Vision, Mission, Values

VISION
To be a global leader in vision health by delivering and advancing innovation, integration, and excellence in education, research, and clinical practice.

MISSION
We shape the future of Ophthalmology and Vision Sciences by:
- Educating and mentoring the next generation of clinicians, teachers, and scientists.
- Conducting high-impact research, generating innovative technology that includes informatics, and translating discoveries to high-quality patient care.
- Leading in the delivery of the highest quality patient care.
- Informing public policy as to the eye care needs of society, contributing to our communities, and improving the health of populations locally and globally through discovery, application, and knowledge communication.

VALUES
**Excellence:** We strive for the highest standards of scholarship, critical thinking, clinical practice, professionalism, and leadership.

**Innovation:** We promote novel and implementable ideas that improve and advance vision health.

**Collaboration:** We collaborate, regardless of location or affiliation, in all eye care subspecialties, in all medical disciplines and in all health care professions, with scientists, and with industry.

**Respect:** We respect the ideas, rights, beliefs, dignity, and wellbeing of all faculty, trainees, patients, and staff.

**Accountability:** We (and all our activities) are accountable to our stakeholders and local/global communities.
# Table of Contents

2021-2022 Academic Year .......................................................................................................................... 7

Abbreviations and Acronyms .................................................................................................................. 8

Executive Summary .................................................................................................................................... 12

Key Achievements ....................................................................................................................................... 14

1. Introduction ............................................................................................................................................. 18
   1.1 Recommendations from the 2017 External Review ......................................................................... 21
      1.1.1 Variability in the quality of undergraduate teaching between sites ....................................... 21
      1.1.2 Centralization of the IRB amongst all the clinical sites ......................................................... 21
      1.1.3 Streamlined centralized research administration to better manage pre and post award activities .......................................................................................................................................................... 22
      1.1.4 Continue to develop mentoring programs at all levels ......................................................... 22
      1.1.5 Expand the capacity to recruit clinician scientists into the Department .............................. 22
      1.1.6 Expand the number of research endowed chairs .................................................................. 23
      1.1.7 Increase research funding through centralized philanthropy and technology transfer revenue .......................................................................................................................................................... 23
      1.1.8 Improve the information technology infrastructure ............................................................. 23
   1.2 Chair’s Report ...................................................................................................................................... 24

2. People .................................................................................................................................................... 28
   2.1 Structure ........................................................................................................................................... 28
   2.2 Administrative Support .................................................................................................................... 32
   2.3 New Faculty Appointments, 2012-2021 ....................................................................................... 32
   2.4 Faculty Reviews and Reappointments ............................................................................................ 34
   2.5 Faculty Development and Leadership ............................................................................................. 34
      2.5.1 Mentorship and Wellness at the DOVS .............................................................................. 34
   2.6 Gender and Diversity at the DOVS ............................................................................................... 36
9.1 Physician Wellness ................................................................. 69
9.2 Equity, Diversity, and Inclusion .................................................. 69
  9.2.1 Expand EDI Education ......................................................... 71
  9.2.2 National Academic Physician Engagement and Culture Survey .... 71
  9.2.3 DOVS Standards of Professional Behavior Statement .................. 71
10. Global Health ............................................................................ 73
  10.1 University West Indies Outreach (Jamaica, Barbados, Trinidad and Tobago) ... 74
  10.2 CNIB Eye Van ....................................................................... 74
  10.3 Orbis Outreach ..................................................................... 74
  10.4 Marginalized Urban, Homeless, Indigenous Populations .................. 74
  10.5 Global Outreach: Uganda and Kenya ......................................... 75
  10.6 Global Health Case Study: Retinoblastoma in Ghana ....................... 75
11. Future Directions ........................................................................ 77
12. Report of Faculty Member ............................................................ 79
13. Report of Learners ....................................................................... 81
  13.1 Chief Resident Report (Dr. Jason Kwok) ..................................... 81
    13.1.1 Best Practices .................................................................. 81
    13.1.2 Sources of Improvement .................................................... 83
  13.2 Medical Student Report (Bryan Wong) ....................................... 83
    13.2.1 Best Practices .................................................................. 83
    13.2.2 Sources of Improvement .................................................... 84
14. Affiliated Hospital Reports ........................................................... 85
  14.1 Hospital for Sick Children: Dr. Asim Ali, Chief .......................... 85
    14.1.1 Staffing changes ............................................................... 85
    14.1.2 Honours and Appointments ................................................ 85
    14.1.3 Educational Achievements .................................................. 87
  14.2 Mount Sinai Hospital: Dr. David Yan, Chief ............................... 87
14.3 Sunnybrook Health Sciences Centre: Dr. Peter Kertes, Chief ..........................90
  14.3.1 Programmatic Alignment..........................................................90
  14.3.2 Brain Sciences Program ...........................................................90
  14.3.3 Trauma, Emergency, and Critical Care and Cancer Programs..............91
  14.3.4 Women and Babies’ Program .....................................................91
  14.3.4 Clinical Activities ......................................................................91
  14.3.5 Retirements ..............................................................................93
  14.3.6 Recruitment .............................................................................94
  14.3.7 Education ...............................................................................98
  14.3.8 Faculty Education and Development ..........................................98
  14.3.9 Research ...............................................................................99

