TEMERTY FACULTY OF MEDICINE
UNIVERSITY OF TORONTO

EXTERNAL REVIEW REPORT FORM

CLINICAL DEPARTMENT UNDER REVIEW	Dept. of Ophthalmology & Vision Sciences
COMMISSIONING OFFICER	Professor Trevor Young, Dean
REVIEW DATES	January 24-25, 2022

Reviewers are asked to provide a report that satisfies the following:

- *Identifies and commends the Clinical Department's notably strong and creative attributes*
- *Describes the Clinical Department's respective strengths, areas for improvement, and opportunities for enhancement*
- *Recommends specific steps to be taken to improve the Clinical Department, distinguishing between those the Clinical Department can itself take and those that require external action*
- *Recognizes the institution's autonomy to determine priorities for funding, space, and faculty allocation*
- *Respects the confidentiality required for all aspects of the review process*
- *Addresses all elements of the terms of reference*

PREVIOUS EXTERNAL REVIEW *[Indicate if, and how, the Clinical Department addressed the findings of the previous review.]*

The Department of Ophthalmology and Visual Sciences (DOVS) at the University of Toronto has made significant progress since the last review in 2017. Long considered as one of the premier departments of ophthalmology in Canada, the DOVS continues to evolve, leading the country in a number of notable dimensions, particularly in the areas of education, training, clinical practice, and research. Under the leadership of the current chair, Dr. El-Defrawy, the DOVS has exceeded expectations in all components of its mission, setting the stage for the next chair to take the DOVS to the next level of departmental achievements. Specifically, the recommendations from the previous review were the following:

1. Centralization of the IRB amongst all the clinical sites.
2. Streamlined centralized research administration to better manage pre and post award activities.
3. Continue to develop mentoring programs at all levels.
4. Expand the capacity to recruit clinician scientists into the department.
5. Expand the number of research endowed chairs.6. Increase research funding through centralized philanthropy and technology transfer revenue.
7. Improve the information technology infrastructure.

Of the above items, the Department has made observable progress on six of the seven recommendations. Additional comments regarding these items will be covered in the remaining text of the review. The reviewers did not discuss with the DOVS the progress which may have been made on item 7, improve the information technology infrastructure.

The reviewers outlined their key observations using the outline established by the Dean and her colleagues. Essentially the key categories include the following: Education, Faculty/Research, Relationships, Governance, Financial Structure, Long Range Planning Challenges, National and International Comparators, and Conclusions. Any redundancy that is observable throughout the document, not only underscores the importance of these points, but also reflects the integration of initiatives that is required to take the DOVS to its next chapter of its remarkable journey.

1. Education

A. UNDERGRADUATE MEDICAL EDUCATION

- **Please comment on the size, scope, quality, and priority assigned to undergraduate medical education.**

The DOVS has significantly improved its undergraduate education program since the 2017 review. In pre-clerkship phase, the lecturers now use a flipped classroom approach (with prerequisite reading and case-based modules). This maximizes the utility of the small allocation of only six curriculum hours and works well. The clerkship phase builds on the curriculum with a well-designed integrated clinical experience. A practical manual of common ophthalmological conditions has set a standard for medical students that they would like to see from on other clinical rotations. The consistency of teaching in the clinic has

improved, however, physical space is a constant constraint given the concurrent clinical pressures. Mentors are evaluated by the students and weak teachers are flagged for early detection and remediation. The evaluation of the one-week block is impressively high and the experience is unsurpassed by any Canadian Medical School.

Challenges:

Availability of adequate clinic space to teach is a constant issue. The Department would have difficulty finding clinics that could accommodate the additional learners. The lack of clinical space limits students who have an interest in pursuing ophthalmology to arrange elective time. Busy clinics impact the teaching students receive at some sites, and it was noted that it is sometimes difficult to engage faculty to teach. The assignment of UME site leaders has improved the program; however, the reviewers were not able to interview the site leaders to probe their perspectives. The administrative efforts required to coordinate, organize, schedule, support, and collate assessments and evaluation from 270 students is formidable. Presently, administrative support to the undergraduate, residency, and continuing professional development programs is very limited. The scale of these continually developing and expanding programs necessitates increased administrative resources.

