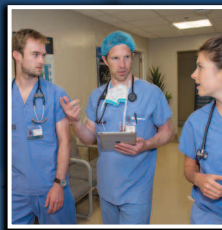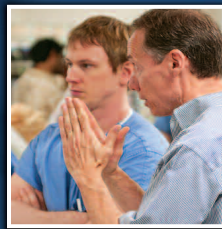# ACCOUNTABILITY REPORT
2013

OFFICE OF EDUCATION

Department of Anesthesia, Pain Management & Perioperative Medicine

Dalhousie University

DALHOUSIE UNIVERSITY
Inspiring Minds
Faculty of Medicine

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).

TABLE OF CONTENTS

    A.a Education Projects
    A.b Funded Projects
    A.c Publications

The **Education Accountability Framework** was developed in keeping with the Department of Anesthesia, Pain Management and Perioperative Medicine's values of transparency and accountability.

In developing the framework, a working group of education administrators and medical directors within the department articulated the targets and indicators necessary to measure and report on performance and productivity as it relates to education.

The Education Accountability Framework was approved by the department in July 2010.

THE ACCOUNTABILITY FRAMEWORK HAS FOUR SECTIONS:

1) **Profile:** The need for an accountability framework within the departmental and university context is addressed. In addition, the Office of Education's background is described and a snapshot of departmental functions is provided in the form of an organizational chart.

2) **Results Chain:** Provides an overview flow chart that logically links inputs, or resources devoted to educational endeavors, to department specific educational activities to short and long term outputs/results and overall outcomes.

3) **Measurement and Reporting Plan:** Identifies the most appropriate indicators of educational activity and production, our current targets, how to measure the indicators and how to report the results.

4) **Evaluation Strategy:** Outlines a cyclical, iterative strategy, or life cycle model, for ongoing learning from results and strategy adjustments as required.

The Department of Anesthesia, Pain Management & Perioperative Medicine 2013 Education Accountability Report communicates the education activities by staff physicians with respect to established targets and goals stated in the *Framework's Measurement and Reporting Plan*. The information in this report highlights educational activities and achievements from July 2012 to June 2013, and data from previous academic years for comparative purposes. Although not captured in this report, the Office of Education assumed responsibility for **Global Health** activities in 2012, and **Faculty Promotion and Appointment** in 2013.

Develop Learners

INDICATOR: Leadership

TARGET: One faculty per year attends leadership development program

RESULT: In 2012-13, two faculty members participated in leadership development programs to the *Association for the Study of Medical Education FLAME* Course and *Fully At The Table*.

INDICATOR: Leadership and Mentorship

TARGET: An active, formalized mentorship program exists

RESULT: Phase 1 (Orientation) and Phase 2 (non-clinical CPD sessions) continue to be offered. For Phase 1, the overall satisfaction rate given by participants was 4.4/5.0 for the two orientation sessions offered in 2012-13. Phase 2, which consisted of five sessions, was rated overall as a 4.8/5.0.

Phase 3 (Mentor/Mentee), saw limited uptake from department members; however, the program was modified in 2012-13 to ensure that each resident within the department was in a peer to peer and/or resident to staff mentor/mentee relationship. The full program will be launched in the 2013-14 academic year and will be evaluated to monitor its success.

Engage in administrative functions/processes

INDICATOR: Management

TARGET: CaRMS deadlines are met 100% of the time

RESULT: All CaRMS deadlines were met for 2012-13 and a new *Multiple Mini Interview (MMI)* format was implemented. The number of applicants have remained constant at approximately 100 per year.

