



EXTERNAL REVIEW REPORT FORM

CLINICAL DEPARTMENT	Department of Medicine
COMMISSIONING OFFICER	Prof. Trevor Young, Dean
EXTERNAL REVIEWERS	Prof. Katrina Armstrong Dept. of Medicine, Harvard Medical School Prof. Graydon Meneilly Dept. of Medicine, University of British Columbia
DATES OF REVIEW	December 3-4, 2018

INTRODUCTION

In compliance with the University of Toronto's policy of 5-year cyclical review of its departments, the Dean of the Faculty of Medicine, Prof. Trevor Young, invited two outside reviewers to perform a comprehensive review of the Department of Medicine at the University of Toronto. The External Review Committee (hereafter called The Reviewers) received: terms of reference; previous external review report (2013-14); a copy of the Chair and Dean's response to the last review; an extensive self study report of the department and its divisions along with CV's and other important material; a list of the strategic priorities of department; The Dean's report 2018; the Faculty of Medicine's Strategic Priorities; and University of Toronto Towards 2030.

EXTERNAL REVIEW SUMMARY

The Reviewers spent two days meeting with stakeholders including the Dean of the Faculty of Medicine, the Chair of the Department, the Physicians-in-chiefs, the Department Division Directors and Postgraduate Program Directors, the Quality and Innovation Committee, the Mentorship Equity and Diversity committee, the Education Executive, the Vice Deans Undergraduate and Postgraduate Education, research leadership at the university and the hospitals and the research executive, representatives from cognate units that interact with the department extensively, senior administrative staff, junior faculty members, fellows, residents, and students.

We want to thank the administrative staff, who did a wonderful job of the arrangements. We are grateful to all who met with us. We appreciated the forthright and constructive nature of the comments we received.

We found that under Dr. Hawker's leadership, the DOM has articulated and is carrying out an excellent strategic vision. In general, the reviewers found the overall morale of the DOM to be high and everyone was very supportive of Dr. Hawker's leadership.

PREVIOUS EXTERNAL REVIEW

1. Mississauga

With regard to the educational program for both clinical clerks and postgraduate trainees at the Mississauga campus, the reviewers pointed out that, "Concerns were raised that this was taking residents away from core educational programs". They also pointed out that they recognize that there will be increased challenges with resident duty hours and potential declines in resident numbers. We heard no concerns about the Mississauga campus on this occasion. The issues about resident numbers and workload remain and will be addressed below.

2. Alignment of Research Efforts Across Sites

The reviewers said, "The individual hospitals retain substantial administrative and financial control over the research efforts of the hospital and DOM faculty. Consequently, there is considerable duplication of effort and costs across the entire enterprise. Further, the Chair has limited influence over the coordination and development of research plans, or the recruitment/retention of faculty. The University needs to continue efforts to better coordinate the research efforts of the faculty across sites". Although the research enterprise remains somewhat fragmented, the chair and her team have made substantial inroads into breaking down barriers and improving integration as outlined in detail in the self study, and the integration of the research programs is much improved

3. Clinical investigators

The reviewers noted, "There is concern that the Clinician Investigators (50% effort devoted to research) track is not a viable option for the majority of individuals in this track. It takes considerable time and effort to excel at both clinical work and investigation. Therefore, faculty members in this track may end up frustrated or ineffective. Other academic medical centers have similar experiences with this track and have decided to largely eliminate it". The department struck a task force to address this issue and substantial progress has been made. After deliberation they believe that this job category is highly valued and should not be eliminated. Efforts have been made to more closely align the job description with the actual activity of these individuals and to identify ways in which these investigators can be better supported (see below).

4. Relationships

The reviewers noted that, “For the Department of Medicine to move up to the next level it must build upon the relationships, not only with the departments and the hospitals, but also with the research institutes, community, and industry. In the future, there will need to be a better sense of professional identity within the University. The DOM should continue to play a major role in the Toronto Academic Health Science Network”. The department has made a number of changes to address these issues including enhanced support for investigators and transparency of processes, attention to the balance between clinical service and academic productivity, and greater engagement in fund raising. Dr. Hawker is now Co-Chair of the TAHSN medicine committee which should serve to further address this issue.