Opportunities:

The Canadian Ophthalmology Society has recently developed a National Curriculum to standardize what Canadian medical students are being taught. This curriculum is linked to a rich resource of teaching tools and is continually monitored by a panel of educational and content experts to ensure it remains current. A desk audit documenting the support that is needed to administer this UME program will be important to ensure the sustainability and continued quality of the UME program.

B. POSTGRADUATE MEDICAL EDUCATION

- **Please comment on the size, scope, quality, and priorities of postgraduate education programs.**
- **Do current programs offer adequate training in different settings?**

The residency training program is perhaps the largest point of pride in a highly productive department. It has continually improved over the past 10 years (refer to the list of changes mentioned in the 2017 review) and is now may be the most comprehensive and well-designed program in the country. It is well thought of nationally and internationally as evidenced by the ease with which the graduates have secured highly competitive jobs and fellowship positions. The residents and faculty we spoke with were uniformly positive about the program. Specific highlights that were mentioned include:

- Royal College examination success rate is 100% pass for Canadian Medical Graduates in the past 10 years and the training program is fully accredited.
- Effective efforts (resources, question bank subscriptions) to improve OKAP scores (aggregate score is now above the 80th percentile.)
- Highly desirable program for CaRMS applicants: allows the program to match the best and the brightest candidates
- Education at all levels (undergraduate, postgraduate, fellowship) is prioritized. This culture is noticed by learners and seems to be a big factor in why students chose the program.
- There is a highly engaged and supportive Chair, Program Director, Associate Program Director and faculty who are all committed to continual improvement and development of the program (wellness, mentoring, funding for CIP program, surgical simulation, research support). One senior faculty member described the Department's greatest strength being the recent recruits who are "bright energetic and inquisitive" and have accelerated the quality of teaching in the last 10 years.
- A residency training program committee that has balanced representation and implements timely and effective policies.
- Residents are collegial and supportive – PGY1s are included in most of the home program activities.
- Excellence in clinical and didactic teaching in all subspecialties (with multiple mentors in all subspecialties).
- A large number and variety of education events (Grand rounds, Sub-specialty rounds, seminars, high quality CPD events, National TORIC course).
- An exceptional large volume of surgical (e.g. some residents perform 1000 cataract cases) and clinic experience (particularly impressive given the constraints of the pandemic).
- The benefits of an independent surgical facility (Kensington Eye Institute) is that it provides a home base for the program. The addition of a fifth operating room and the increase in the number of lanes at KEI facilitates the access of residents to surgical and nonsurgical cases.
- A funded ($2000/resident) Global Health program offers residents a wide range of global health opportunities during their training.
- Newly instituted resident mentorship program.
- Financial support for their first Clinical Investigator Program participant (concurrent Master of Epidemiology).
- Flexibility and rapid pivot to the circumstances imposed by the pandemic.

Challenges:

The transition to Competence by Design (CBD) will significantly add to the administrative load required to support this large resident program. As mentioned above the work required to implement new assessment and evaluation systems collate results and coordinate monitoring and feedback meetings threatens to overwhelm the current amount of support. This support will be greatest during the initial phases of the implementation that is scheduled to occur with the next two years.

The delivery of multi-site teleconferencing identified in the last review has been implemented. While laudable, it has increased the amount of technical and administrative support required to ensure these sessions are being delivered to all sites.

Opportunities:

The residency program is well positioned to leverage existing programs in global health and health equity to educate U of T residents and keep them at the forefront of implementation science. Allocating one of the positions within the large residency program for the Clinician Investigator Program might be an excellent way to leverage the recent investments in research institutes and Clinician Investigators.

C. FELLOWSHIP MEDICAL EDUCATION

- Please comment on the size, scope, quality, and priority assigned to fellowship medical education.

The DOVS boasts the largest number (11 programs, 35 fellows) of clinical and research fellowships in the country. In some instances, the fellowship programs are also the largest in North America. The programs attract highly trained international trainees and are widely recognized for their excellence. Fellowship opportunities exist in all of the subspecialties, including the smaller niche subspecialties such as global health, ocular oncology, and low vision rehabilitation. Fellows are frequently involved in resident teaching and research. Dr. Nav Nijhawan is an effective leader, in his role of Fellowship Director, and has begun to review each fellowship program to ensure educational quality, sustainability, safety and implementation of EDI initiatives.

