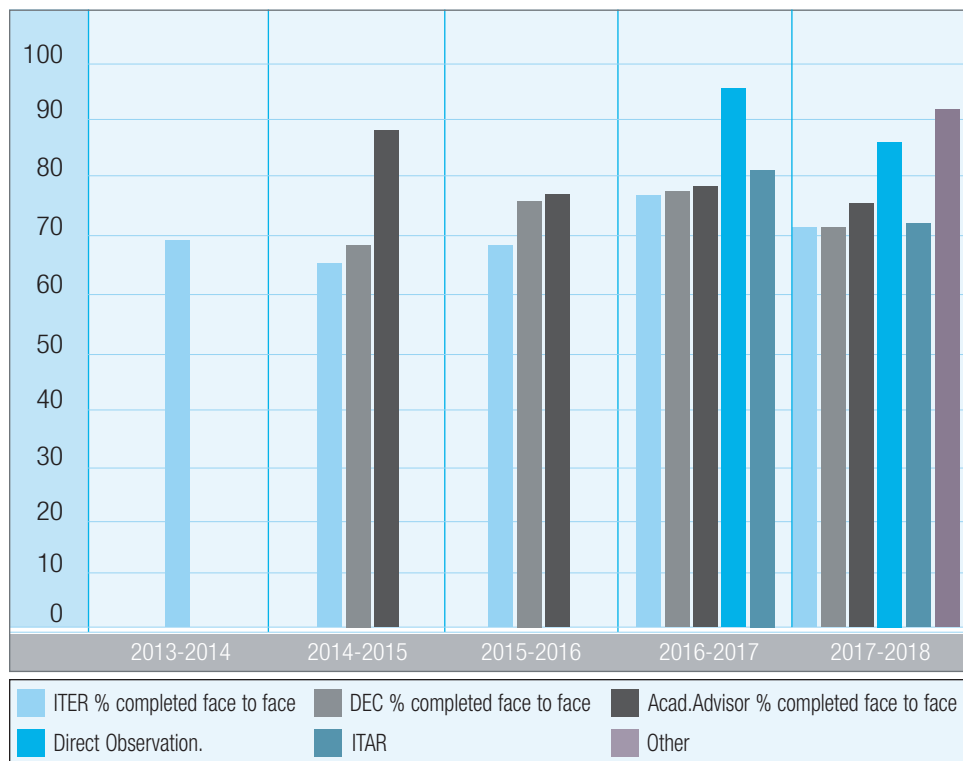
RESULT: Since the launch of the competency based medical education (CBME) curriculum in July 2016, modifications have been made based on feedback from residents and faculty. The curriculum will be formally reviewed for accreditation in November 2018.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: End of rotation ITERs are provided during a face-to-face feedback session.

RESULT: 72.5% of the end of rotation ITERs were completed on a face-to-face basis between residents and faculty. Daily feedback ITERs had a face-to-face percentage of 72.4, and academic advisors completed their quarterly evaluations 76.2% of the time. ITARs and Direct Observations had face-to-face feedback of 73.7% and 85.8% respectively. With the increased evaluation, through CBME, various other evaluations and assessments, such as exceptional event and case-based learning assessments have been introduced with a 92.9% face-to-face feedback.