TABLE 1:   **CaRMS Applicants**
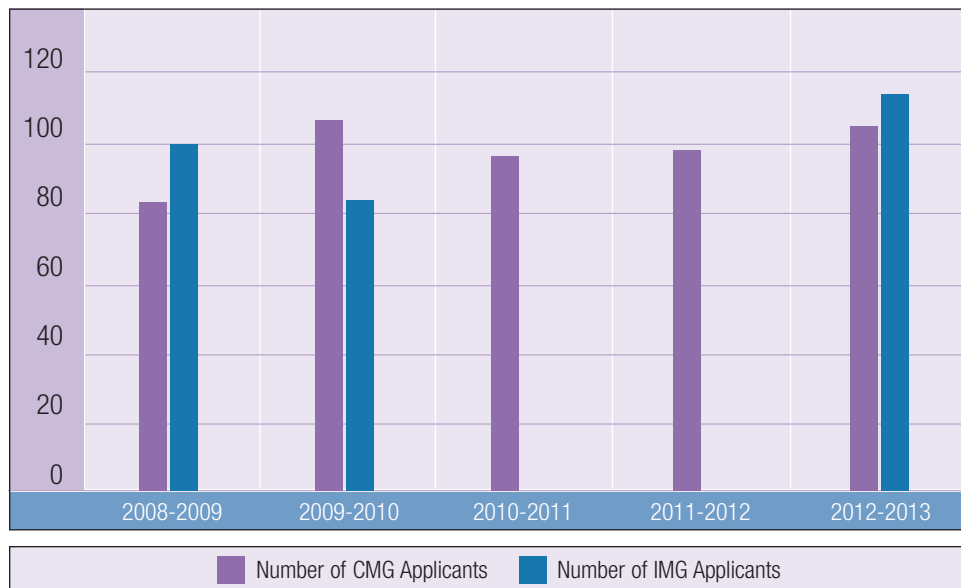
Of note, for 2010-11 and 2011-12 funding was not allocated to the department for an IMG position.

Engage in administrative functions/processes

INDICATOR: Management

TARGET: 100% of faculty maintain up-to-date teaching dossiers

RESULT: 44% maintained up-to-date teaching dossiers using the IIS CV tool. During 2012-13 a review of the IIS CV tool was launched. A revised version is in development which will provide faculty with a more inclusive and user friendly method of tracking their academic activities.

INDICATOR: Management

TARGET: 15% of faculty are Professors, 30% of faculty are Associate Professors, 40% of faculty are Assistant Professors, 15% of faculty are Lecturers and 10% of faculty hold cross appointments.

RESULT: 14% of faculty are Professors, 21% of faculty are Associate Professors, 46% of faculty are Assistant Professors, 19% of faculty are Lecturers and 3% of faculty hold cross appointments. In 2012-13, six faculty members applied for and achieved academic promotion.

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: In 2012-13 a comprehensive CPD series was offered, resulting in a total of 56 sessions which represents a 16% increase from 2011-12.

TABLE 2:   **Continuing Professional Development Activities**

INDICATOR: Ongoing lifelong learning

TARGET: *   90% of planned CPD sessions occur

RESULT: All of the planned 56 sessions were delivered.

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 2012-13 was 4.2/5.0 which has been consistent with previous years. In 2010-11 the overall score was 4.3/5.0 and 4.2/5.0 in 2011-12. Prior to 2010-11 formal evaluation data was not obtained for all sessions.

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: In 2012-13, 100% of residents were engaged in or completed a research project, with some residents choosing to complete research related to education.

Develop, deliver and evaluate educational programs/Facilitate the learning of students, residents & other health professionals 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

RESULT: 90% of available residents attended scheduled seminars and workshops.

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

TARGET: 100% of residents complete required clinical rotations

RESULT: 96% of residents completed required clinical rotations, with one resident taking a leave of absence from the program.

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

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

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

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

TARGET: An active simulation program is available

RESULT: There is a lack of sustainable, well resourced simulation program leading to less than adequate simulation-based learning experiences for all academic departments. Dalhousie Faculty of Medicine and Health Professions in partnership with the IWK and CDHA are collaborating to develop a business plan to address this issue.

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

TARGET: * Accreditation is maintained

RESULT: Residency program maintains full accreditation – however failure to meet the accreditation standard related to simulation may jeopardize future accreditation in 2017.

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

TARGET: * 80% of residents indicate satisfaction with their program, inclusive of Wednesday afternoon sessions

RESULT: 100% of residents participated and indicated satisfaction with academic teaching (seminars) at 4.5/5.0 and faculty teaching at 4.4/5.0.

TABLE 3: **Seminar and Faculty Teaching Evaluation**

In the above chart, data for seminars in 2008-09 and 2009-10 is not available.

INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement
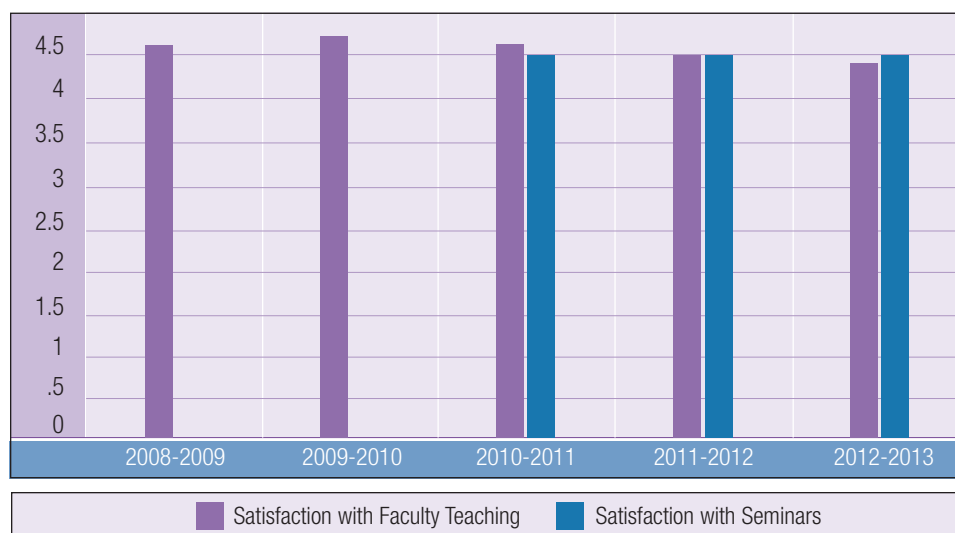
TARGET: Curriculum is reviewed and updated every two to three years

RESULT: A comprehensive review and renewal of the curriculum launched in 2012 with implementation scheduled for the 2013-14 academic year.

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: 80% end of rotation ITERs were completed on a face to face basis between residents and faculty.

TABLE 4: **Face to Face ITER Feedback**

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

TARGET: * 100% exam success rate

RESULT: 100% exam success rate for the four residents who completed the program. As shown in the chart below, all residents who have finished the program since 2010-2011 have successfully passed the exam.

TABLE 5: **Royal College of Physicians and Surgeons Exams**

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

TARGET: Successful completion of pre/post tests

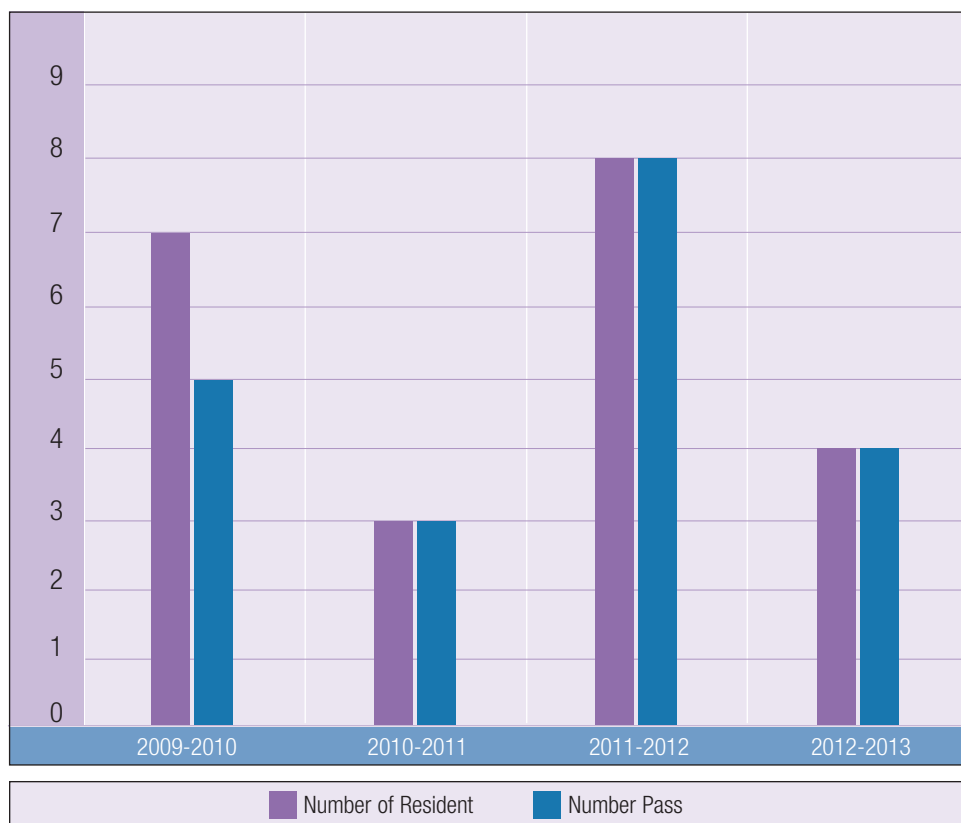**RESULT:** 100% completed pre/post tests with 91% achieving a pass.

