



ACCOUNTABILITY REPORT 2015

Department of Anesthesia,
Pain Management
& Perioperative Medicine

OFFICE OF EDUCATION



DALHOUSIE
UNIVERSITY

Anesthesia, Pain Management and Perioperative Medicine Vision and Mission

Vision

A culture of excellence in anesthesia clinical practice and programs, research and education.

Mission

To deliver anesthesia services through up-to-date clinical care based on the latest evidence (research) and knowledge (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:
<http://medicine.dal.ca/departments/department-sites/anesthesia/education.html>

The 2015 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 2015. The information in this report includes educational activities and achievements from July 2014 – June 2015, and data from previous academic years for comparative purposes.

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

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

- The Department now offers a three-phase mentorship program.
- Five residents (17.9%) were actively involved in committees or organizations external to the Department.
- A newly developed anesthesia learning scheduling application allows for accurate reporting of daily teaching assignments and preceptorships for learners and is being used to capture daily OR assignments.
- All faculty guided and taught residents when asked and participated in various administrative processes when asked.
- All CaRMS deadlines were met.
- The CPD program included 53 sessions in 2014-15. All planned sessions occurred and overall satisfaction was 4.3/5.0.
- The department's performance was especially favourable in the area of postgraduate education delivery for anesthesia residents:
 - All residents fulfilled the research project requirements, completed required clinical rotations, and maintained a procedure log.
 - All available residents attended scheduled seminars and workshops.
 - An active simulation program is in place, overall program accreditation has been maintained, and a fundamental innovations in residency education (FIRE) application was successfully submitted to the Royal College of Physicians and Surgeons of Canada (RCPSC) to move forward with development of a competency based medical education curriculum.
 - Residents indicated satisfaction as follows: academic teaching: 4.5/5; faculty teaching 4.4/5; problem rounds: 4.4/5.0.
 - All PGY5 residents completed the residency program and 100% of eligible residents successfully completed the RCPSC exams.
 - Two residents completed an elective in Rwanda and three faculty participated in the teaching program at the University of Rwanda.
 - All PGY2 residents completed the pre-/post-test.
 - Seventy-nine non-anesthesia residents completed elective rotations in the Department; all mandatory anesthesia rotations were filled.

(Cont'd)

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

- All medical student elective rotations were filled, and a waiting list was maintained. The overall satisfaction rate among medical students was 91.31%.
- There were 18 tutors who delivered 672 hours of teaching.
- All six fellows in 2014-25 reported satisfaction with their learning experience.

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

- Though 100% of participants in the course on global outreach in anesthesia were satisfied with their learning experience, the course attracted fewer registrants than targeted (15 actual vs. 25 targeted registrants) and fewer Dalhousie faculty taught in the course than targeted (26% of course faculty were from Dalhousie).
- End of rotation ITERS are being provided during face-to-face feedback sessions, but not at the desired rates. The 2014-15 frequency was 66%.
- Two faculty members applied for academic promotion in 2014-15; one was promoted to professor and the other to associate professor. Of the 165 anesthesia faculty members, 15.2% are professors, 17.6% are association professors and 65.4% are assistant professors. The targets are 15%, 30% and 40% respectively.

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

- Twelve of 28 residents were actively involved in committee work in 2014-15. This represents a total of 42.9% of the resident body; the target is 85%.
- Attendance at education-related committee meetings fell short of the 80% attendance target: education operational committee: 71.43%; fellowship advisory committee: 62.26%; CPD advisory committee: 55.57%; residency program committee: 73.22%.
- Seven Dalhousie medical students applied to the Dalhousie Anesthesia Residency Program. This represents 29.1% of medical students who completed an elective in the department. The target is 55%.

CATEGORY 1: ALL LEARNERS

Develop Learners

INDICATOR: Mentorship

TARGET: An active, formalized mentorship program exists

RESULT: The overall satisfaction for phase one (orientation) of the mentorship program was 4.3/5.0 for the orientation delivered in 2014-15. As part of phase two (non-clinical CPD sessions), the department launched an online training module: *The mentoring process*.

The resident mentorship initiative, launched in 2013-14 as part of phase three, was offered again in 2014-15 due to its success in the previous year. Resident mentorship included 13 staff physician mentors and nine senior resident mentors, and all 26 residents were mentees. Resident mentorship coordinates with the clinical mentorship program, where 39 physician staff mentors and the PGY1 and PGY2 residents are matched.

An academic advisor program within the anesthesia residency program, which provides regular feedback and support to residents, will be launched in the 2015-16 academic year.