5. Diversity

The reviewers comment on the need for the development of a plan to increase the diversity of students and faculty and they also comment on the aging of some clinicians. The department has made progress in addressing these issues as outlined in the self study, but this work is ongoing, especially in relation to issues concerning senior faculty (see below).

6. Research

The reviewers noted, “The Department of Medicine is uniquely positioned to play a role as a catalyst between basic sciences and clinician sciences and between the University, hospitals, and research institutes”. The department has made substantial progress in addressing this issue by developing research networks, recruitment of a computer scientist and a myriad of other activities outlined in the self study.

THE CHAIR

We received nothing but positive feedback about the chair. She is honest, principled, visionary and dynamic. Her contributions to equity, wellness, integration of university and hospital processes, support for faculty and the redefining of the leadership team are outstanding. She should be reappointed without hesitation.

Recommendation 1: Dr. Hawker should be reappointed.

EDUCATION

The Department of Medicine is recognized as a leader in medical education and is well known for its substantial contributions in Undergraduate, Graduate and Continuing Professional Education. The Undergraduate and Graduate educational responsibilities of the Department of Medicine are conducted principally through its 7 teaching hospitals. Of the Department of Medicine's 789 full-time faculty, 57 are clinical educators and 286 are clinician teachers. The Department of Medicine contributes a large amount of the curriculum development as well as a large number of teaching hours in the Faculty. The DOM has also contributed substantially to the educational leadership programs of the Faculty, as well as to educational scholarship. Departmental members participate in and lead many important initiatives that foster educational scholarship, such as the Master's Teachers Program, CEPT (Clinical Educator Training Program) and CREST (Collaboration of Researchers, Educators, Scholars and Teachers). There is absolutely no question as to the dedication and excellence of the Department to its teaching mandate and support of educational scholarship at all levels. Dr. Hawker's recruitment of a leading educator to be the Vice Chair of Education has advanced the Department's commitment and efforts across the educational portfolio. The ongoing support for the education mandate of the Department arises from the Department Chair, the Vice Chair of Education and those dedicated individuals who have been instrumental in implementing key teaching programs that support the education goals of scholarship and learning.

A. Undergraduate

The Department of Medicine provides undergraduate medical education across its academies within the city and on the Mississauga campus with a current class size of 270 students per year. It provides a significant part of the preclinical education, in addition to the mandatory and selective/elective rotations and the clerkship. The amount of education and the quality of education contributed by the Department are excellent and there is no question as to the dedication and commitment of the teachers and the Department to undergraduate education. The students greatly valued the exposure to ambulatory medicine in the medicine clerkship and wondered if this should be taught in a separate dedicated rotation. The person centred care curriculum pioneered by the department of medicine should be singled out as a particularly important and worthwhile initiative. While the participation of the department in the first 2 years of the curriculum is extensive, there is an opportunity for the Department leadership to have an even greater impact on this critical period to enhance their pipeline for the best trainees. Development of stronger connections between UME leadership and the Vice Chair of Education or an alternative Department leader for the pre-clinical UME programs could benefit both the UME programs and the DOM.

Recommendation 2: Consider improving the UME ambulatory medicine experience including developing a separate, dedicated ambulatory rotation.

Recommendation 3: Consider appointing a DOM liaison to the pre-clinical UME curriculum.

B. Postgraduate

At the time of the review within the Department of Medicine there were over 1000 postgraduate trainees, including 250 in the Core Internal Medicine program and 142 in direct entry programs. One hundred and fifty two are within the subspecialty training programs and there are 460 Fellows. This represents the largest postgraduate educational contribution at the University of Toronto. It is our understanding that all programs are fully accredited. The postgraduate trainees were enthusiastic about their experiences, including the mentorship for fellows at the subspecialty level. Education is considered to be of high quality with dedicated teachers in the most appropriate settings.