CATEGORY 3: POSTGRADUATE ANESTHESIA RESIDENCY PROGRAM

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

TARGET: 100% of residents maintain a procedure log

RESULT: All residents are required to complete a procedure log as part of their program. 100% of the residents have been compliant with this requirement.

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

TARGET: 90% of residents complete the program

RESULT: 100% of PGY 5 residents completed the program. During 2012-13 no residents transferred out of the program, and no residents transferred into the program.

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

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

TARGET: 60% of elective rotations are filled

RESULT: 95% of resident elective rotations were filled. In 2012-13 there were 52 residents, totaling 224 hours of teaching. The overall number of residents increased by 16% and 7% for teaching hours from the previous academic year.

TABLE 6: **Off-Service and Elective Residents**
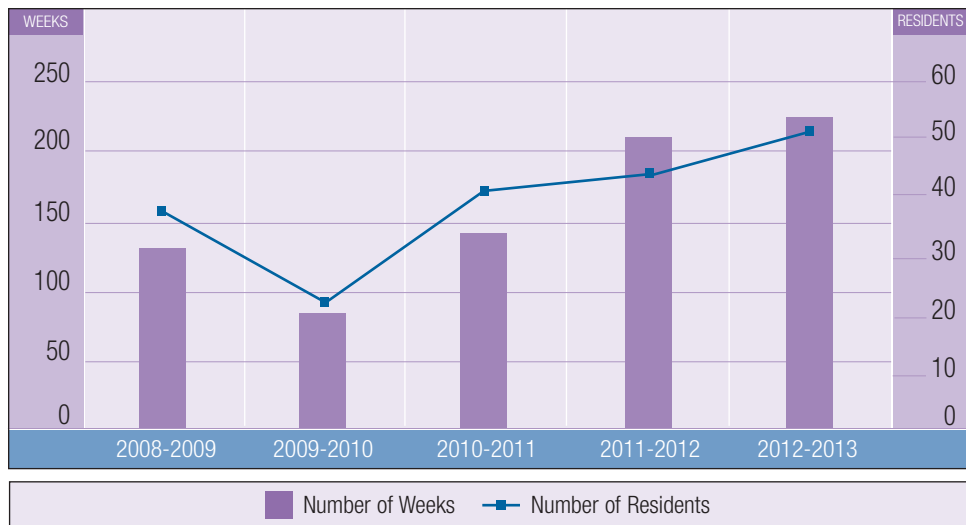
Develop, deliver and evaluate educational programs/Facilitate the learning of undergraduate students in an atmosphere of respect for diversity

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

TARGET: One to two studentships recruited per summer

RESULT: Two studentships occurred in 2012-13.

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

**TARGET:** 100% of available rotations are filled with a waiting list of interested students

TARGET: * 100% of available rotations were filled. A waitlist was maintained and offers made in compliance with medical education national guidelines. Of these learners rotating through the department in 2012-13, there were 99 elective students and 124 other learners (*Table 7*), such as primary care paramedics, nursing students, and so forth. Overall, there was a significant increase of 25% for elective students and 39% for other learners from the previous academic year.