TABLE 5: Face to Face ITER Feedback



CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

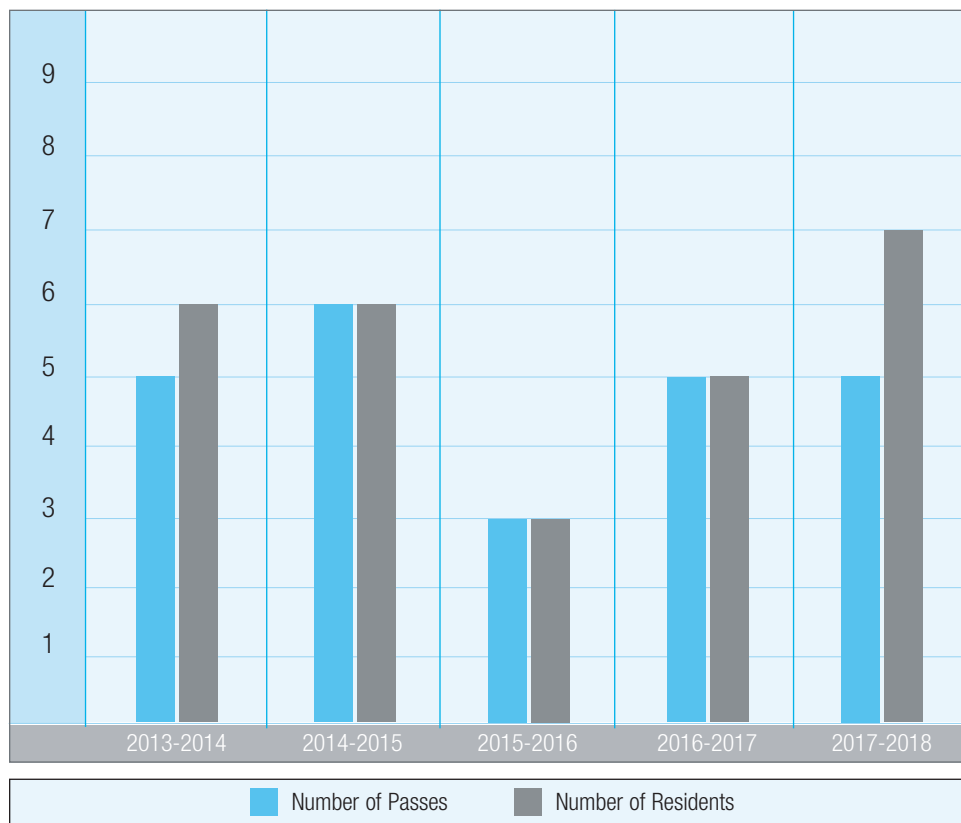
INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% exam success rate.

RESULT: Seven residents were eligible to take the Royal College of Physicians and Surgeons of Canada exams. Five residents had successful results.

A comprehensive exam preparation program including dedicated study time and oral exam preparation is provided to PGY5 residents. In addition, oral exam preparation sessions were offered to all residents from PGY2 – PGY5.

TABLE 6: Royal College of Physicians and Surgeons of Canada Exams



CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: Successful completion of pre/post tests.

RESULT: All six incoming residents completed the pre-/post-test with a mean score of 60.6%, and the AKT 6 exam with a mean score of 65.5%.

For any low scores, the results were reviewed with the residents to ensure adequate resources were available to support their success in the program.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of residents maintain a procedure log.

RESULT: 100% of the residents completed the required procedure log.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 90% of residents complete the anesthesia residency program.

RESULT: 100% of the PGY5 residents completed their program.

Provide global health electives for Dalhousie residents

INDICATOR: Learner demand

TARGET: One to two residents participate in a global health elective annually.

RESULT: Two residents and three fellows completed a global health elective in Rwanda.

CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

Collaborate on the coordination and delivery of the anesthesia residency teaching program at University of Rwanda (UR)

INDICATOR: Faculty engagement

TARGET: Two to four Dalhousie faculty participate in teaching annually.

RESULT: Five faculty took part in the teaching program at the University of Rwanda.

CATEGORY 4: NON-ANESTHESIA RESIDENTS

Develop, deliver and evaluate educational programs/Facilitate student, resident and other health professional learning in an atmosphere of respect for diversity.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of mandatory rotations are filled.

RESULT: All requested mandatory rotations from non-anesthesia residency programs were filled.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 60% of elective rotations are filled.

RESULT: 86.4% of resident elective rotations were filled. In 2017-18 there were 64 off-service/elective residents, totaling 200 weeks of teaching. Based on increase demands on overall learners within the department, the number of anesthesia elective requirements cannot be fulfilled.