A number of issues of concern were also identified. The volume and complexity of patients increases every year and is exceeding the capacity of the house staff to provide care and have a reasonable balance between workload and education. The department will need to work with its partners in the hospital system to develop alternative methods of care to support inpatients and the training program. This will have the added benefit of freeing up more time for the residents to undergo training in ambulatory care of patients with complex comorbidity, an essential skill in a modern health care system. If properly designed, innovative staffing models can also improve quality, efficiency and patient experience. Competency by design is on the horizon and the department needs to do everything it can to make the implementation of this program as seamless and streamlined as possible. Point of care ultrasound is a core competency for all internists in the future and efforts are needed to ensure that all residents are trained in this important modality. Attending presence at different times of day varies across the teaching services and may need to be increased in the evenings to optimize teaching and care.

Recommendation 4: *The department will need to work with its partners in the hospital system to develop alternative staffing models to support inpatients and the training program.*

Recommendation 5: *The department should continue to work diligently to make the implementation of CBD as seamless and streamlined as possible.*

Recommendation 6: *Because point of care ultrasound is a core competency for all internists in the future, the curriculum in this regard should be enhanced and expanded.*

Recommendation 7: *Attending presence in the evenings should be evaluated across the inpatient services to ensure that teaching and care is optimized.*

C. Continuing Education

The DOM continues to contribute in the area of Continuing Medical Education and should be complemented for the quality of its offerings.

D. Quality Improvement

The DOM has made a significant contribution through the highly successful Centre for Quality Improvement and Patient Safety and the Vice Chair for Quality and Safety. There are currently several Clinician Quality and Innovation scholars within the Department who have taken advantage of advanced training in this domain, including the collaborative UT Masters program and/or the Co-learning Curriculum for QI for faculty and trainees. The University and Department have identified this as a unique career track. Department faculty have made unique educational and scholarly contributions in this area that have been disseminated to other Departments and received international attention.

The reviewers felt that the Department's leadership in this innovative initiative that addresses many of the important challenges faced by clinicians seeking careers in quality and safety should be applauded. The progress that has been made in the last 5 years has been stunning. In particular, the efforts to outline criteria for promotion in this track should be highlighted. Uncertainty about faculty promotion and advancement beyond the junior stages exists and reflects the rapid recent growth in this area and the preponderance of relatively junior faculty. We heard that there is some tension between the needs of the health system and the academic needs of the faculty in regard to the selection of QI projects. Finally, the lack of an integrated EMR and a special track for QI research ethics were a significant barrier to CQI research (see below).

Recommendation 8: Consider a special track for QI research ethics to be developed as part of the ethics harmonization process.

Recommendation 9: Continue to invest in mentorship and advancement of junior faculty with a QI focus in partnership with the hospital leadership.

RESEARCH

The research program of the DOM spans the spectrum of biomedical investigation encompassing all 4 pillars of the CIHR. Research is conducted on campus, in the Research Institutes affiliated with each of the Hospitals and in the Hospitals themselves. The research programs are excellent when assessed by funding, the degree of innovation, and the quality of the publications. Currently, there are ~197 Clinician-Scientists (>75% effort devoted to research), ~178 Clinician-Investigators (50% effort devoted to research) and 54 clinicians in quality and innovation. In 2017 (the most recent year for which data are available), department research funding totaled \$185.448 million, an increase from \$160.613 million five years ago.

These are primarily operating funds since the Canadian Institutes of Health Research does not allow funding of scientists' salaries. In the last five years, the DOM has generated 23,607 peer-reviewed publications (articles, editorials, proceeding papers and reviews) and 245,770 citations. DOM faculty members are key leaders in many institutional initiatives and the department has encouraged its faculty to be entrepreneurial in seeking funding from industry, foundations, and philanthropic support. Faculty members in the DOM collaborate extensively with other divisions, departments and universities.

The individual hospitals and their associated research institutes retain substantial administrative and financial control over the research efforts of hospital and DOM faculty. Nonetheless the department has done an excellent job of coordinating the research efforts of the faculty across all sites. The reviewers appreciated the ongoing efforts to foster communication and interaction. The Merit Review process consistently and transparently evaluate the efforts of individuals who are receiving funds from the DOM and should be commended.

Concern was expressed in the last review that the Clinician-Investigators (50% effort devoted to research) track is not a viable option for the individuals in this track. It takes considerable time and effort to excel at both clinical work and investigation. We heard uniformly that this track is valued by the hospitals and the department, felt to be very productive, and should not be eliminated. However, support for CI's (grant facilitation, ethics facilitation, statistical support, financial management, etc.) was felt to be uneven and inadequate at some sites.