14.4 St. Michael’s Hospital: Dr. David Wong, Chief ...............................100
  14.4.1 Infrastructure ........................................................................100
  14.4.2 Staffing and Recruitment ...........................................................101
  14.4.3 Clinic Services ..........................................................................102
  14.4.4 Academia ...............................................................................105
  14.4.5 Research ...............................................................................106
  14.4.6 Challenges and Concerns ...........................................................108
  14.4.7 Strengths ................................................................................112
  14.4.8 Future Directions and Opportunities .........................................114

14.5 UHN-Toronto Western Hospital: Dr. Robert Devenyi, Chief ...............116

Appendix A: Publications ........................................................................117
Appendix B: Strategic Report .................................................................215
Appendix C: Department Communications ..............................................216
Appendix D: Student Support Services ....................................................217
## 2021-2022 Academic Year

### Faculty Composition

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents</td>
<td>30</td>
</tr>
<tr>
<td>Fellows</td>
<td>35</td>
</tr>
<tr>
<td>Total Faculty</td>
<td>171</td>
</tr>
<tr>
<td>Full Professors</td>
<td>31</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>21</td>
</tr>
<tr>
<td>Assistant Professors</td>
<td>50</td>
</tr>
<tr>
<td>Lecturers</td>
<td>69</td>
</tr>
<tr>
<td>Faculty Endowed Chairs</td>
<td>9</td>
</tr>
<tr>
<td>Alumni</td>
<td>More than 800</td>
</tr>
</tbody>
</table>

### Since 2012

- VSRP support for graduate students: $5.8 M
- Endowed Chairs: 9
- TAHSN Hospitals: 6 Fully Affiliated, 1 Fully Affiliated IHF, 3 Associates
- Awards: 34
- Clinician Scientists: 6

### Since 2012-2013

- Peer Reviewed Publications: 1,429
- Presentations by Faculty: 1,000
- New Faculty: 61
- Senior Promotions: 28
- Senior Promotions: 28
- Grants Awarded: $67.8 M
- CPD Courses Visiting Professors: 25
- Philanthropy: $6 M
## Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaRMS</td>
<td>Canadian Residency Matching Service</td>
</tr>
<tr>
<td>CBD</td>
<td>Confidence by Design</td>
</tr>
<tr>
<td>CBL</td>
<td>Case-Based Learning</td>
</tr>
<tr>
<td>CIHR</td>
<td>Canadian Institute of Health Research</td>
</tr>
<tr>
<td>CLTA</td>
<td>Contractually Limited Term Appointment</td>
</tr>
<tr>
<td>CME</td>
<td>Continuing Medical Education</td>
</tr>
<tr>
<td>CPD</td>
<td>Continuing Professional Development</td>
</tr>
<tr>
<td>CTU</td>
<td>Clinical Teaching Unit</td>
</tr>
<tr>
<td>DOVS</td>
<td>Department of Ophthalmology and Vision Sciences</td>
</tr>
<tr>
<td>EDI</td>
<td>Equity, Diversity, and Inclusivity</td>
</tr>
<tr>
<td>FBC</td>
<td>Fighting Blindness Canada</td>
</tr>
<tr>
<td>TfoM</td>
<td>Temerty Faculty of Medicine</td>
</tr>
<tr>
<td>GFT</td>
<td>Geographic Full-Time</td>
</tr>
<tr>
<td>GTA</td>
<td>Greater Toronto Area</td>
</tr>
<tr>
<td>HEBR</td>
<td>Human Eye Biobank for Research</td>
</tr>
<tr>
<td>HSC</td>
<td>The Hospital for Sick Children</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>INO</td>
<td>Internuclear ophthalmoplegia</td>
</tr>
<tr>
<td>JCAHPO</td>
<td>International Joint Commission on Allied Health Personnel in Ophthalmology</td>
</tr>
<tr>
<td>KEI</td>
<td>Kensington Eye Institute</td>
</tr>
<tr>
<td>KRI</td>
<td>Kensington Research Institute</td>
</tr>
<tr>
<td>KVRC</td>
<td>Kensington Vision and Research Centre</td>
</tr>
<tr>
<td>MOHLTC</td>
<td>Ministry of Health and Long-Term Care</td>
</tr>
<tr>
<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
</tr>
<tr>
<td>NSERC</td>
<td>Natural Sciences and Engineering Research Council of Canada</td>
</tr>
<tr>
<td>ONDRI</td>
<td>Ontario Neurodegenerative Disease Research Initiative</td>
</tr>
<tr>
<td>PARO</td>
<td>The Professional Association of Residents of Ontario</td>
</tr>
<tr>
<td>PGME</td>
<td>Post Graduate Medical Education</td>
</tr>
<tr>
<td>PGY-X</td>
<td>Post Graduate Year Residency Training (Year 1, 2, 3, 4, 5)</td>
</tr>
<tr>
<td>PSI</td>
<td>Physicians’ Services Incorporated</td>
</tr>
<tr>
<td>QA</td>
<td>Quality Assurance</td>
</tr>
<tr>
<td>RAPD</td>
<td>Relative afferent pupillary defect</td>
</tr>
<tr>
<td>RCPSC</td>
<td>Royal College of Physicians and Surgeons of Canada</td>
</tr>
<tr>
<td>SH</td>
<td>Sinai Health</td>
</tr>
<tr>
<td>SHSC</td>
<td>Sunnybrook Health Sciences Centre</td>
</tr>
<tr>
<td>TFoM</td>
<td>Temerty Faculty of Medicine</td>
</tr>
<tr>
<td>TORIC</td>
<td>Toronto Ophthalmology Residency Introductory Course</td>
</tr>
<tr>
<td>UH</td>
<td>Unity Health</td>
</tr>
<tr>
<td>UHN</td>
<td>University Health Network</td>
</tr>
<tr>
<td>UME</td>
<td>Undergraduate Medical Education</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
</tr>
<tr>
<td>UoT</td>
<td>University of Toronto</td>
</tr>
<tr>
<td>VSRP</td>
<td>Vision Science Research Program</td>
</tr>
</tbody>
</table>
The self-study report should be broad-based, reflective, forward-looking, and include critical analysis. It is an assessment of the strengths and challenges facing the Clinical Department, the range of its activities, and the nature of its future plans.