Challenges:

The reviewers heard that some fellows experienced suboptimal levels of supervision from their mentors and one described micro-aggressions occurring in the clinical setting. There is a clear need for a reporting structure that allows fellows to provide immediate feedback to the Fellowship Director in a way that ensures there will be no repercussions. The reviewers noted that a **GuidelineforManagingLearnerMistreatment** already exists and should form the basis for this reporting structure.

Another universal challenge is the provision of funding for fellows at an appropriate level of compensation (recently established minimum of $55,000/year). While some fellows are sponsored by industry, this model does not work well for all sub-specialties and care must be taken to ensure the funds are unrestricted in nature.

Opportunities

The reviewers noted that there is an emerging possibility and need for a fellowship in Global Health and Health Equity.

D. CONTINUING EDUCATION + QUALITY IMPROVEMENT

- **Please comment on the size, scope, quality, and priorities of continuing education programs.**

The DOVS is to be commended for its ambitious slate of high-quality continuing education programming - Walter Wright, Jack Crawford, cataract Course, TORIC, Grand Rounds and Subspecialty Rounds. These rounds are accessed by learners from across the country and serve to further raise the profile and reputation of the Department. Furthermore, numerous faculty have assumed leadership roles in International and National scientific societies.

Quality Improvement (QI) efforts are led by Vice Chair Clinical and the appointed Director of QI. They undertake a wide range of QI initiatives that are supported by two faculty who, impressively, have a Master of QI implementation. Residents are routinely involved in both QI teaching and QI investigation projects. An untapped opportunity exists in applying QI metrics to measure the effects of implementing QI initiatives and reporting these to the respective organizations and stakeholders.

E. OTHER EDUCATIONAL ACTIVITIES

- **Describe briefly. (e.g., leadership, faculty development)**

Since the last review, the DOVS has implemented a system for Faculty Mentoring (Residency Mentoring continues to exist and is well received). While the on-boarding of new recruits and mentoring them through the early stages of an academic career is important, mentoring and supporting mid-career faculty (promotion, leadership, skill development) and late- career faculty (transitioning to retirement) is equally important and identified as areas in need of some improvement. An identified career development officer (provided by the University) might be an ideal resource support faculty at of all stages with information and guidance for their career.

The DOVS provides an important leadership role in global education by assisting the University of West Indies with its ophthalmology training program and efforts to build capacity locally.

The DOVS has taken on a national leadership role in educating all Departments of Ophthalmology about the principles of unconscious bias and other important principles imbedded in inclusion, diversity, and equity initiatives.

F. LEARNER WELLBING

- **Describe the initiatives taken to promote learner wellbeing and resiliency in the educational environment.**

The pandemic has taken its toll on physician and learner wellness. Arising from this acute need, the DOVS has implemented two initiatives to try and improve wellness. 'Wellness Moments" are presented ahead of faculty wide zoom gatherings (e.g. Virtual Grand Rounds) to briefly share and highlight wellness ideas. There is also an initiative for volunteer participation in 5-minute mediations which is also part of a carefully designed study to measure the effects of this novel wellness intervention.

2. Faculty / Research

- **Please comment on the scope, quality, and relevance of research activities.**
- **Are the research activities appropriate for the residents and fellows in the Clinical Department?**
- **Have opportunities for recruitment of young investigators been identified?**
- **Are the levels of research activities (e.g., funding and peer-reviewed publications) appropriate relative to national and international comparators?**
- **Please comment on the diverse faculty complement plan.**
- **Address the appropriateness and effectiveness of the Clinical Department's use of existing human resources.**
  [In making this assessment, reviewers must recognize the institution's autonomy in determining priorities for funding, space, and faculty allocation.]

As noted in the Self Report, the Department is highly productive given the large number of peer reviewed publications noted, ranging from 118 in 2013-14 to 355 in 2020-21. Residents, fellows, and faculty have authored more than 1400 publications in the last 8 years and have amassed 67 million dollars in the last 10 years. Given the level of academic activity based on the work of 171 faculty and 30 residents managing a busy clinical load across several sites, this output is impressive. There have been 28 senior promotions, 11 of which have been to the level of Professor, since the last review indicates that curation of the careers of faculty is being effectively managed. There are 9 endowed chairs within the Department.

The scope of research topics covered reflects the depth of subspecialty representation across the *5* teaching hospitals and affiliated practices. Both residents and fellows are actively involved in research, engaging in projects in most cases beyond the minimal required single project during the entire residency period. There is also rich engagement of medical students, expanding the research aspirations of potential future applicants to the residency program.