TABLE 7: Off-Service and Elective Residents



CATEGORY 5: UNDERGRADUATES

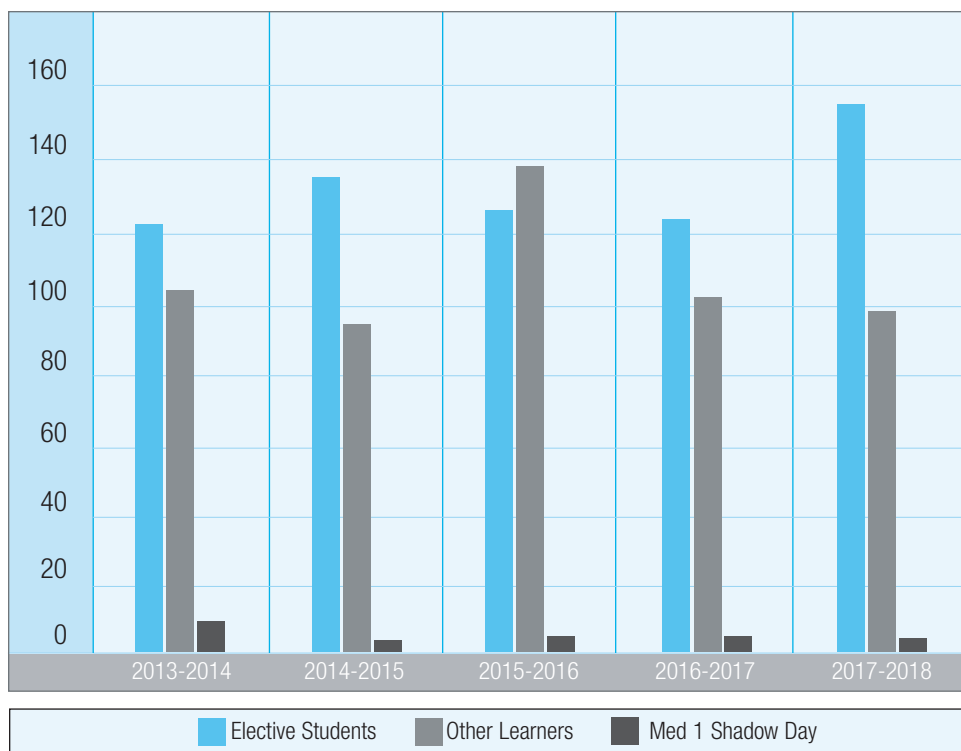
Develop, deliver and evaluate educational programs/Facilitate undergraduate student learning in an atmosphere of respect for diversity

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% of available rotations are filled and there is a waiting list of interested students.

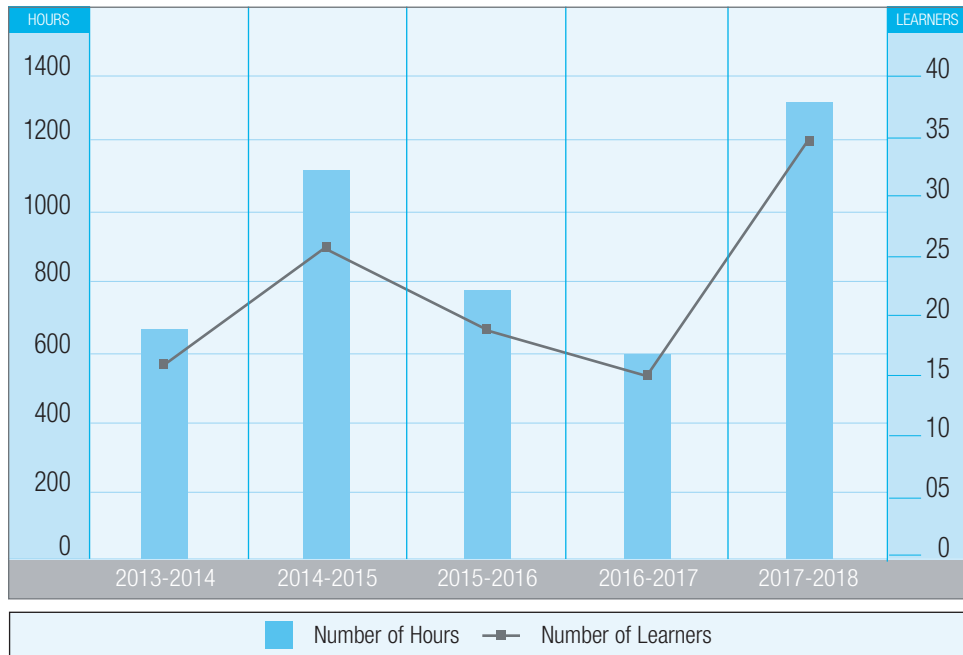
RESULT: 100% of available rotations were filled. A waitlist for fourth-year electives was maintained and offers were made in compliance with medical education national guidelines. Of the learners rotating through the department in 2017-18, there were 154 elective students (inclusive of Med1-4 students) and 99 other learners.