The self-study should address the terms of reference. These form the basis of the assessment of the Clinical Department. The self-study should be customized to reflect what is under review.

The preparation process should involve faculty, students, and staff. The input of others deemed to be relevant and useful (e.g., graduates, industry, the professions, practical training programs, employers) may also be included.

If the self-study report is not to be made publicly available, clearly mark the report as “Confidential.” If the intent is to distribute the self-study broadly and to post it online, ensure that it contains no confidential or sensitive material.

When organizing the report, consider carefully the level of detail given in the body. The self-study report can be “de-cluttered” by placing information in the appendices. See p. 3 for examples of items to consider including as appendices.

1. INTRODUCTION
   
   Context
   ▪ Briefly introduce the Clinical Department that will be described in the self-study. Provide a URL.
   ▪ Highlight any significant developmental milestones.
   ▪ What particular strengths, characteristics, and risks define the Clinical Department?
   ▪ Refer to any indicators/data that relate to the general “environment” of the Clinical Department.
   ▪ Describe how the Department/EDU is acting upon Temerty Medicine’s commitment to equity, diversity, inclusion, Indigeneity, and accessibility to attain Excellence Through Equity.

   Self-Study Participation
   ▪ Describe in detail the participation of faculty, staff, and learners—and any others deemed to be relevant and useful—in the self-study process and how their views have been obtained and taken into account.

   Recommendations from Previous External Review
   ▪ Summarize the key findings of the previous review(s).
   ▪ Describe how the Clinical Department has addressed any recommendations from the previous external review(s).

   Chair’s Report

2. PEOPLE
   ▪ Provide faculty CVs on a flash drive.
   ▪ Describe the faculty complement and its demographics. List faculty members as follows:
     ▪ academic rank (Assistant, Associate, Full)
     ▪ Status Only, Clinical, Adjunct, Sessional, Part Time, etc.
     ▪ hospital
   ▪ Describe the complement of residents, fellows, etc. Include lists.
   ▪ Identify areas of strength and expertise focusing on current status, as well as plans for future development. Attention should be given to any notable changes in the strengths and weaknesses of the complement as a whole, including real or anticipated changes experienced or anticipated as a result of recent/expected hires. Plans for future development may include a faculty renewal plan.
• Describe the appropriateness and effectiveness of the Clinical Department’s use of existing human resources in delivering its programs.
• Identify and describe support for faculty development, including recruitment and career progression through an EDIIA framework.

3. EDUCATION

Provide a separate section for undergraduate education, postgraduate education, advanced training programs for postgraduate trainees, collaborative programs, continuing education, professional development, and any other educational activities. Where appropriate, the following might be contained in report of a Director for each of the above: Description, Objectives, Admission Requirements, Delivery, Awards, Funding, Quality Indicators, Quality Enhancement.

• Describe any initiatives taken to enhance the learning and teaching environment, including initiatives taken to promote learner wellbeing and resiliency in the educational environment.

4. RESEARCH + SCHOLARSHIP

In all cases, an assessment of the quality of research and scholarly activity, supported by evidence appropriate to the discipline, is essential. There will be variation across units as to the appropriate indicators.

• What are the major research themes and priorities?
• Describe the research undertaken in the last 5 years, grouped under the relevant themes.
• Provide data on research funding over the past 5 years.

• What benchmarks of funding success are measured within the Clinical Department?
• Comment upon the level of activity and success in research and scholarship. Discuss how this level of research activity and success compares nationally and internationally.
• Explain how the research activity supports learning in the Clinical Department.
• Consider the following data points to reflect on research:
  ▪ publication and citation rankings
  ▪ list of major research awards and honours
  ▪ level of research funding of the Clinical Department

5. ORGANIZATION + FINANCIAL STRUCTURE

Detailed financial charts and tables should generally be omitted. Summarize instead, in the body of the report, the financial state of the Clinical Department. This may include a general statement about revenues, operating costs, and financial vulnerabilities accompanied by some figures.