The Department maintains an interest in having at least one clinician scientist at each of the hospital sites. The Department has been successful in recruiting three basic scientists and two clinician scientists since the last review in partnership with the Donald K. Johnson Eye Institute and the Krembil Research Institute.

Areas of Opportunity:

A. With the recruitment of a new chair, it will be important to ensure alignment of the interests and strengths of the department with the new strategic plan of the DOVS and the Temerty School of Medicine for the next *5* years. However, as the selection process unfolds, a departmental research strategic planning process can be initiated which engages key stakeholders, including but not limited to the Donald K. Johnson Eye Institute, Krembil Research Institute, members of the Executive committee and subspecialists across the Department. Currently, the research focus is primarily focused in the subspecialty of retina, and thus, the Department is missing the opportunity to grow efforts in other areas such as cornea,

glaucoma, and oculoplastics. Moreover, given that current strategic plan for the Temerty School of Medicine has, as one of its three pillars and associated investment of resources, a focus on inclusion, diversity, and equity, by strategically planning for the future, additional opportunities for the Department can be found in growing expertise in health equity research, population health, and health services. These areas of interest offer the added advantage of attracting diverse candidates at every stage of professional development, ranging from undergraduate medical students who may ultimately become residents to fellows who will potentially stay on as junior faculty. Inclusive engagement is however important. The following confidential comment underscores the dominance of retina: "The over-representation of retinal specialists on the executive committee of the department is problematic from multiple points of view, with strong male dominance. The lack of representation of most other disciplines in ophthalmology at this important decision-making level is a barrier to understanding overarching departmental needs and the capacity to discuss and address them."

B. The Department has hired 3 clinician scientists since the last review however it continues to aspire to recruit at least one clinician scientist at each of the five teaching hospitals and clinician scientists within each specialty. The primary funding for the aspiration has been largely driven by the practice plans, each of which has its own limitations to free up the necessary funds to support this objective. Increasing expenses to support the infrastructure for clinical ophthalmology, the interest and the leadership ability of the respective hospital chief to advocate for this objective, and the interest of participating clinicians to support local research are among several factors which will determine the feasibility of hiring a clinician scientist at any given site. The dream of a centralized practice plan for the DOVS has not yet materialized and will likely not occur in the near future. Either additional pathways for funding should be explored or strategies to hold hospital chiefs accountable for seeking additional ways to support future clinician scientists should be sought, particularly given the expense of not only recruitment but sustainability of research efforts of those scientists who are hired.

C. Fully leveraging available mechanisms to support efforts to increase the number of clinician scientists such as Clinical Investigator Program should be considered. In further conversation with the Chair, this formal mechanism has only been tapped once in the last decade; it should be noted there are occasional residents who have opted into a graduate program once accepted. However, other departments have used this mechanism more formally, identifying and accepting individuals as residents who are committed to an academic career. Developing future clinician scientists who train as residents and then return for junior faculty positions appears to be an effective mechanism that has served the Department well. Those tasked with choosing residents may wish to be proactive in using the Clinical Investigator Program, considering a resident slot every year or every other year in the future.

D. The Department has expanded the KEI to include a Clinical Research Unit since the last review. Additional efforts have been made to strengthen the research infrastructure. Formalizing the new Donald K. Johnson Eye Institute is an important starting point to bring together basic and clinical research with the Department. Centralization of the IRB processes, pre and post award review have been initiated since the last review and the infrastructure established however, more work needs to be done given continued delays in the approval process. However, given the challenges now experienced with the current workload, additional staff may be needed to fully realize the necessary efficiency required to support efforts to centralize research infrastructure.

E. The Chair and the Faculty are committed to the diversification of the faculty. The significant number of women residents currently matriculating bodes well for continued growth of the number of women who may choose to remain or return as faculty. However, there are still apparent barriers to the advancement of women as leaders in the Department with only 3 of the 13 members of the Executive Committee who are women and none of the Hospital Chiefs. Intentional succession planning with professional development of future leaders can ensure that the representation of women will improve in the future. If the next chair of this Department is a woman, such an appointment will be effective in messaging to the community the value of women leaders in ophthalmology. It should be noted that the Hospital for Sick Children has had two women leaders in the past, however currently there is a clear apparent paucity of visible women leaders in this Department. Furthermore, there are areas of the department that can benefit from the engagement of more men in the department, such as the leadership of wellness and inclusion, diversity, and equity initiatives.