INDICATOR: Leadership

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

RESULT: Twelve of 28 residents were actively involved in committee work in 2014-15. This represents a total of 42.9% of the resident body. However, some of the 12 residents were active on more than one committee, occupying 16 positions/committee memberships.

INDICATOR: Leadership

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

RESULT: Five residents were actively involved in committees and/or organizations external to the department. This represents 17.9% 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 newly developed anesthesia learning scheduling application (ALSA) is being used to capture all daily OR assignments of learners at the QEII. This application allows for accurate reporting of daily teaching assignments and preceptorships for learners.

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	4	71.43%
Fellowship Advisory Committee	5	62.26%
Continuing Professional Development Advisory Committee	3	55.57%
Residency Program Committee	7	73.22%

CATEGORY 1: ALL LEARNERS

INDICATOR: Management

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

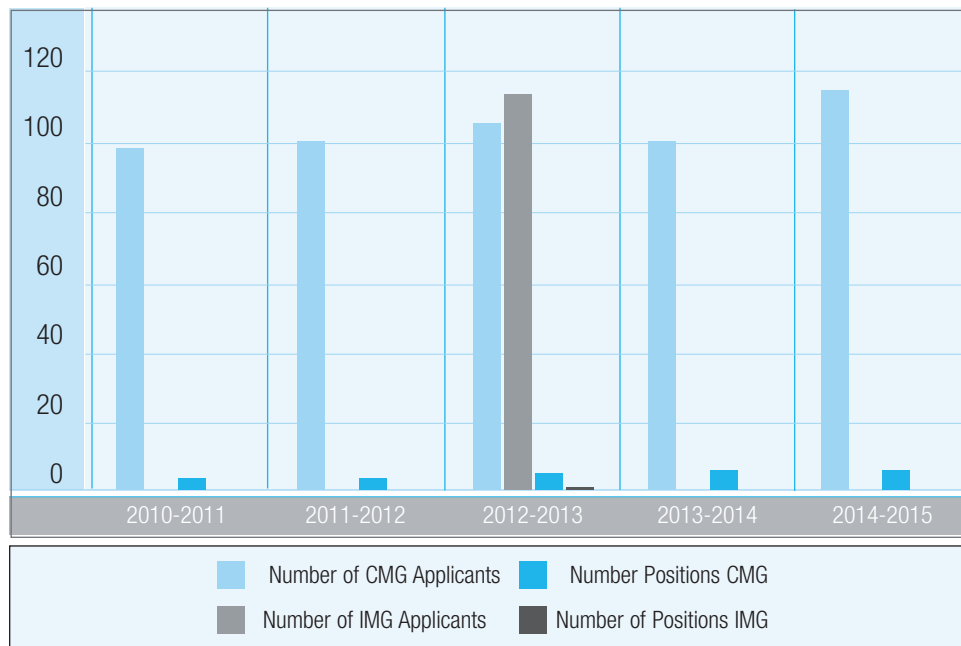
RESULT: 100% of all requests were met.

INDICATOR: Management

TARGET: 100% of CaRMS deadlines are met

RESULT: All CaRMS deadlines were met. One hundred and fifteen applications were received for the six Canadian Medical Graduate (CMG) positions. The Department was not allocated International Medical Graduate (IMG) positions in 2014-15.

TABLE 1: CaRMS Applicants



CATEGORY 2: CONTINUING PROFESSIONAL DEVELOPMENT

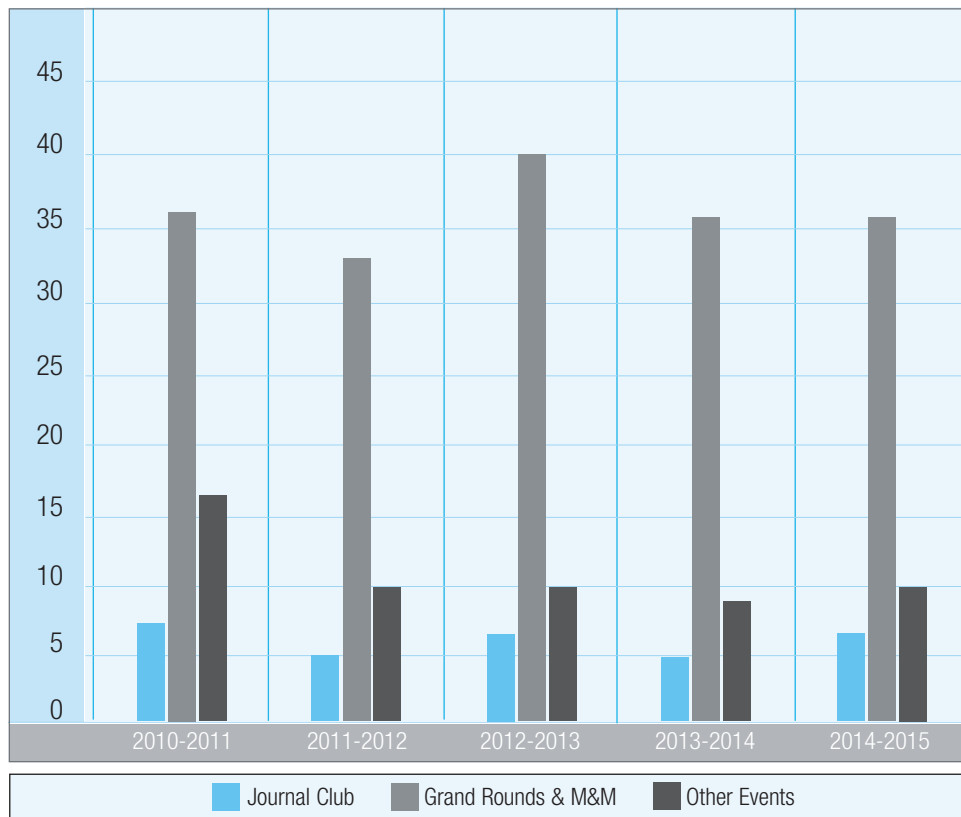
Engage in process of life-long learning, self-assessment and mentoring