The DOM Clinician Scientist Training Program (CSTP) exists to provide funding for selected clinical trainees to pursue graduate training leading to an MS or PhD at the University of Toronto. Considerable efforts have been made to ensure that these clinical trainees receive appropriate support and mentoring. The trainees expressed very positive opinions about their training and the efforts of the DOM. The trainees dedicate 80% of time for research and most pursue some clinical practice. In regard to the latter, the department could be more proactive in ensuring clinical placements for these individuals, in part to maintain their clinical skills and in part to help them financially. The numbers of women in this program appears to be declining. There is concern about the long duration of training and their high debt load. The trainees are appropriately concerned about the diminishing funding for new investigators, especially since many external awards in Canada have stopped permanently. They are also worried about the lack of commitment from the institution upon completion of their training, especially when they have fulfilled all of the milestones that were set for them.

The DOM has appropriate and broad opportunities for trainees (students, residents, and fellows) to participate in research. The Reviewers heard on several occasions that there still remained a gap between the numbers of basic and clinical research trainees. The department is the major supplier of clinician scientists in the country. Attention needs to be given to the training of basic clinician scientists in particular and configurations that allow continuous exposure to basic research during the core

residency, such as a hemidoc program, should be considered. In addition, ongoing flexibility in the junior faculty review for clinician scientists with basic science programs should be supported.

A number of other issues have been identified. Harmonization of ethics and contracts between sites remains an issue. While the dean assured us that the former is about to be fixed, the latter remains to be solved. We were very impressed with the new collaboration that has been developed between the DOM and computer science. Efforts to develop similar relationships with other basic science departments on campus should be considered. The department has an excellent mentorship program with representatives in each division. Contributions to mentorship should be recognized as part of the promotions package at the level of the faculty. Trainees and junior investigators found it challenging to identify potential mentors or collaborators outside of their Division or Hospital. Consideration should be given for making sure that junior scientific faculty have mentors outside their own division or even department, in addition to mentors in their own divisions. Finally, it was suggested that the DOM should consider a reverse mentorship program. Junior faculty could be quite helpful to senior faculty in regard to the use of social media, adaptation to electronic health records, and introduction to point of care ultrasound, to name a few.

Recommendation 10: *The department should work with relevant stakeholders to ensure that Clinician Investigators are receiving appropriate support for their research at all sites.*

Recommendation 11: *The department could be more proactive in ensuring clinical placements for trainees in the clinician scientist program.*

Recommendation 12: *Efforts should continue to be made to recruit more women into the CSTP.*

Recommendation 13: *The department and the associated institutions should consider making a commitment of a faculty position to clinician scientist trainees while they are still in the program, especially when they have fulfilled all of the milestones that were set for them.*

Recommendation 14: *Attention needs to be given to the pipeline of basic clinician scientists and configurations that allow continuous exposure to research during the core residency, such as a hemidoc program, should be considered.*

Recommendation 15: *Harmonization of ethics and contracts between sites remains an issue. While the former is about to be fixed, the latter needs to be addressed expeditiously.*

Recommendation 16: *Efforts to develop relationships similar to that with computer science with other basic science departments on campus should be considered.*

Recommendation 17: *Contributions to mentorship should be recognized as part of the promotions package at the level of the faculty.*

Recommendation 18: *Consideration should be given to make sure that junior scientific faculty have mentors outside their own division or even department, in addition to mentors in their own divisions.*

Recommendation 19: *The DOM should consider a reverse mentorship program for senior faculty by junior faculty.*

RELATIONSHIPS

The members of other Departments that we met expressed very positive comments about DOM. There was considerable respect for the accomplishments and leadership of Dr. Hawker. The DOM is a large and complex organization and the relationship between its related University/Faculty Departments, Hospitals and their associated research institutes is complicated. The substantial growth of the Department in the last several years has been primarily because the collective leadership has worked hard to develop collaborative, mutually supportive working relationships. Dr. Hawker is co chair of the Toronto Academic Health Sciences Network (TAHSN) which ensures that the department will continue to play a major role in the integration of academic activities between the sites.