3. Relationships

- **Please comment on the strength of the morale of the faculty, learners, and staff.**
- **Please comment on the initiatives undertaken to enhance a sense of an inclusive community in the Department.**
- **Please comment on the scope and nature of the Clinical Department's relationships with cognate Departments/EDUs at the University of Toronto, affiliated hospitals, and external government, academic, and professional organizations.**
- **Address the extent to which the Clinical Department has developed or sustained fruitful partnerships with other universities and organizations in order to foster research, creative professional activities, and to deliver teaching programs.**
- **Please comment on the social impact of the Clinical Department in terms of outreach—locally, nationally, and internationally.**

The morale of the DOVS is high, with the majority of the opinions expressed described as very positive, particularly in support of the Department Chair. He has been celebrated as well as the "consummate teacher, and … that he gets more personal satisfaction from mentoring learners than from anything else that he does." (Page 81, Self-Study). He has developed a surgical teaching evaluation instrument and connected access to the OR to teaching effectiveness. This process is critically important to the effectiveness of teaching surgery in ophthalmology.

At the core of the mission of the DOVS is mentoring, as stated: "Educating and mentoring the next generation of clinicians, teachers, and scientists." Mentoring of faculty, staff, and trainees is informal, without any specific organized approach to linking mentors and mentees, at any stage of professional development. Since the last review, a position of Vice Chair, Faculty Development, Global Health, and Equity, Diversity, and Inclusion has been developed. Sessions focused on mindfulness, stress, meditation, and burnout have been conducted in the Department. Annual reviews are conducted by the chair and there is an annual town hall meeting to discuss the requirements for promotion and the composition of the dossier.

The Chair has an effective relationship with cognate chairs and is held in high regard by his peers. It is unclear however how much engagement exists between members of the DOVS and the Temerty Faculty of Medicine. When the reviewers asked if there had been any participation in the Temerty Faculty of Medicine strategic planning process, there was no indication that anyone from the DOVS had been involved.

Members of the DOVS are actively engaged in professional societies such as the Canadian Ophthalmological Society and the World Glaucoma Association, serving as officers and receiving several awards across the Department. Community outreach is best exemplified by the work of Dr. Myrna Lichter, who has focused her career on the care of the urban homeless, the urban indigenous and the urban marginalized community. Her work is informing the work of Dr. Helen Dimaras, who is focused on global health and using implementation science to create impact. Dr. Dimaras was appointed Director of Global Health in 2019. Internationally, the DOVS has a partnership with the University of West Indies and has programs with Project Orbis, Uganda, Ghana, and Kenya. Since 2015, the DOVS has three out of four strategic objectives, specifically establishing criteria for partnership engagement, set metrics for demonstrating impact, and establishing a Chair in Global Health.

Opportunities:

The communication between the leads of the subspecialties appears and the Executive Committee appears to be spotty, with some specialists indicating that there is little to no feedback related to issues presented to the Executive Committee on their behalf. Hospital Chiefs also noted limited time to present their issues at the Executive Committee and insufficient opportunity to problem solve within their own group while tapping into the wisdom of the Chair and other senior leaders in the DOVS.

A. Better communication and alignment of the Promotions Committee, Appointments Committee and Faculty Development is needed.

B. Better communication between Research Vice-Chairs with researchers based at various hospitals-research institutes - A Research committee with representation from each of the hospital research institutes and a Director of Resident Research would improve the communication.

C. A more formal mentoring structure with accountability of mentors and mentees can strengthen efforts to advance the careers of trainees and junior faculty. Actively engaging senior faculty to assume roles as sponsors of junior faculty and trainees can further accelerate career growth.

D. Currently the Vice Chair of Faculty Development also is responsible for wellness and EDI. Such concentration of key functions in one individual dilutes one's ability to impact in any one of these key areas. Disaggregating these functions will decompress this work of this one individual who also happens to be a junior faculty member.

   Expanding the scope of faculty development to consider the arc of an entire career including retirement, provides an opportunity to reduce the uncertainty that individual faculty members may have at every stage of his/her/their career. There does not appear to be formal succession planning, not only related to administrative roles but also the assumption of clinical responsibilities, when faculty retire. In one instance, it was noted that the practice of a retiring faculty member was transitioned with either little planning or input from the retiring faculty member.