INDICATOR: Ongoing lifetime learning

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

RESULT: 53 CPD sessions occurred in 2014-15, fulfilling department needs.

TABLE 2: Continuing Professional Development Activities



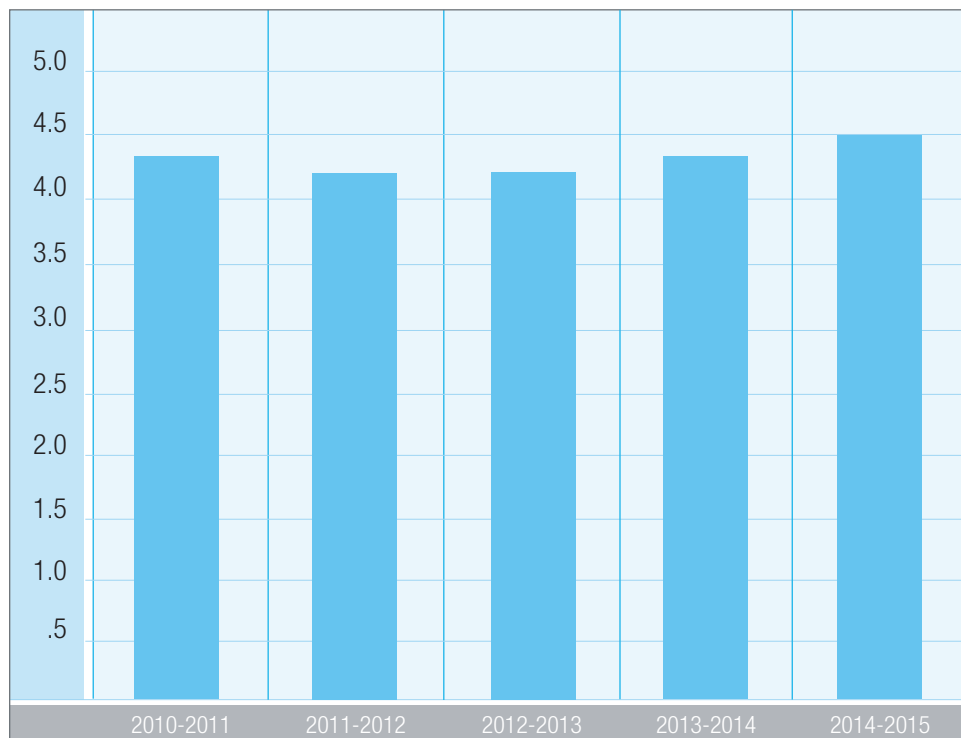
CATEGORY 2: CONTINUING PROFESSIONAL DEVELOPMENT

- INDICATOR:** Ongoing lifetime learning
- TARGET:** 90% of planned CPD sessions occur
- RESULT:** 100% of the 53 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 2014-15 was 4.5/5.0, which represents an increase over the last three years.

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: Of the 23 course faculty in 2014-15, six (26%) were department members.

INDICATOR: Learner demand

TARGET: Registration targets are met

RESULT: The target was a total of 25 participants (15 physicians and 10 learners). The actuals were eight physicians and seven learners. A review of the course will be completed to determine if the course should continue annually.

INDICATOR: Learner satisfaction

TARGET: 100% of participants indicate overall satisfaction with their learning experience

RESULT: 100% of participants were satisfied with the course.