Again this year the department participated in *Med 1 Shadow Day* (*Table 7*), which was introduced into the MD program in 2010-11. This opportunity allows medical students a first-hand experience in a clinical environment on their initial day of medical school. This past year, the department again offered an experience to ten medical students, which is approximately 13% of the class.

For the *Med 1* and *2* elective students(*Table 8*), there was a significant increase (37%) in the number of students who completed their experience within the department.

TABLE 7: **Undergraduate Learners**

Elective Students · Other Learners · Med 1 Shadow Day
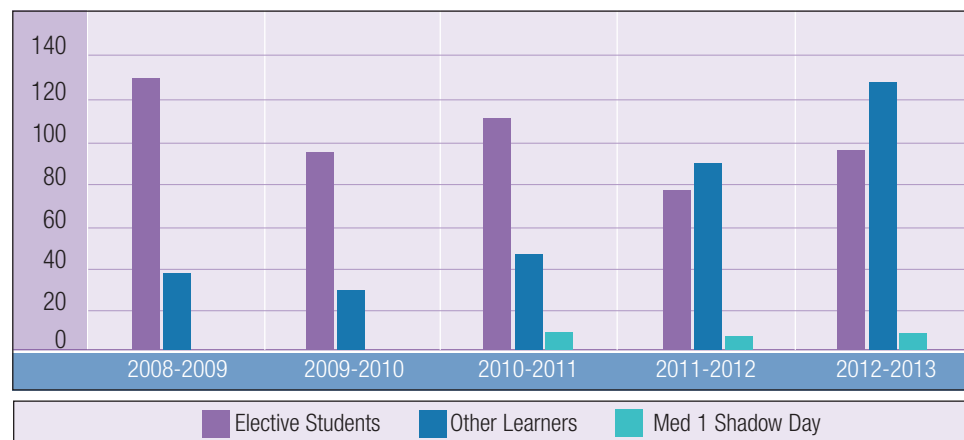
TABLE 8:   **Med 1 & Med 2 Electives**
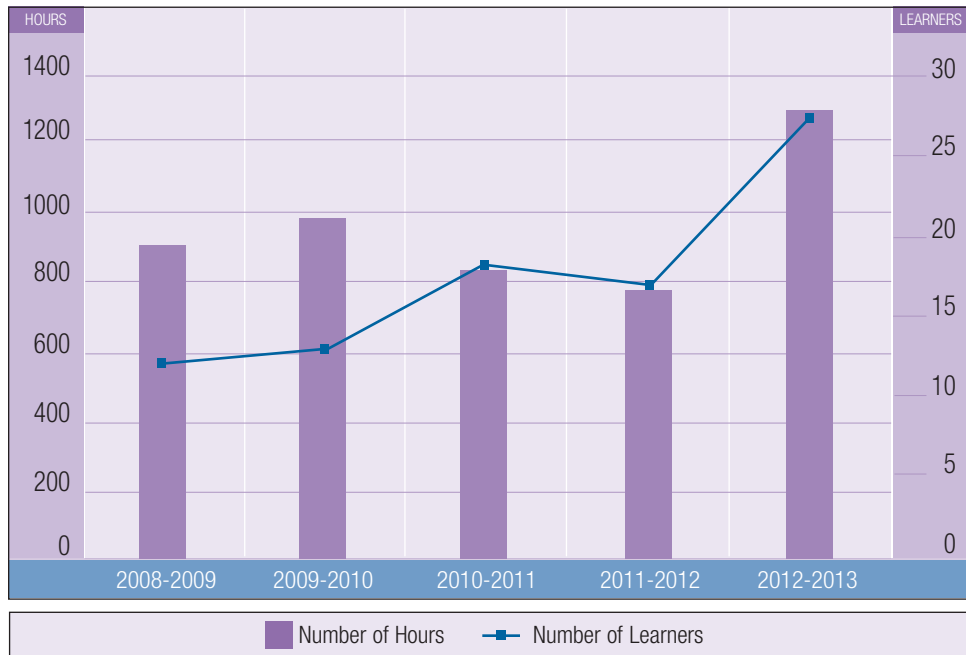
INDICATOR: Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

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

RESULT: The overall satisfaction rate for undergraduate electives was 91% during 2012-13.