TABLE 8: Undergraduate Elective and Other Learners



CATEGORY 5: UNDERGRADUATES

TABLE 9: Med 1 & Med 2 Electives

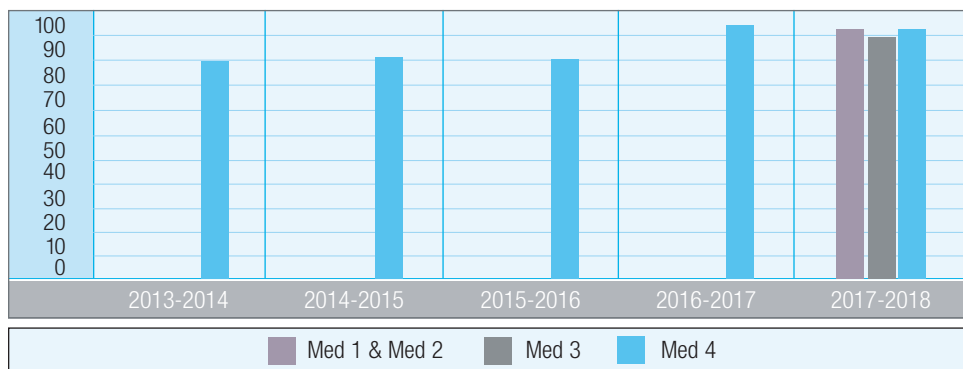


INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 80% of undergraduate students indicate satisfaction with their anesthesia education experience.

RESULT: The overall satisfaction rate for undergraduate Med 4 electives was 95%. A formal evaluation was implemented within the Med 1 and 2 elective, and Med 3 selective, with overall satisfaction on of 93.5% and 91.3% respectively.