CATEGORY 3: 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, 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: 75% of available residents attend scheduled seminars, workshops, etc.

RESULT: 100% of available residents attended scheduled seminars and workshops. Attendance at sessions was 68.6%, which allows for excused absences of on-call responsibilities, post-call, 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. The Office of Education has begun to utilize the data from the anesthesia learning scheduling application (ALSA) to manage equitable distribution of teaching assignments.

CATEGORY 3: 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, with three sessions offered to PGY1s and eight sessions offered to PGY2s. Additionally, two pediatric simulation sessions are offered to all residents as part of a pediatric anesthesia rotation. Medical students who complete an elective with the program are offered a half-day simulation session, which focuses on airway management and IVs.

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

TARGET: Accreditation is maintained

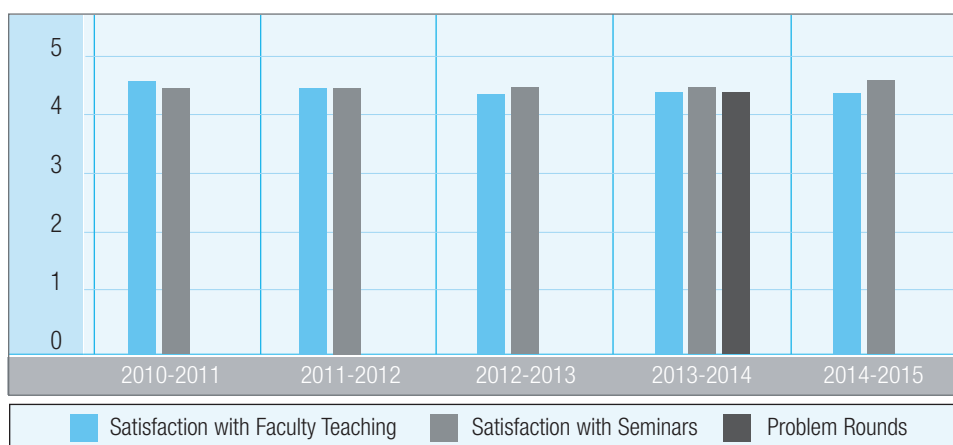
RESULT: Full accreditation is being maintained. The next accreditation cycle will begin in fall 2015. A fundamental innovations in residency education (FIRE) application was submitted to the Royal College of Physicians and Surgeons of Canada seeking approval for the development of a CBME curriculum.

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: 4.5/5 and faculty teaching: 4.4/5.

TABLE 4: Seminar and Faculty Teaching Evaluation



* Problem rounds were introduced into the curriculum in 2013-2014 but not evaluated in 2014-2015.

CATEGORY 3: 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

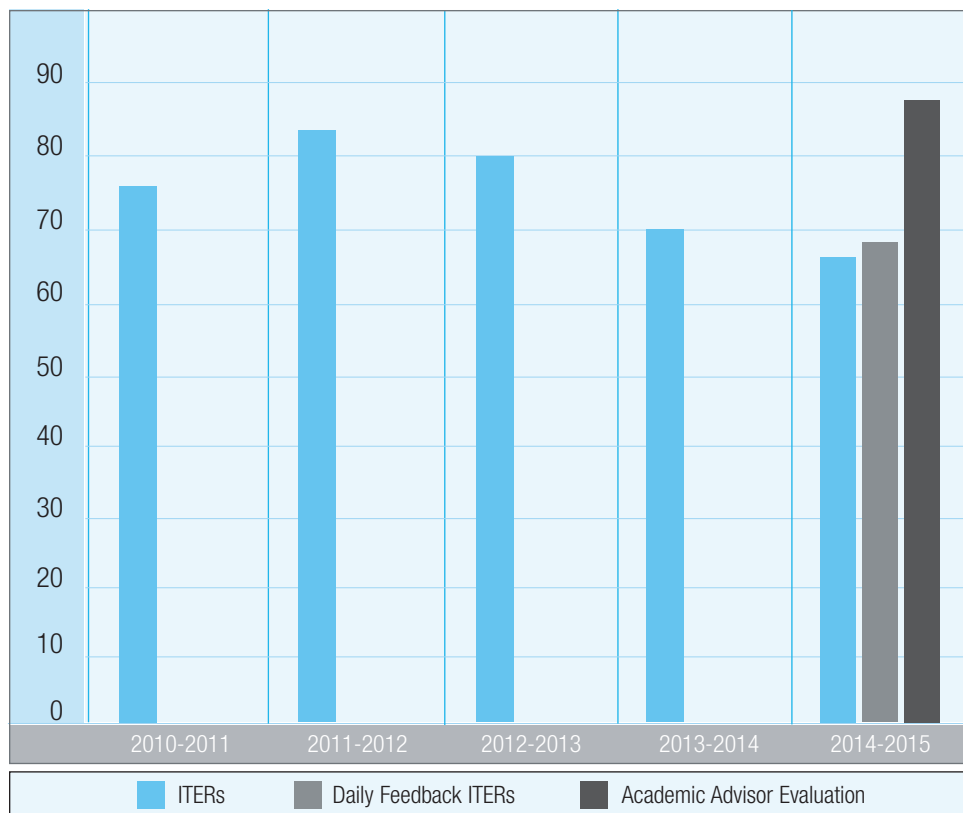
RESULT: Phase two of the curriculum review was implemented in 2014-15. The curriculum will continue to be enhanced with the development of competency based medical education (CBME).