• Assess the appropriateness of the administrative and governance structure for the effective functioning of the Clinical Department.
• Describe the appropriateness and effectiveness of the Clinical Department’s organizational and financial resources in delivering its programs.
• What are the challenges and opportunities over the next 5 years?

6. RESOURCES + INFRASTRUCTURE

• As appropriate, describe any unique space pressures and requirements and how these are accommodated.
• Describe the appropriateness and effectiveness of the Clinical Department’s use of existing physical resources in delivering its programs.

7. INTERNAL + EXTERNAL RELATIONSHIPS

• Describe any initiatives undertaken to enhance a sense of community in the Clinical Department.
▪ Describe the scope and nature of the Clinical Department’s relationship with cognate Departments/EDUs at the University of Toronto, affiliated hospitals, and external government, academic, and professional organizations.

▪ What has been the social impact of the Clinical Department in terms of outreach to local, national, and international communities?

▪ Has the Clinical Department developed or sustained fruitful partnerships with other universities/organizations in order to foster research and creative professional activities and to deliver teaching programs?

8. ALUMNI + ADVANCEMENT PROGRAMS
▪ Describe briefly.

9. FUTURE DIRECTIONS
▪ What are the key challenges and opportunities facing the Department over the next 5 years?
▪ Describe the areas identified through the self-study process as requiring improvement.
▪ Describe the areas that hold promise for enhancement.
▪ Describe the initiatives or changes planned to provide further support to—or enhance—research, scholarship, programs, or the learning and teaching environment.

10. FACULTY REPORT
▪ What are the views and vision of faculty members? [To be prepared by faculty members other than the Chair.]

11. LEARNER REPORT
▪ What are the views of the learners?

12. OTHER REPORTS

APPENDICES
Below is a list of items to consider including in the appendices. Clearly mark any appendices as “Confidential” if they are not to be made publicly available or posted online.

History of Clinical Department
Constitution of Clinical Department
Previous external review report
Recent accreditation documents
Academic plan of Clinical Department
Publication and citation rankings
Research awards and honours lists
Research funding
Committee/professional faculty service
Student Support Services Information [Provided by the Office of the Dean.]
Workload of Clinical Department
Calendar program entries
Reading lists
Curriculum renewal material
Marking schemes
Learner funding, honours, and awards
Executive Summary

This Ten-Year Review document highlights key achievements in education, research, clinical work, and humanitarian efforts of the Department of Ophthalmology and Vision Sciences (DOVS) at the University of Toronto since 2012. It also showcases the Department’s leadership, faculty, and alumni engagement throughout this period. During this term, the Department faced unique and significant challenges posed by the COVID-19 pandemic. These challenges were met head on as the DOVS employed innovative tactics to ensure continued care for its patients, education for its learners, and sustained efforts towards research endeavors. The DOVS also used this challenging period to redefine its integration of technology within the Department, resulting in expanded virtual rounds, education, and communication.

The DOVS is a leader in vision health on an international scale. The Department is the largest in Canada, with 171 full-time faculty members, 30 residents, and 35 clinical fellows. The Department also includes 12 research scientists and four clinician scientists. Its residency training program is an entry-direct Royal College of Physicians and Surgeons of Canada accredited program, with eight subspecialty fellowship programs: glaucoma, medical retina, surgical retina, neuro-ophthalmology, pediatrics, pediatric cornea, low vision, and cornea. Full-time faculty members of the DOVS are spread across five fully affiliated TAHSN academic hospitals and the Kensington Eye Institute (KEI), a fully affiliated independent health facility. These five hospitals include: The Hospital for Sick Children, Sunnybrook Health Sciences Centre, St. Michael's Hospital, Mount Sinai Hospital, and the University Health Network (Toronto Western Hospital and Princess Margaret Cancer Centre). Residents, fellows, and medical students on ophthalmology rotations receive instruction at all participating centres and several community partners, including the Trillium Health Partners, a three-hospital group comprised of the Credit Valley Hospital, Mississauga Hospital, and Queensway Health Centre, as well as the Michael Garron Hospital and the North York General Hospital.

The DOVS is a research-intensive and academically productive department with approximately seven million dollars per annum in research funding, and producing, on average, 175 peer-reviewed publications per year (2013-2021). Sources of research funding include the following organisations:

- Canadian Institute of Health Research (CIHR);
- Ontario Neurodegenerative Disease Research Initiative (ONDRI);
- Natural Sciences and Engineering Research Council of Canada (NSERC);
- Physicians’ Services Incorporated (PSI);
- Fighting Blindness Canada (FBC);
- Kensington Research Institute (KRI).
Peer-reviewed funding was close to $7 million in 2019-20. Our bibliometric data compares favourably with other top-ranking ophthalmology programs worldwide. The DOVS derives its funding from multiple sources, including base funds from the University, and Ministry of Health and Long-Term Care (MOHLTC), advancement funds, endowed funds, and revenue from continuing professional development courses. Over the last few years, funding from these sources has declined, and the Department has shifted its focus to the advancement of academic and clinical endeavours in order to maintain and enhance the quality of education and patient care provided. The academic Department has raised more than $3M over the last five years. The hospital Departments have also produced successful outcomes in their fundraising efforts. Most notably, the Department of Ophthalmology at UHN received a $50M donation in 2021 that will drive research over the next decade.