TABLE 9:   **Satisfaction of Elective**

In the above table, data is not available from previous years.

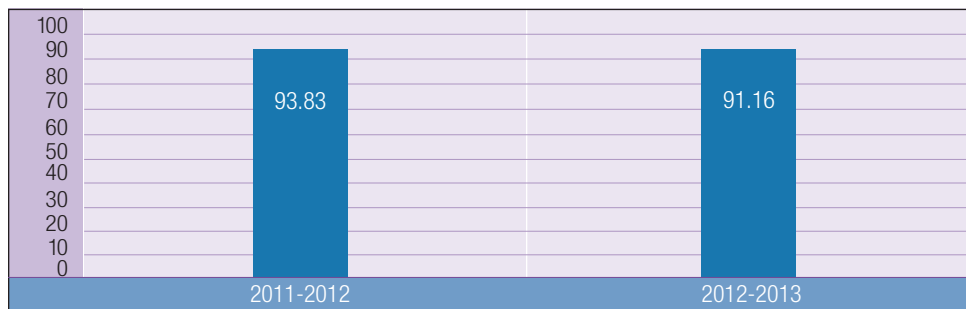**INDICATOR:**   Synthesis/translation, learner satisfaction, learner success, learner demand, faculty engagement

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

RESULT: Developed the Anesthesia Learning Scheduling Application and redesigned the IIS CV tool to provide accurate recording of faculty teaching activities/hours.

In 2010-11, the Faculty of Medicine revised the undergraduate curriculum, which translated into a decrease in the teaching hours per week in the Case Base Learning (CBL) modules. The second phase of the revised curriculum occurred in 2011-12 which resulted in another decline in the teaching hours per week, which ultimately had an impact on our overall teaching hours. However, during 2012-13, there was an increase (18%) in the number of faculty delivering CBL teaching, resulting in a 48% increase in the overall teaching hours for the department, as a result of the Faculty of Medicine request for additional assistance.

TABLE 10:   **Case Based Learning (CBL)**
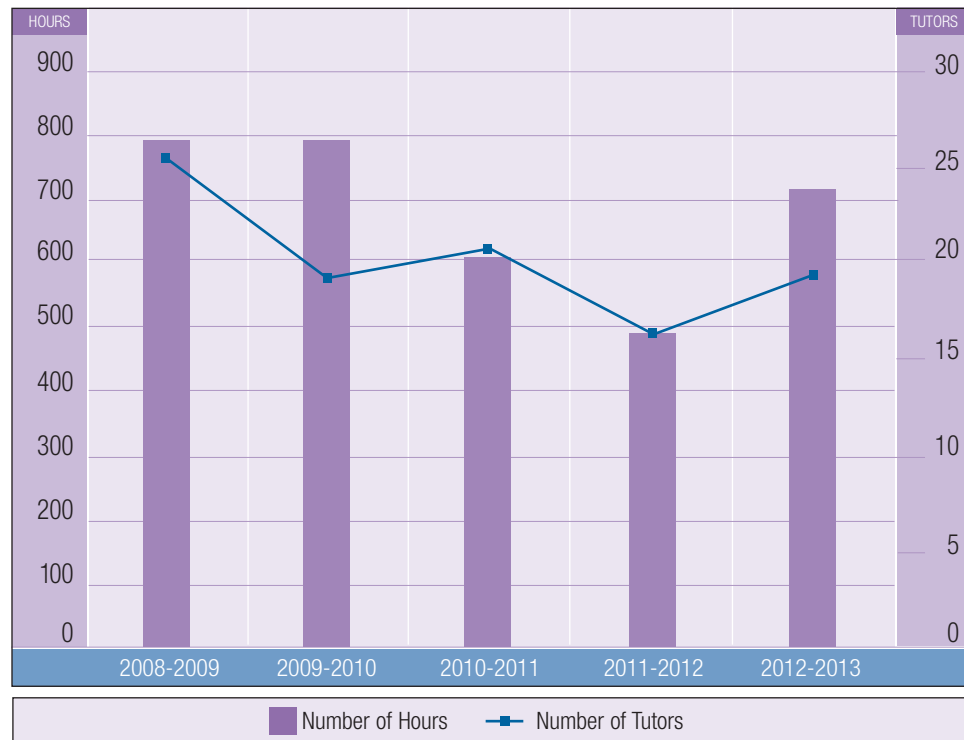
CATEGORY 6: SUBSPECIALTY/FELLOWSHIP