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: 66% 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 67, and academic advisors completed their quarterly evaluations 87% of the time.

TABLE 5: Face to Face ITER Feedback



CATEGORY 3: ANESTHESIA RESIDENCY PROGRAM

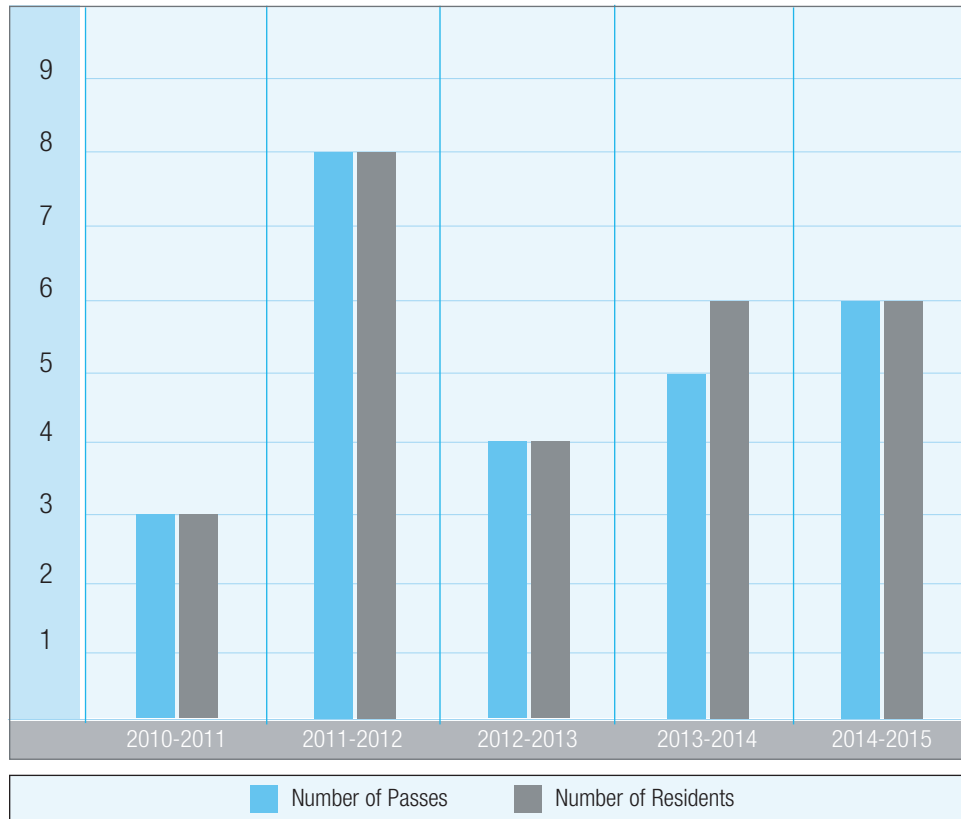
INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

TARGET: 100% exam success rate

RESULT: Six residents were eligible to take the Royal College of Physicians and Surgeons of Canada exams. All six 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: ANESTHESIA RESIDENCY PROGRAM

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

TARGET: Successful completion of pre/post tests

RESULT: All seven PGY2 residents completed the pre-/post-test, with a mean score of 64.1% and a range of 50-86. Additionally, the PGY2 residents completed the AKT 6 exam and the PGY5 residents (five residents) completed the AKT 24. Inclusive of the pre/post exams, the overall mean score was 68% with a range of 50-86.

For any low scores, the results were reviewed with the residents to ensure adequate resources were available to succeed 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. One of the five residents completing the program had their completion date extended by three months to allow for remediation work.

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 completed a global health elective in Rwanda.