Over the last decade, the faculty of the DOVS have consistently demonstrated a commitment to academic and clinical excellence fostered within the supportive environment provided by its academic hospital partners, research institutes, independent health facilities, and the Temerty Faculty of Medicine (TFoM). The organizational structure of the Department has created a unified infrastructure that can fully support the talented DOVS faculty, allowing the Department to maintain its position as a leader in vision health while making strides to reach even greater heights.
Key Achievements

01 Restructured residency training program with subspecialty areas and vertical electives.

02 Appointed chiefs of subspecialty services to oversee educational services, research, quality assurance, and clinical work.

03 Shifted approach to surgical teaching expectations and responsibilities, with a clear understanding of the minimal requirements to maintain surgical privileges and the regular monitoring of teaching performed by faculty members.

04 Ensured appropriate number of surgical cases for each resident in training.

05 Developed enhanced surgical experiences for ophthalmology residents, including a resident outreach program, in which residents travel to an area of the developing world.

06 Consolidated the Departmental administrative offices at the Kensington Eye Institute.

07 Expanded the KEI to include:
   - Surgical Skills Wet Lab
   - Outpatient Clinics
   - Outpatient Diagnostic Centre
   - Cytokine Laboratory
   - Outpatient Surgery, including cataract, glaucoma, retina, and cornea surgery
   - Resident Education Centre
   - Clinical Research Unit
   - Prose and Advanced Contact Lens Clinic
   - Electrophysiology Diagnostics Unit

08 Formalized the new Donald K. Johnson Eye Institute, a merger between the Division of Vision Science of the Krembil Research Institute and the Donald K. Johnson Eye Care Centre, which captures basic and clinical research, as well as clinical ophthalmology activity onsite at the Krembil Research Institute and Toronto Western Hospital.
09 Received $60M in philanthropical donations to the Donald K. Johnson Centre over the last decade.

10 Created a new academic program at Trillium Health Centre with undergraduate education, resident training, and a thriving research program in clinical ophthalmology.

11 St. Michael’s Hospital and Mount Sinai Hospital have constructed new ophthalmology clinics at each site, fully equipped with state-of-the-art equipment and clinical research facilities.

12 Created new clinics at the Kensington Vision and Research Centre and the Kensington Urgent Care Centre.

13 Performed the first Argus implant in Canada (ophthalmology faculty member Dr. Robert Devenyi).

14 Performed the world’s first neurotization of the cornea at the Hospital for Sick Children (Dr. Asim Ali).

15 Utilized a $3M grant from the Ministry of Health Long-Term Care to study the feasibility of ensuring corneal crosslinking in the province; subsequently treated 1000 eyes over 3 years.

16 The above-mentioned crosslinking program has expanded to incorporate all provincial crosslinking as a KEI/DOVS program.

17 Created new Kensington research program resulting in 16 studies over the last 5 years with $3.25M in funding since inception.

18 Developed a new advancement strategy.

19 Expanded and enhanced the surgical wet lab to incorporate an increased number of stations, increased simulations, and increased subspecialty surgery capacity.
20. Appointed a new Vice Chair Wellness, Global Health, and EDI.

21. Expanded and focused global health initiatives.

22. Appointed a new Director of Global Health to focus and direct global health initiatives.

23. Ensured efforts were focused on physician wellness in the Department, including a mentorship program for all faculty and residents, evenings for discussion of the different phases of physician careers and important aspects of these phases, and lectures and discussions on how to deal with stress and focus on well-being.

24. Appointed a new Director of Equity, Diversity, and Inclusivity (EDI) to ensure an equitable, inclusive and diverse environment within the Department, its committees, and leadership.

25. Support for the Director of EDI to be able to have more impact nationally in ophthalmology.

26. Recruited 3 clinician scientists.

27. Ensured support exists within the Department to facilitate the recruitment of clinician scientists in every subspecialty in order to ensure basic research and translational research exist within each subspecialty.

28. Recruited an academic rheumatologist to support the uveitis service clinically and pursue research endeavors in rheumatology related to uveitis.

29. Instituted an annual resident retreat, allowing all the residents in the program to connect in a relaxed setting while enjoying a variety of bonding exercises, and seminars covering topics in training and practice.
Instituted a regular three-year review of all fellowship programs to parallel the Royal College review of the residency programs.

Expanded surgical facilities and volumes at KEI.

Recruited 2 academic full-time glaucoma specialists, 2 neuro-ophthalmologists, 2 medical retina-uveitis specialists, and 4 academic comprehensive ophthalmologists.

Appointed a new Director of Equity, Diversity, and Inclusivity (EDI) to ensure an equitable, inclusive and diverse environment within the Department, its committees, and leadership.

Instituted a JCAHPO-certified ophthalmic medical technician and technologist training program.