E. As noted previously, gender equity is limited in the DOVS, with only 3 out of 13 members of the Executive Committee who self-identify as women and none of the Hospital Chiefs. The lack of equitable representation dampens the morale of some members of the Department. Given the significant proportion of women residents and the inherent value of ensuring the existence of a diverse cadre of role models, more equitable distribution of leadership positions should be a priority.

4. Organizational + Financial Structure

- **Please comment on the appropriateness and effectiveness of the Clinical Department's organizational and financial structure, and its use of existing human, physical, and financial resources in delivering its programs.**
  [In making this assessment, reviewers must recognize the institution's autonomy in determining priorities for funding, space, and faculty allocation.]
- **In the broadest sense, how well has the Clinical Department managed resource allocation, including space and infrastructure support?**
- **Please comment on opportunities for new revenue generation.**

The "hub and spoke model" mentioned in the last review continues to function well. The "hub" of the Department resides at KEI. One faculty member suggested that the "Chair and administrative staff should be moved to the Temerty Faculty of Medicine to provide a neutral base to avoid unintended bias that may favour resource allocation amongst hospitals". The reviewers felt that the current structure manages to avoid any preferential allocation of resources and allows an appropriate check and balance through the executive. The Department executive has been re-organized to provide an efficient way of representing all clinical sites and academic interests.

The teaching hospitals which function as the "spokes" operate with autonomy and have geographic fulltime (GFT) members that must conduct 80% of their clinical time at that institution. We heard that many fail to reach this requirement - frequently because of insufficient clinic resources. Other members are considered part time because they divide their time between two (or more hospitals) and consequently do not meet the 80% threshold for either hospital. Perhaps the concept of an Academic Full Time (AFT) would allow members that spend an aggregate of 80% in academic hospitals to meet the criteria for GFT status (with resources at the GFT level) in at least one of the teaching hospitals.

Governance/Executive Committee

The DOVS is a large department with many ongoing initiatives resulting in many voices and a complex reporting structure. The current organizational structure seems to capture all constituents although there are the Hospital Chiefs who feel their share of time to address issues with the executive is not sufficient. Some faculty feel the communication channels between the executive and faculty should be improved (e.g. the communication between the Vice Chair Clinic and the Clinical Service Chiefs). Despite these areas for improvement, there is unanimous support for the executive model. Many endorsed the model for how it encourages participation and engagement of the faculty. Efforts to enhance communication channels have improved timely dissemination of department news/policy and achievements.

The lack of diversity of the executive membership with respect to gender and subspecialty is a concern. One faculty noted the executive committee positions lack defined terms. Another suggested that the executive might consider utilizing the gallery to increase transparency and communication. Hospital Chiefs requested to reinstate the presenting of Chief reports at the AGM. Finally, following the best practice for governance, a 360 evaluation of the committee's function may be helpful.

Financial Structure:

Department Budget is well managed and follows accepted transparent reporting principles. Each teaching hospital has its own practice plan and while the DOVS has provided the hospital units with guiding principles it seems very hard to have a common practice plan. The percentage of clinical earnings captured by the practice plans vary from 2-9%. The plans are therefore not equally resourced to fund a clinician scientist. Proportional contributions to support common activities of the DOVS could be considered.

Opportunities for revenue generation are limited outside of conventional sources such as practice plans, industry support and philanthropy. While outside of the scope of this review we did hear that CPD events were helpful (critical) sources of revenue for the department but that these have suffered large reductions because of the pandemic. There is a dedicated advancement officer for ophthalmology for major gifts over 25K. Opportunities exist to increase the planned giving for the department (see next section).

Reduction in administrative support budget despite ever increasing administrative tasks many to comply with the UG Medicine and the University (data collection). In addition, the current group of admin support personnel have not had a recent review of the grade for quite some time and feel that they are working beyond their stated grade. So many new or expanded mandates {QI, CBD, EDI, CME Fellowship reviews, committee support, work with advancement, appointments/promotions, communication, social media presence).

The DOVS has an opportunity to apply the University for funding of its internationally recognized work in health equity. This research theme is well aligned with the Faculty's research strategy.