CATEGORY 3: ANESTHESIA RESIDENCY PROGRAM

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

INDICATOR: Faculty engagement

TARGET: Two to four Dalhousie faculty participate in teaching annually

RESULT: During 2014-15 three 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: 94% of resident elective rotations were filled. In 2014-15 there were 79 residents, totaling 285 weeks of teaching.

TABLE 7: Off-Service and Elective Residents



CATEGORY 5: UNDERGRADUATE

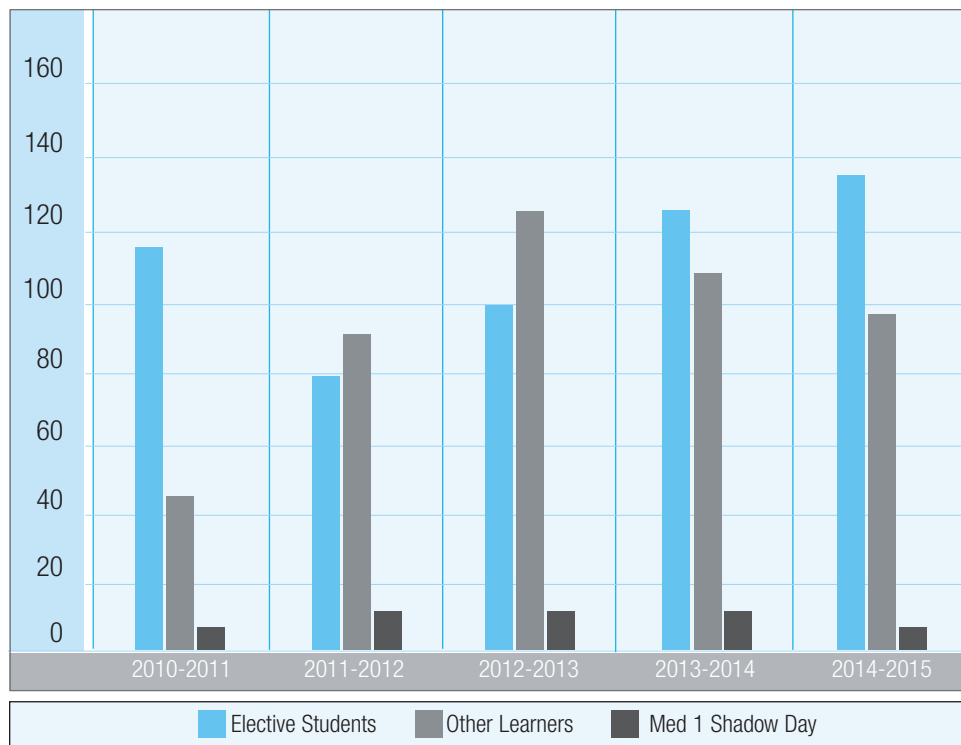
Develop, deliver and evaluate educational programs/Facilitate undergraduate student learning in an atmosphere of respect for diversity

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

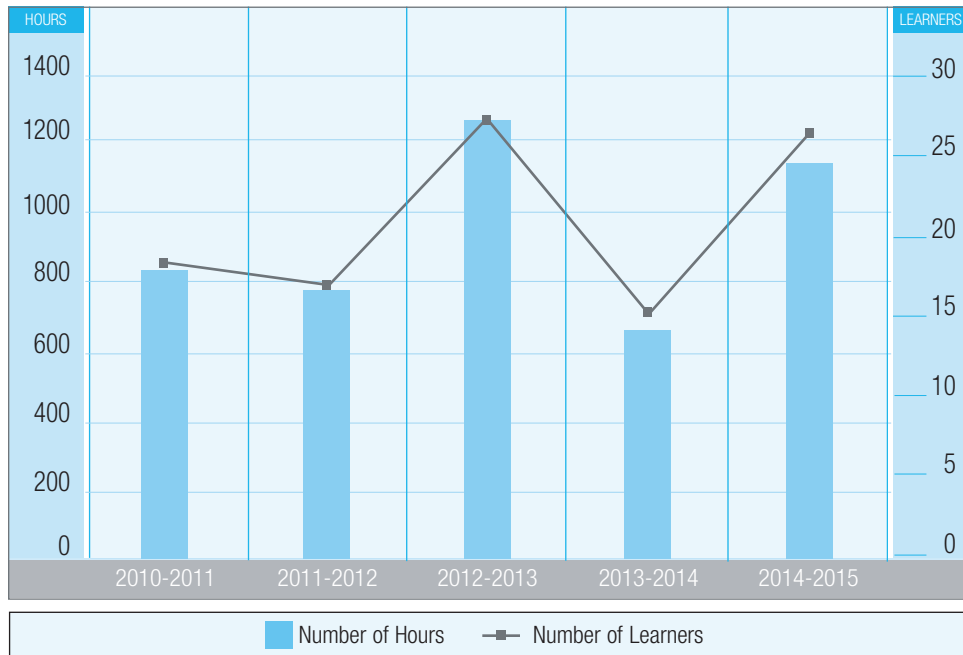
RESULT: 100% of available rotations were filled. A waitlist for fourth-year electives was maintained and offers were made in compliance with medical education national guidelines. Of the learners rotating through the department in 2014-15, there were 108 elective students (inclusive of Med 3 selective students) and 95 other learners (see table).