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

INDICATOR: Fellowship demand/recruitment

TARGET: Trend demonstrates increase in number of applicants year over year

RESULT: In 2012-13 the intake of fellows increased by 33% from 2011-12. Overall, the number of qualified applicants continues to increase since the development of fellowship programs in 2010-11.

TABLE 11:   **Fellows**
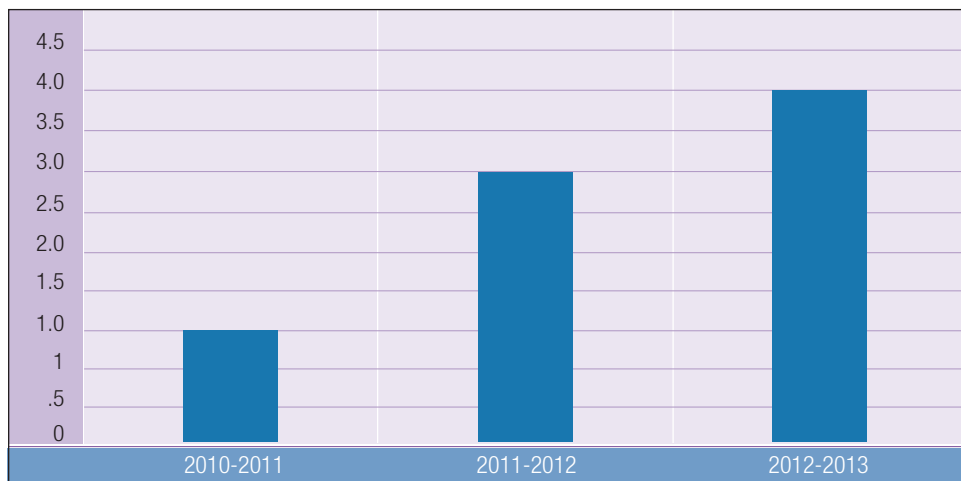
INDICATOR: Learner satisfaction

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

RESULT: 100% of the fellows enrolled in the program in 2012-13 indicated satisfaction with their learning experience throughout the duration of the program. As each program is relatively new, feedback continues to improve the programs.

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

RESULT: 15 opportunities for nine faculty members occurred during 2012-13.

SUMMARY

As a summary, the areas where targets were met or partially met, as well as those targets that were not met in 2012-13 are outlined below.

AREAS IN WHICH THE DEPARTMENT MET ITS TARGETS IN 2012-13

- Two faculty members participated in leadership development programs
- Deadlines for CaRMS were met, resulting in 219 CMG and IMG applicants
- 16% increase in the overall delivery of the CPD program
- 100% of planned CPD sessions were delivered
- CPD sessions had an overall satisfaction of 4.2/5.0
- 100% of residents were engaged or completed a research project
- 90% of available residents attended scheduled seminars, workshops
- 100% of faculty guided and taught residents as requested
- SimEd Network established
- Accreditation maintained
- Residents indicated satisfaction with their program
- Curriculum renewal and mapping underway
- 100% of residents eligible to sit their qualifying exams were successful
- All residents maintained a procedure log book
- 100% of PGY5 residents completed the requirements of the program
- 95% of all requested resident elective rotations were provided with a 16% increase in residents and 7% increase in teaching hours from 2011-12
- Two students completed a studentship in 2012-13
- All available elective rotations for medical students were filled, with an increase of 25% from 2011-12
- 91% of medical students were satisfied with their elective experience
- 18% increase in faculty delivering CBL modules, resulting in a 48% increase in hours from 2011-12
- Anesthesia Learning Scheduling Application (ALSA) was developed to record all clinical teaching within the department
- IIS CV tool was redesigned to provide a more comprehensive academic profile
- Four fellows were recruited into four anesthesia specialty programs
- Nine faculty members were invited to participate in the delivery of education sessions external to the department