5. Long-Range Planning Challenges

- **Please comment on the vision for the future of the Clinical Department.**
- **Has the Clinical Department clearly articulated a strategic academic plan that is consistent with the University's and Temerty Medicine's academic plans?**
- **Please comment on whether there is consistency with Temerty Medicine's commitment to inclusion, equity, and diversity to attain Excellence Through Equity.**
- **Please comment on the planning for advancement and leadership in approaching alternative sources of revenue, and appropriateness of development/fundraising initiatives.**
- **Please address any space and infrastructure considerations.**
- **Please comment on the management, vision, and leadership challenges in the next 5 years.**

The vision of the DOVS is to be a global leader in vision health by delivering and advancing innovation, integration, and excellence in education research, and clinical practice. The Department's vision and academic initiatives are well aligned with the strategic direction of the Temerty School of Medicine. The Department's strategic initiatives for the next five years include:

- To build on the recent addition of clinician scientists by supporting their work by hiring vision scientists, encouraging the use of (and financially supporting) the Clinician Investigator program and consider the benefits of a strategic planning exercise focused on vision science research in all of the research units across the organization.
- To build on infrastructure benefits that the Kensington Eye Institute have provided the Department. While evaluating the feasibility of expansion options is out of the scope of this review, a number an intriguing suggestions were made to create satellite clinics to capture the market share of eye care services required by the population of the northern portion of GTA. Given that the current infrastructure sites reside in the downtown core, a northern satellite would address demographic diversity and accessibility concerns. All of the Hospital Chiefs expressed concern that the existing clinical footprint in their respective institution was not large enough to host current activity levels including teaching and would not be able to meet any significant growth in the demands for eye care in the near term.
- To work with the five Hospital Chiefs to develop practice plans that adhere to the recently established principles so that resources can be directed to locally performed research and centrally performed administration.
- To advance the increased awareness of EDI principles to the implementation of these principles at all levels of the organization (including a rebalancing of gender and subspecialty representation of the executive council). The reviewers also noted the potential of expanding the EDI mission further to include scholarship activities that have already begun under the leadership of Dr. Lichter who has published widely on implementation science of health equity.
- The reviewers also noted opportunities to for allied health training programs that are critically needed in our country (e.g. an Orthoptist Training Program - that could be delivered by partnering with other institutions using a distributed education model). Related to this initiative is the requirement to address the waning capacity of adult strabismus expertise and resources. The DOVS has the potential to lead the country out of this critical growing gap of eye care.

With respect to planning for advancement, the Department already has an engaged alumni that exceed the average donation level across Clinical Departments. That said, there are significant untapped opportunities to explore a strategic planned giving campaign. The Department hosts a superb annual CME event that is attended by ophthalmologists from across the country. The conference, the Walter Wright Meeting, is a point of pride for its alumni and might serve as an ideal event to increase engagement and financial support from alumni.

With respect to leadership of the Department, many groups expressed concern that finding a leader with requisite for the leadership skills and the energy, dedication and vision of the present Chair would be very difficult task. The need for a Chair who is a skilled communicator, given the scope and size of this department, is readily evident. Both the Hospital Chiefs and the incoming Department Head might benefit from University support for Leadership courses such as the local NEAL Course, Leadership retreats and executive coaching.

6. National + International Comparators

- **Please assess the stature of the Clinical Department compared to others of similar size in national and international universities, including areas of strength and opportunities.**

Nationally, the DOVS at the University of British Columbia may be considered a national comparator, with multiple faculty in all the subspecialties of ophthalmology. There are 12 basic science faculty listed on its website. There are research centers two centers, BC Centre for Epidemiology and International Ophthalmology and a Centre for Macular Research (CMR). Graduate Student and Postdoctoral Fellows positions are available at the CMR. The Department has a full residency program and lists 14 Fellows on its website.

Compared to this department, the DOVS at the University of Toronto appears to have a deeper bench of full-time faculty and greater depth in research.

Internationally, the Massachusetts Eye and Ear Infirmary (MEEI), one of the teaching hospitals of Harvard Medical School has several similarities to the DOVS at the Temerty Faculty of Medicine, University of Toronto. MEEI has 24 residents, 30 clinical fellows and 96 research fellows. MEEI is based in a hospital setting with other affiliated hospitals associated with the primary department. It is not integrated with a School of Medicine, as others in the United States, such as Wilmer Eye Institute, Scheie Eye Institute, and the Kellogg Eye Center at the University of Michigan. This is an important distinction given the benefits that an integrated hospital system has over a free-standing hospital programs, specifically accessing graduate students and basic research collaborations. MEEI in one year acquired 85 million in extramural dollars to support research. Outpatient visits numbered 257,866 last year and 21,729 surgical procedures (including lasers).