TABLE 8: Undergraduate Elective and Other Learners



CATEGORY 5: UNDERGRADUATE

TABLE 9: Med 1 & Med 2 Electives

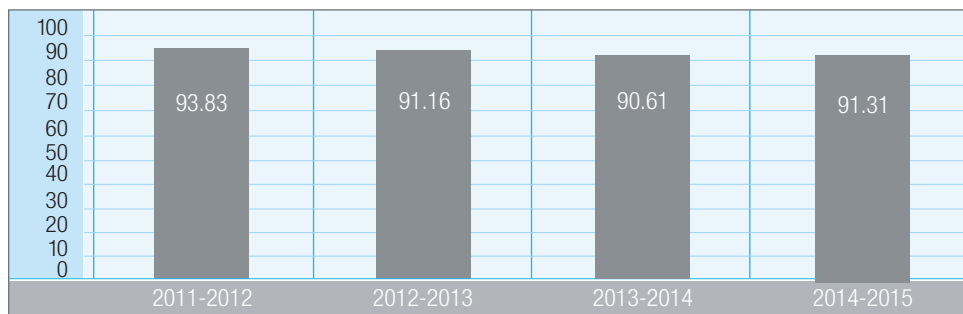


INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

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

RESULT: The overall satisfaction rate for undergraduate electives was 91.31%.

TABLE 10: Satisfaction with Elective



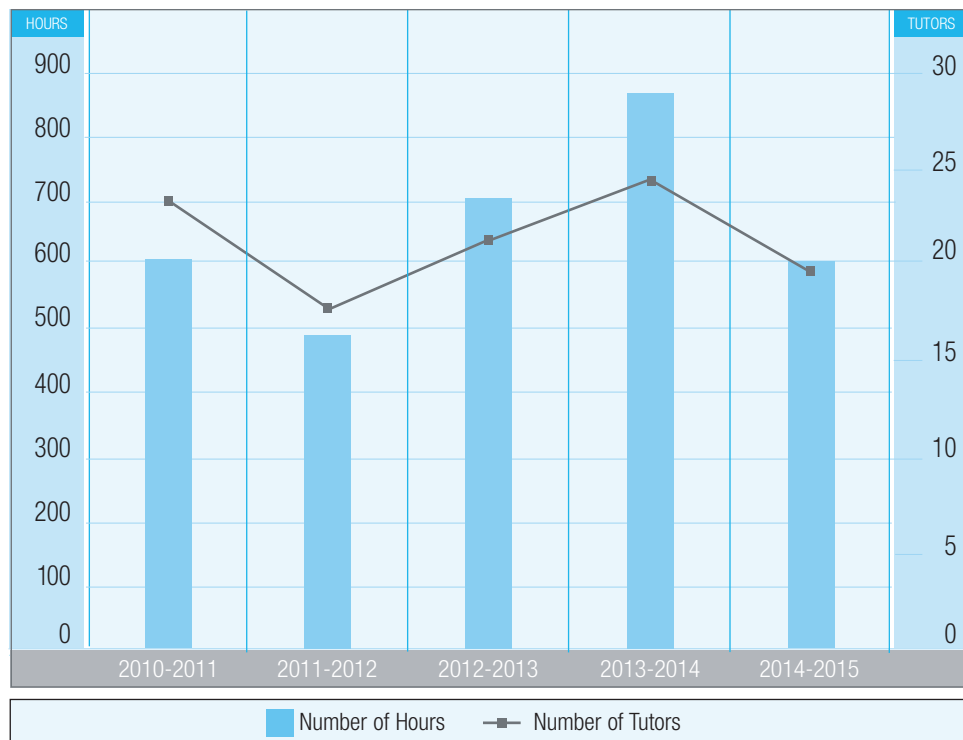
CATEGORY 5: UNDERGRADUATE

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

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

RESULT: In 2014-15 there were 18 tutors representing 672 hours, which is on par with the number of hours the department commits annually.

TABLE 11: Case Based Learning (CBL)



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: 24 Med 4 students from Dalhousie University completed an anesthesia elective. Of these learners, seven students (29.1%) applied to the Dalhousie Anesthesia Residency Program.