FACULTY

The DOM is a large department with more than 1000 full-time and part-time faculty. The Department's faculty members are organized into Hospital Departments and specialty/subspecialty Divisions. A Physician-in-Chief (PIC), who is appointed jointly by the Hospital and the University, leads each Hospital Department. The PIC is responsible for the delivery of academic and clinical programs within the Hospital. The PIC's have access to academic funds made available through the hospital practice plan. The Practice Plans use financial incentives to reward successful performance in clinical and academic activities. The Department Chair is responsible for the coordination and delivery of the academic (education and research) programs across the Hospitals (i.e., the University).

Close working relationships between the University and the Hospital Departments of Medicine are key to the success of the Department. The job description for a faculty member is developed jointly by the PIC, DDD and Department Chair and includes the distribution of time between clinical care, education, research and administration. Job descriptions also determine the level of financial support provided by the practice plans to faculty members. The DOM appears to have a robust academic planning process and mentoring program designed to ensure success of newly appointed faculty members.

The faculty in the DOM is aging and many are working beyond the normal age of retirement. The department recognizes the importance of career transitions and is developing a number of processes to address this issue. Consideration should be given to a better performance management system to be applied at all ages that may assist with some of these difficult discussions

Recommendation 20: *The DOM should continue its efforts to develop a robust process for facilitating career transitions.*

Recommendation 21: *Consideration should be given to developing a better performance management system to be applied at all ages that may assist with some of these difficult discussions.*

EQUITY AND DIVERSITY

Currently, women represent 36 % of the full-time faculty and as of recently approximately 50% of leadership positions. Under Dr. Hawker's direction the department has made remarkable strides in educating all stakeholders about the importance of equity and addressing the issues that were identified at the last review. Efforts need to continue, particularly to ensure the recruitment of more female faculty and their progress through the ranks.

The Faculty of Medicine of the University of Toronto is committed to the recruitment and retention of students, faculty, and staff that reflect the diversity of Canadian society (in particular, indigenous Peoples of Canada; people of African ancestry and the economically disadvantaged). The Department is collecting data on diversity in the ranks and will be moving forward with a task force to address this issue in the near future.

Recommendation 22: *Continue to pursue the equity program with a focus on increasing the number of women in the department and their progress through the ranks.*

Recommendation 23: *Continue to collect data on diversity and move forward with the task force expeditiously.*

CHAIR'S OFFICE

The DOM Chair is supported in her role by four outstanding Vice-Chairs. The DOM is governed by an Executive Committee which meets monthly and includes the Chair, Vice Chairs, PICs, DDDs and leaders of key educational programs. The Executive Committee is responsible for approving major policies and procedures for the Department. There are a number of other standing committees. In parallel, each Division has an Executive Committee structure led by the DDD and includes the Division Head in that specialty from each affiliated hospital, the Head of the training

program in the specialty a mentoring director and selected other members as determined by the DDD. The department has recruited outstanding new division directors including clinician educators. The benefit of this diversity is already apparent from the interactions among the chiefs. Because the scientific mission of the Department of Medicine is often the most fragile of its missions, attention will need to be paid to ensure that the research productivity and impact of the Department continues in this new model. New Division Directors report strong mentorship and support which will facilitate this effort.

Recommendation 24: *Continue to bolster cross-divisional research efforts and investment to ensure the future success of the research enterprise across all Divisions.*

ORGANIZATIONAL, FINANCIAL RESOURCES AND OTHER

The DOM is generally well resourced. The DOM's annual budget is \$16.7M. The largest proportion of funding comes from the University's operating budget. Interestingly, a percentage of funding comes from tuition revenues from the foreign medical graduates enrolled in the residency and fellowship programs and these funds have been put at risk by the withdrawal of the Saudi trainees. The department is aggressively pursuing a fundraising strategy to address this shortfall. Further fundraising training for selected faculty may assist in achieving this goal. The development office, institutional and hospital leaders should consider additional strategies for generating endowment support that improves the whole, while sustaining the needs of the individual Hospitals.