Compared to the University of Toronto DOVS at the Temerty Faculty of Medicine, these numbers are 4X greater and l0X greater. Surgery is performed primary at MEEI but also includes other hospital sites. There are 636 physicians and researchers at MEEI, which differs by a factor of 4 compared to University of Toronto. Care is provided at 20 sites in Greater Boston and Providence, RI. The DOVS could scale up its outpatient visits, surgery, and research with more clinical sites such has been the case at KEI; access to patients beyond Metropolitan Toronto given the challenges of navigating this urban environment can be an additional strategic initiative to increase access to patients. Moreover, greater access to research space that is proximate to basic research space with core laboratory facilities has the potential of multiplying the intellectual and innovative capacity of the DOVS.

7. Conclusions

- **Provide an overall assessment of strengths and concerns, and recommendations for future directions.**

The DOVS at the Temerty Faculty of Medicine at the University of Toronto has made extraordinary progress in the last 10 years under the leadership of the current chair. As noted by one of the faculty members: "I think what came out loud and clear from this External Review is the outstanding job that Dr. El-Defrawy has done as Chairperson of the department. He has supported academic pursuits in terms of research, teaching and clinical care. He has fostered an atmosphere of excellent communication and collaboration. The Executive committee meets regularly and deals with all aspects of the functioning of the department. As a result of his leadership, organizational skills, communication, and collaboration, I feel that the department has benefited tremendously."

Strengths:

- Leadership of the chair and engagement of the faculty
- Highly productive faculty with significant growth in research funding and publications
- Outstanding UME and Post graduate programs with strong surgical teaching and access to surgical and non-surgical patients for trainees
- Robust representation across all subspecialties in ophthalmology, providing ample access to excellent teaching for trainees and access to research projects
- Significant philanthropic gifts since the last review, securing funding for the recruitment of clinician scientists and researchers
- Strong support of 5 teaching hospitals, all with ophthalmology presence and varying degrees of commitment and capacity to grow ophthalmology
- Strong partnership with Kensington Eye Institute (KEI) and the opening of an additional operating room and additional lanes
- Access to robust research resources at the Hospital for Sick Children, Donald K. Johnson Eye Institute, and the Krembil Research Institute
- Generally, a well-functioning organizational structure with an Executive Committee, representing key functional areas in addition to the leadership of the 5 teaching hospitals

Recommendations:

- Develop a research strategic plan that engages key stakeholders including subspecialty representation in addition to members of the Executive Committee, hospital chiefs, the Donald K. Johnson Eye Institute, and the Krembil Research Institute.
- Explore the availability of research space at the Temerty Faculty of Medicine, providing access to core laboratories and a critical mass of senior scientists
- Continue to strengthen the central administrative functions required to conduct effective research, specifically efficient IRB approval processes and pre-and post-award review
- Consider strategies to recruit and develop additional clinician scientists that are not primarily dependent upon the

availability of funds from practice plans

- Determine additional strategies to access patient care opportunities outside metropolitan Toronto, consider the option of expanding to a site on north of Toronto
- Enhance the gender representation of leadership in the DOVS. Consider gender when choosing the next Chair of the DOVS.
- Enhance the communication between the Executive Committee and the Clinical Subspecialty Leads
- Consider hiring a career advisor or strengthening the role of the Vice Chair for Faculty, to support the retention and professional development of faculty as well as guiding the transition of faculty at all stages of their career
- Expand access to additional clinical space at each of the Hospital sites
- Ensure that there is adequate administrative support for the centralized functions of the DOVS, particularly related to UME and GME support. It is also important to ensure that the current staff are adequately supported and compensated. A review of compensation of key staff has not been conducted in a few years.

EXTERNAL REVIEWERS

Prof. Eve Higginbotham – Professor, Dept. of Ophthalmology and Vice Dean of Inclusion & Diversity, University of Pennsylvania

Prof. Martin ten Hove – Associate Professor and Department Head, Dept. of Ophthalmology, Queen's University

SIGNATURES