CATEGORY 6: SUBSPECIALITY/FELLOWSHIP

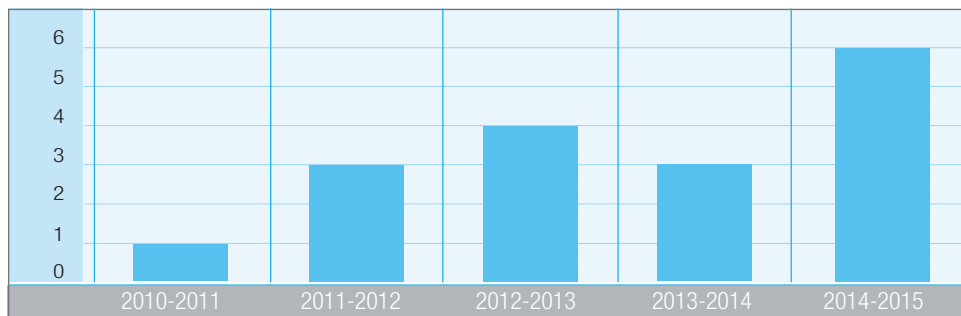
Develop, deliver and evaluate educational programs/Facilitate fellow learning in an atmosphere of respect for diversity

INDICATOR: Fellowship demand/recruitment

TARGET: Trend demonstrates annual increase in the number of applicants

RESULT: In 2014-15 there were six fellows, which represents a 100% increase over 2013-14.

TABLE 12: 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 2014-15 academic year. Medical directors conduct a debrief with the fellows at the conclusion of the fellowship to obtain feedback on the programs.

CATEGORY 7: OTHER UNIVERSITY/CLINICAL DEPARTMENTS

Develop, deliver and evaluate educational programs/Facilitate fellow learning 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: 16 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 will include 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
- Saint John Regional Hospital

RESULT: The committee included six department members, representing the targeted academic ranks and organizations.

Promotion committee will review and make recommendations with respect to faculty academic promotion

INDICATOR: 100% of faculty put forward by the committee for promotion are successful

TARGET: Review all departmental applications for academic promotion on the basis of the criteria established by Dalhousie University and the standards set by the Faculty of Medicine. Make recommendations to the Head of the Department with respect to academic promotion

RESULT: Two faculty members applied for promotion and 100% were successful. One faculty was promoted to professor, and one was promoted to associate professor.

CATEGORY 8: PROMOTION AND APPOINTMENT

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 165 staff that hold a faculty appointment with the department, 15.2% (25) of faculty are professors, 17.6% (29) are associate professors, 65.4% (108) are assistant professors and 1.8% (3) are lecturers; 8.5% (14) of faculty hold cross appointments.

APPENDIX A – EDUCATION PROJECTS / PRESENTATIONS

Scientific Abstracts

1. Acuna J, Epstein I, Chisholm J, Gubitz G, Hazelton L, Warren A. Using an elearning module to facilitate faculty around competency based medical education (CBME) at Dalhousie University [Podium] 2015 Canadian Conference on Medical Education (Vancouver, BC), April 2015
2. Dumbarton T, Livingston P, McLeod A. Curriculum design and mapping for the anesthesia residency program: An ethnography. [Podium] Research Day (Department of Anesthesia, Pain Management & Perioperative Medicine, Dalhousie University), April 2015

Clinical and Program Development

1. 2014 – present: Chisholm J, Vakharia N, RCPSC Anesthesia Subspecialty Committee. RCPSC anesthesia competence by design [Medical education]
2. 2014 – present: Chisholm J, Eichhorn V. CBL module leader [Delivery models]

Peer Reviewed Journal Publications

1. Livingston P, Zolpys L, Mukwesi C, Twagirumugabe T, Whynot S, MacLeod A. (2014). Non-technical skills of anesthesia providers in Rwanda: An ethnography. *PanAfrican Medical Journal*, 19. Doi: 10.11604/pamj.2014.19.97.5205
2. Livingston P, Evans F, Nsereko E, Nyirigira G, Ruhato P, Sargeant J, Chipp M, Enright A. (2014). Safer obstetric anesthesia through education and mentorship: A model for knowledge translation in Rwanda. *Canadian Journal of Anesthesia*, 61(1), 1028-1039. Doi: 10.1007/s12630-014-0224-8.

Non-peer Reviewed Journal Publications

1. Livingston P, Durieux M. (2015). Improving anesthetic safety in low/middle income countries: A different challenge. *Anesthesia Patient Safety Foundation Newsletter*, 29(3), 54 & 60. [Letter to the editor]



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