TABLE 10: Med 1 & 2, Med 3, Med 4



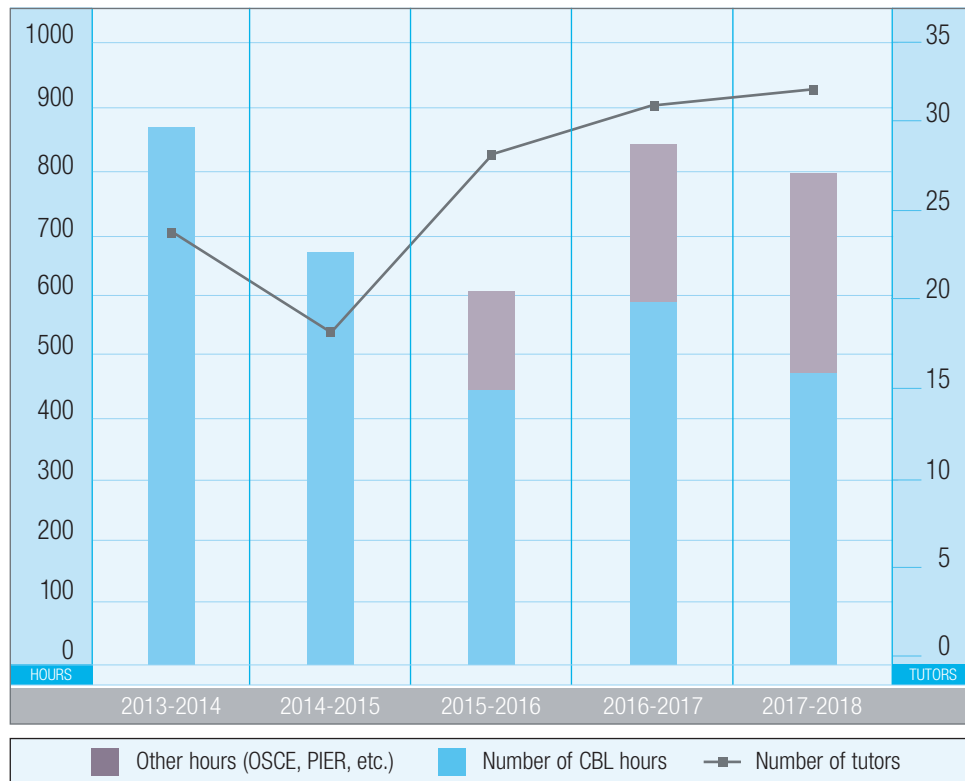
CATEGORY 5: UNDERGRADUATES

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: Trend indicates maintenance and/or increase in faculty teaching hours.

RESULT: In 2017-18 there were 32 tutors/instructors representing 802 hours in CBL, OSCEs and PIER sessions. This represents meeting the expectations set by the Faculty of Medicine.

TABLE 11: CBL, OSCEs and PIER Sessions



INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 55% of medical students who complete an elective apply for an anesthesia residency position at Dalhousie (depends on availability of *CaRMS* data).

RESULT: 15 Med 4 students from Dalhousie University completed an anesthesia elective. Of these learners, 10 students (66.67%) applied to the Dalhousie Anesthesia Residency Program.

CATEGORY 6: SUBSPECIALITY/FELLOWSHIP

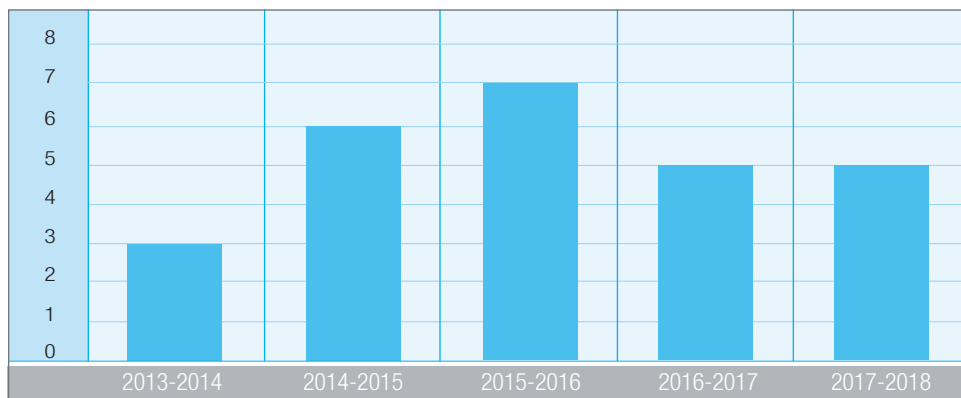
Develop, deliver and evaluate educational programs/Facilitate fellow learning in an atmosphere of respect for diversity

INDICATOR: Fellowship demand/recruitment

TARGET: Trend demonstrates annual increase in the number of applicants.

RESULT: In 2017-18 there were five fellows enrolled.

TABLE 12: Number of Fellows



INDICATOR: Learner satisfaction

TARGET: 100% of fellows indicate satisfaction with their learning experience.

RESULT: 100% of fellows were satisfied with their program during the 2017-18 academic year. Mid-program and year-end debrief sessions are conducted by medical directors.