Instituted a series of evenings for the clinical and research fellows to meet and interact and hear about the practical side of life after fellowships.
1. Introduction

The Department of Ophthalmology and Vision Sciences at the University of Toronto ([https://ophthalmology.utoronto.ca/](https://ophthalmology.utoronto.ca/)) is comprised of 171 faculty members who are engaged in clinical services and academic roles at five fully-affiliated Toronto Academic Health Science Network (TAHSN) teaching hospitals (The Hospital for Sick Children, Unity Health, Sinai Health, University Health Network, Sunnybrook Sciences Health Centre), at the fully affiliated Kensington Eye Institute (KEI), and three associate-member TAHSN hospitals (Michael Garron Hospital, North York General Hospital, and Trillium Health Partners), as defined by affiliation agreements with the Temerty Faculty of Medicine (TFoM). In addition, the Department has active faculty in other community hospitals around the Greater Toronto Area (GTA), including Humber River Regional, Lakeridge Health, Markham Stouffville, Southlake Regional, and William Osler Health System. The DOVS is active in undergraduate medical education, postgraduate residency and fellowship training, and continuing professional development. Its research, training, and tertiary-care programs are highly regarded, housing internationally renowned researchers and clinicians, and attracting candidates from all over the world.

The DOVS has undergone considerable changes over the last 10 years. This self-study report will summarize the Department’s activity and accomplishments during this period, focusing on the last 5 years. It also details the identified weaknesses and challenges as highlighted by previous external review and the actions taken by the DOVS in response, in order to strengthen the Department. We gratefully acknowledge the efforts of external reviewers Dr. Eduardo Alfonso (University of Miami) and Dr. Marcelo Nicolela (Dalhousie University), who conducted an external review in 2017.

The DOVS is a research-intensive collective, with a broad-based and active research program featuring active collaborations with other University of Toronto basic science and clinical departments. Department faculty and trainees have published more than 1400 peer-reviewed publications over the last 10 years. Regarding clinical activity, staff at fully affiliated academic hospital sites engage in more than 250,000 patient visits annually, with a significant portion of these patients participating in clinical studies and trials. The vast majority of these patient visits involve a trainee, allowing for the excellent clinical experience reported by learners. The DOVS is fully accredited by the Royal College of Physicians and Surgeons of Canada (RCPSC) for its residency training program and offers eight subspecialty fellowship programs.

From an educational perspective, the DOVS residency training program has been refined to enhance the breadth and depth of medical and surgical subspecialty and comprehensive education, and add greater range in exposure to subspecialty electives. The program has also incorporated international and community-based rotations and enhanced the graded responsibilities the residents experience as they complete their training. These include senior resident cataract clinics where residents assess the patient, perform all diagnostic testing themselves and select the intraocular lens type and power, and perform the surgery themselves. The trainees have full access to all lens types in these clinics and thus receive full training with the latest technology available. Senior
residents also supervise junior residents and medical students in clinic with oversight from the responsible faculty, allowing the senior resident to teach and make clinical decisions on their own. Subspecialty vertical blocks and electives allow trainees to delve deeply into the subspecialties, both clinically and surgically, and also allow for exposure to research in these areas. Every subspecialty at DOVS has at least 8 academic subspecialists, meaning the residents receive a breadth of exposure rarely found in academic departments. Residents also have opportunity to tailor their time in their senior year to their career interests. Those pursuing a community-comprehensive career may choose to do more community electives, while those pursuing a subspecialty can focus their time in that subspecialty, often receiving surgical training that places them well ahead of the curve when they reach their fellowship. Those that wish to pursue a research-intensive career have the option to complete a graduate degree with associated research while doing their residency. Currently we have one resident doing a concurrent PhD and one doing a concurrent MSc. We also have 2 residents with PhDs who have secured research funding to continue their research, and the program has created time in their schedule in order to allow for the continuation of this research. The competitive nature of medical research now means that if a researcher has a gap of 5 years in publications, it could have a significant impact on their ability to obtain funding, so the residency program ensures that residents continue their research and have research output during their postgraduate training.

The fellowship programs continue to be refined, with development of clear, unified competencies and goals that align with the Association of University Professors of Ophthalmology Fellowship Compliance Committee program requirements. Each fellowship program is reviewed every four years to ensure that the fellows are satisfied with the training and that the program is providing the necessary surgical and medical training, evaluation, and feedback.

One of the main goals of the last decade was to establish KEI as an academic center, and centralize the DOVS academic and administrative functions within KEI. Another goal was to shift targeted surgical procedures to KEI, and to introduce and expand subspecialty procedures that would be performed by surgeons from all the fully affiliated academic hospitals. The shift would not only expand and enhance patient care, but increase the surgical teaching occurring and deepen surgical research. In addition, it would bring all the ophthalmologists and trainees from the different centres together under one roof, not only enhancing camaraderie, but also creating dialogue with respect to education and research. These goals have been attained, and have created increased surgical volumes within the centre, and aligned surgical procedures and surgeons among the fully affiliated academic hospitals. Faculty and trainees have been brought together, and the outcome has been an increase in the quantity and quality of surgical deliverables, improved efficiency, and enhanced education, as well as improved communication between learners and faculty. There has also been a significant rise in surgical research projects. Expansion of clinics at the KEI has allowed for recruitment of academic, full-time ophthalmologists. The KEI clinics have also provided significant utility in allowing late-career surgeons at the hospitals to transition from practice through resource-sharing opportunities. Surgeons seeking to reduce practice involvement can use institute resources to appoint a recruit and begin sharing cases, with the intention of an eventual
complete transfer. Several career-transitioning surgeons have pursued this path, allowing for a gradual transfer of cases that results in undisrupted patient care outcomes, administrative and clinical teaching opportunities, and countless other synergetic benefits. Transfers of this kind allow for a complete practice reallocation within five years.