There are no funds from the practice plan/clinical earnings to the DOM. The practice plan, including MOHLTC Alternate Funding Plan dollars, funds the base salary support for faculty. While the funds from the MOH have been a godsend to the department, the DOM should consider applying for an Alberta or Queen's style AFP that will provide comprehensive funding for all faculty, avoid the haphazard nature of the current funding model and allow the department to sustain and expand its excellence.

The central departmental office is spread over multiple sites. Plans have been made to consolidate the activity under one roof, which would significantly enhance the efficiency and effectiveness of the enterprise. These plans should be enacted expeditiously to optimize the activities of the department.

IT support for the postgraduate program is inadequate. Given the size and complexity of the enterprise and the looming specter of competency by design, this should be remedied as soon as possible.

While this is not the purview of the department or the faculty, it appears that the various institutions are taking an independent approach to the establishment of EMR's. An integrated approach would have significant benefits for clinical care, clinical research and the training program because the trainees rotate frequently between multiple sites.

The department has embarked on a process to involve patients in all aspects of the mission, not just ethical issues and the conduct of research. While this has proven difficult to fully implement it is a laudable goal and should continue to be pursued with vigor.

Recommendation 25: *The department should aggressively pursue other sources of funding to replace high risk revenue sources such as tuition fees from Saudi Residents.*

Recommendation 26: *The department should consider further fundraising training for selected faculty.*

Recommendation 27: *The DOM should consider applying for an Alberta or Queen's style AFP.*

Recommendation 28: *The faculty leadership should make every effort to ensure that the departmental staff are moved into consolidated space as soon as possible, since this will maximize efficiency and effectiveness.*

Recommendation 29: *The faculty should consider increased IT support for the large postgraduate programs of the department, particularly with the implementation of competency by design.*

Recommendation 30: *The health system should consider adopting an integrated electronic medical record for all the teaching hospitals in Toronto, as this would have significant benefits for clinical care, clinical research and the training program.*

Recommendation 31: *The department should continue its plans to involve patient advisors in all aspects of the mission.*

LONG-RANGE PLANNING ACTIVITIES

The DOM has undergone a significant strategic planning initiative with the appointment of the new chair. The Vision of the Department is “We meaningfully impact health through international leadership in education, research and the translation of new knowledge into better care and health outcomes”. The mission is “Through the discovery, application, translation and communication of knowledge, we prepare future physician leaders, contribute to our communities and improve the health and health care experiences of individuals and populations”. The strategic plan identified a number of priorities including engaging the perspectives of patients and families, promotion of equity, diversity and professionalism, social accountability, alignment of training to meet future needs, promoting knowledge generation and translation, recognizing the contributions of the members, enhancing mentorship and raising funds. The strategic planning exercise was widely endorsed and appreciated by many. Equally, most department members were well aware of the strategic initiatives to achieve these goals and how these were being accomplished. The Reviewers were impressed with the detailed nature of the strategic plan and progress that has been achieved in regard to many of the goals.

NATIONAL AND INTERNATIONAL COMPARISONS

The DOM at the University of Toronto is one of the largest in North America. The DOM is a research-intensive department. This is reflected in the research programs that span basic science, clinical translational research, clinical epidemiology, and quality improvement. The operating funds in grants (\$185.448 million) compares favorably to top level public institutions in the US. For example, excluding Harvard institutions, the top three NIH funded Departments of Internal Medicine for FY 2018 have NIH funding levels of 197, 186 and 165 million dollars. In the last 5 years, the scholarly production of the DOM has been outstanding. The Department is a major educator at all levels – UME, GME and CME. The success of the DOM’s educational programs has been recognized by all major reviews and accrediting agencies. The Department is highly regarded by the most qualified candidates for academic positions in the country and continues to recruit talented leaders from peer institutions. In summary, we would rank the department the best in Canada by an order of magnitude, and in the top ten departments in North America.

CONCLUSIONS

In summary, the DOM is exceptional and should be complemented on its ongoing efforts to address the multiple aspects of its mission. In particular, we wish to comment on Dr. Hawker’s outstanding leadership. In the opinion of one of us she has accomplished more in a short time than any chair of a DOM in Canada in recent memory, and this is especially notable in view of the size and complexity of the organization in which she works.

Respectfully Submitted By
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