AREAS IN WHICH THE DEPARTMENT PARTIALLY MET ITS TARGETS IN 2012-13

- Mentorship program underwent modifications in an attempt to encourage uptake of the program
- The proportion of Assistant Professor and Lecturer exceeds established targets, but Professor (14%), Associate Professor (21%) and Cross Appointments (3%) fall short of established targets
- With one leave of absence during 2012-13, 96% of residents completed required clinical rotations
- 80% of ITERs were completed on a face to face basis, whereas the indicator established was 100%
- 91% of residents were successful on pre/post tests, rather than the required 100%

AREAS IN WHICH THE DEPARTMENT DID NOT MEET ITS TARGETS IN 2012-13

- 44% of faculty maintained an up-to-date teaching dossier, rather than the expected 100%

A.a - EDUCATION PROJECTS

Bailey J, Ntakiyiruta G, Knapp G, Hoogerboord M, Murray M, Tansley G, Livingston P. *Simulation and Skills Development in a Low-Resource Setting: the Dalhousie – National University of Rwanda Partnership.* 2013; Presented: Bethune Round Table.

Chisholm J, Livingston P, Bishop D, Bradley S, Covert R, Delbridge C, Doucet R, Dumbarton T, MacLellan R, McKeen D, Quinn D, Vakharia N. *Anesthesia Post Graduate Education: Curriculum Renewal and Mapping.* 2013; Presented: 14th Annual Symposium on Medical/Health Education and Interprofessional Learning

Livingston P, Evans F, Sargeant J, Nshimyumuremyi I, Banguti P, Nyirigira G, Amani *S. Safer Anesthesia From Education: the SAFE Obstetric Anesthesia Course and Anesthesia Practice Network for Rwanda.* 2013; Presented: Bethune Round Table, Vancouver, BC.

Livingston P. *The CASIEF* – National University of Rwanda Partnership for Anesthesia Resident Education, Ottawa, Canada. (National) [Lecture] Sep 2013. Presentation at the Canadian Association of General Surgeons Annual Meeting.

Nyirigira G, Evans F, Enright A. *Countrywide Implementation of Lifebox Foundation equipment and training in Rwanda.* 2013; Presented: Bethune Round Table, Vancouver, BC.

Quinn D, Chisholm J, Livingston P, Dumbarton T. *Anesthesia Post-Graduate Education: an outcomes-based curriculum that embeds the CanMEDS framework.* 2013; Presented: International Congress on Residency Education (ICRE) 2013, Calgary.

A.b - FUNDED AND UNFUNDED PROJECTS

Chisholm J, Livingston P, Lushman C. *Curriculum Renewal & Mapping Project in Anesthesia Post-Graduate Education* [Educational Grant] Academic Innovation at Dalhousie. Aug 2012. [**$20,000**]

Dumbarton T, Livingston P, MacLeod A. *Curriculum Design and Mapping for the Anesthesia Residency Program at Dalhousie University: An Ethnography.* Apr 2013. [Unfunded]

Livingston P. *Low-fidelity simulation to teach anesthetists' non-technical skills in Rwanda* [Grant] Grand Challenges Canada. Sep 2012. To develop a medical simulation centre in Rwanda that teaches resuscitation, teamwork, communication, and advanced clinical skills using low-tech simulation. This robust learning environment will train health care professionals in essential clinical skills without risk to patients. This teaching approach will improve patient safety and save lives. [**$100,000**]

Livingston P, Skelton T, Nshimyumuremyi I, Zolpys L, Uwineza JB, Mukwesi C, Whynot S. *Low-fidelity simulation to teach anesthetists' non-technical skills in Rwanda: a randomized controlled trial.* Sep 2012. [Unfunded]

A.c - PUBLICATIONS

Non Peer-Reviewed Articles

Chritton S, Weinkauf J, McClain C, O'Flaherty J, Livingston P, Evans F, Kessler S, Nelson E, Durieux M. *Teaching Anesthesiology in Rwanda: A Multi-pronged Approach. American Society of Anesthesiologists Newsletter,* 2013; 77 (6):52 -55

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