The last decade have witnessed several initiatives in research. Under the leadership of Valerie Wallace and Robert Devenyi, and of course, with the very generous support of Mr. Johnson, the Donald K. Johnson Eye Institute was created at Toronto Western Hospital, resulting in the recruitment of three world-class basic scientists to enhance the very strong research base already present. The DOVS, working with the Donald K. Johnson Eye Institute and the Sunnybrook Research Institute, was also able to recruit two clinician scientists to the Department. The expansion of clinician scientists in the Department has enhanced translational research. Members of the DOVS have worked with the MOHLTC on several vision health strategies and policies. New funding in the Department was obtained to allow three resident-led research competitions to be awarded annually. These competitions have resulted in enhanced resident research and helped promote clinical research among clinicians. The Kensington Research Committee was created and has approved/funded 32 research projects, many of which have been published and presented.

An early priority for the Department was to launch a comprehensive planning process to develop and articulate clear strategic priorities that would steer the DOVS into the future, further developing its role as one of North America’s leading departments of ophthalmology and vision health. A strategic planning committee guided this process and engaged faculty at a planning retreat held in January 2014. The planning retreat culminated in the aforementioned strategic plan document.

The DOVS Strategic Plan, Strategies for Transforming Ophthalmology: Vision to the Future (2015-2020), (Appendix C) was created on five Strategic Directions: Education, Research, Clinical Practice, Global Health, Partnerships & Public Policy, and Faculty Development (Figure 1). The Department has made significant strides towards these high-level visions, which will be discussed in detail in this self-study. The DOVS Executive Committee provided oversight and leadership for the implementation of the Strategic Plan, and has compiled indicators and measures to track progress.

This self-study report was compiled with input from the Vice Chairs and the Directors of the Department. Each of the Chiefs wrote their hospital reports.
1.1 Recommendations from the 2017 External Review (Profs. Eduardo Alphonso and Marcelo Nicolela)

1.1.1 Variability in the quality of undergraduate teaching between sites.

The variability in the quality of undergraduate teaching between the sites had been recognized by the Executive Committee and after this item was highlighted in the review, a multifaceted plan was put into effect to standardize and enhance undergraduate teaching.

a. The undergraduate teaching committee was mandated to meet on a regular basis, as opposed to the ad hoc basis. The committee regularly reviewed teaching assessments, and worked on strategies to enhance and standardize undergraduate teaching.

b. Feedback to each specific teacher at each hospital site was given, utilizing the student evaluations a teacher receives over the course of the academic year, and specifying suggestions on how their undergraduate teaching can be enhanced. Those individuals receiving low teaching assessments met with site directors for discussion and guidance on how to improve the clerks’ experience in their clinics.

c. Standardized half-day teaching, both didactic and practical, was instituted to each group of medical students on the 1st day of their weekly rotation in the clinic. This session takes place at DOVS conference room at KEI and standardized the students’ review of the knowledge base required to be in the clinic, but also acts as a clinical skills teaching session in order to standardize student abilities as they utilize the instruments and equipment required to function well in the clinic.

d. An undergraduate guide to clinical ophthalmology was authored by faculty. Dr. Tina Felfeli coordinated this textbook to act as a University of Toronto-specific guide for medical trainees in clinical ophthalmology. Every clerk is given a free copy prior to their rotation on the service. This material also helps standardize the knowledge base and helps set expectations for the clerks as they enter their rotations.

1.1.2 Centralization of the IRB amongst all the clinical sites.

Centralization of the IRB amongst all the TAHSN sites is an item that is recognized as very necessary, not only within the Department, but within the entire Faculty of Medicine. The TFoM is working hard with the affiliated hospitals to ensure that such a centralized IRB can exist in the near future. In the meantime, DOVS recognizes the TFoM IRB is quite expedient and this IRB is used by all KEI studies. Multicentre studies are still dependent on each individual IRB process.
1.1.3 Streamlined centralized research administration to better manage pre and post award activities.

Currently, research occurs at the six fully affiliated sites, each with their own research processes and research institutes, and also within some of the community partner hospitals. This milieu does make it difficult to centralize research. In many cases, there isn’t a need to centralize, as a study may be localized to one site, and the management of the pre and post award activities occurs solely by that site’s administration. With multicentre studies, however, the idea of centralizing research administration is much more valid, and can certainly improve research within the Department. Several strategies have been put into place to help streamline research administration, including:

- A new position, Manager of Administration, has been created and will be filled in the next 6 months. The Manager of Administration will be a senior staff member in the DOVS with responsibility for ensuring highly efficient and impactful administration of operational, financial, technical, and human resources. A component of this role will be to oversee the management of pre and post award activities.
- We are increasingly looking to centralize all funds within the Department.
- We are working on creating a Department-wide research committee that can review research proposals and look to secure further funds for Departmental research endeavours.