CATEGORY 7: OTHER UNIVERSITY/CLINICAL DEPARTMENTS

Develop, deliver and evaluate educational programs/Facilitate the learning of students, residents & other health professionals in an atmosphere of respect for diversity

INDICATOR: Recognition of faculty expertise

TARGET: 10 or more requests per year to facilitate/present to other Dalhousie departments and at forums external to Dalhousie.

RESULT: 26 faculty were invited to facilitate/present sessions at local, national and international forums.

CATEGORY 8: PROMOTION AND APPOINTMENT

Promotion committee

- INDICATOR:** 100% of committee members are elected by department members as stipulated in the collective agreement (DFA) and the university regulations
- TARGET:** The committee includes six department members with at least one representative from the following constituencies: Assistant Professor, Associate Professor, Professor, Queen Elizabeth II Health Science Centre, IWK Women's and Obstetrics, IWK Pediatrics Anesthesia and Saint John Regional Hospital.
- RESULT:** The committee included six department members, representing the targeted academic ranks and organizations.
-

Faculty members actively participate in their own career development in regards to Dalhousie academic appointment and promotion

- INDICATOR:** Management
- TARGET:** 15% of faculty are professors, 30% are associate professors, 10% hold cross appointments, 40% of faculty are assistant professors and 15% of faculty are lecturers
- RESULT:** Of the 190 staff that hold a faculty appointment with the department, 12.6% (24) of faculty are professors, 14.7% (28) are associate professors, 71.5% (136) are assistant professors and 1% (2) are lecturers.
-

APPENDIX A – EDUCATION PROJECTS

Scientific Abstracts

1. Casey M, Shearer C, Chisholm J, Livingston P. The Transition to Competency Based Medical Education in Anesthesia: The faculty experience. [Podium] Canadian Anesthesiologists' Society Annual Meeting (Montreal, QC), June 2018.
2. Mukhida K, Livingston P. Popcorn in the Pain Clinic: The use of Cinemeducation to Enhance Anesthesiology Residents' CanMEDS Competencies in the Assessment and Management of Chronic Pain. [Podium] Creating Spaces VIII Conference: Fostering Critical Thinking through the Arts and Humanities (Halifax, NS), April 2018.
3. Casey M, Shearer C, Chisholm J, Livingston P. The transition to Competency Based Medical Education in Anesthesia: The faculty experience. [Podium] Dalhousie Department of Anesthesia, Perioperative Medicine and Pain Management Research Day (Halifax, NS), April 2018.
4. Casey M, Shearer C, MacLeod A, Livingston P. Faculty perspectives on the transition to Competency Based Medical Education in Anesthesia: An application of Diffusion of Innovations Theory. [Poster] International Conference on Residency Education (Quebec City, QC), October 2017.

Peer Reviewed Journal Publications

1. Eugene Tuyishime, Paul H Park, Dominique Rouleau, Patricia Livingston, Paulin Ruhato Banguti, and Rex Wong (2018). Implementing the World Health Organization safe childbirth checklist in a district Hospital in Rwanda: a pre- and post-intervention study. *Maternal Health, Neonatology, and Perinatology*, 4(7). [Published] DOI: [DOI 10.1186/s40748-018-0075-3](https://doi.org/10.1186/s40748-018-0075-3).

Grants

1. Chisholm J, Doucet R, Banfield J, Shearer C (2018). Resident use of an e-portfolio system to demonstrate competence in Anesthesia (Dalhousie - \$2,041).
2. Patricia Livingston P, Mossenson A, Mukwesi E, Skelton T, Rawson D (2018). Can we make a VAST improvement? Promoting anaesthetists' non-technical skills through the Vital Anaesthesia Simulation Training Course in a low-resource setting. (\$19,936).
3. Power-MacDonald S, Sjaus A (2018). Simulation compared to interactive classroom training in interdisciplinary communication for high risk obstetric teams – a prospective randomized mixed-methods study of impact on behaviors and longitudinal retention. (\$4,983).





**DALHOUSIE
UNIVERSITY**

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Department of Anesthesia,
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