1.1.4 Continue to develop mentoring programs at all levels.

Faculty development has been recognized more and more as a priority for the Department, especially after the impact of the pandemic. A new position of Vice-Chair, Faculty Development, Global Health, and EDI has been created, and a Director of Faculty Development has been appointed. A mentorship program has been developed for all faculty and trainees. Specific sessions have been created on how to prepare a teaching dossier and CPA file, and on how to apply for promotions. Department-wide sessions for mindfulness, meditation, stress, and burnout have also been developed and implemented. A session for late-career surgeons has been implemented and sessions one for early- and mid-career surgeons are being developed. Faculty development, wellness, and mentoring are now a priority for the Department.

1.1.5 Expand the capacity to recruit clinician scientists into the Department.

The recruitment of clinician scientists is a complex endeavour. It involves ensuring that appropriate clinician scientists are available to recruit, that appropriate funds are available to remunerate these individuals, and that appropriate research facilities and startup funds are available. The DOVS has been working hard to ensure all these requirements are in place in order to expand our clinician scientist numbers. The Departmental strategy is to ensure at least one clinician scientist in each of the subspecialties. In 2020, Dr. Stephan Onge Tone was recruited to the DOVS, SHSC, and SRI as a clinician scientist, spending at least 70% of his time performing basic research. Five-year startup funds were secured
for his basic research lab. Dr. David Mathew was also recruited as a clinician scientist. Dr. Mathew is currently completing his PhD in Dr. Sivak’s lab, exploring mechanisms of damage in glaucoma. He will continue glaucoma basic research after finishing his PhD. Thirty percent (30%) of his time will be dedicated to clinical glaucoma work. Dr. Brian Ballios was recruited in 2021 after he completed his medical retina and inherited retinal diseases fellowship at Harvard. He has a basic science lab and five-year start-up funds, as well as a professorship, to allow him to focus on research. We have been working to enhance our practice plans to develop the resources required for additional recruitment of clinician scientists and we continue working to enhance philanthropy to provide for these recruitments.

1.1.6 Expand the number of research endowed chairs.

Research endowed chairs have expanded with the recruitment of the Dixon Chair at SHSC. A chair for the Chair of the Department was created in 2017 and although it is not an endowed chair (the family felt they would do the best job at investing the capital), it is hoped that it will continue to be bestowed upon future chairs. A new professorship was created in 2021 to support the retina and inherited retinal disease clinician scientist. We continue to fundraise for new endowed chairs to support research and education.

1.1.7 Increase research funding through centralized philanthropy and technology transfer revenue.

The Department Chair has come to recognize that one of the most important areas of focus for this position is philanthropy. Philanthropy not only drives capital space acquisitions, but also drives research through endowments, chairs, and research funding. The next five years will be more focused on philanthropy. The University of Toronto Faculty of Medicine advancement team is a tremendous asset and the Department Chair will work closely with both this team and hospital advancement teams to increase funding for a multitude of departmental endeavours and goals, including research.

1.1.8 Improve the information technology infrastructure.

The Department’s information technology infrastructure has remained current over the years. An effort to enhance this infrastructure has taken place over the last five years, with multi-site teleconferencing for our Grand Rounds and tele-ophthalmology for our remote clinical work. However, as noted by the reviewer, the Department needs a more centralized IT infrastructure and clearer roots of communication between the different facets of the Department. An additional administrative individual could focus on enhancing IT infrastructure, as well as managing pre- and post-award research activities.
1.2 Chair’s Report

There has been significant activity in the Department over my ten-year tenure as Chair, with some difficult periods and some good, but I am confident that we are a better Department as a result of weathering all these periods and that the Department has a very bright future ahead.

In 2015, DOVS took the time to come together and develop a five-year strategic plan. We published this plan (Appendix C) acknowledging the Department’s position as one of North America’s leaders in ophthalmology and aspiring to a future of global leadership in vision health. Strategies for Transforming Ophthalmology: Vision to the Future (2015-2020) reflects on the many significant initiatives that were implemented over the last decade, such as the establishment of the KEI as an academic ambulatory clinical, surgical, and research facility, and consolidating and centralizing the DOVS within the Institute. These initiatives also include improved subspecialty integration and alignment, and collaboration across the DOVS’s numerous clinical sites to produce a cohesive eye care system and rich academic environment, for faculty and learners alike. The strategic plan reflects the input and shared aspirations of more than 100 of the DOVS faculty, trainees, and partners. It acted as a roadmap allowing the Department to navigate its high-level strategic goals while defining clear implementation priorities, specific, desired outcomes, and tangible metrics by which to measure success. The plan was designed based on the Department’s four academic pillars of education, research, quality clinical work, and global health and partnerships (Figure 1), and, of course, arose from a foundation of nurturing faculty and paying attention to faculty development, wellness, and EDI. As this document describes, the majority of these goals have been attained.

We have managed to enhance our resident clinical training programs, ensuring a thorough subspecialty training while also allowing for community and international experience. We have ensured an excellent surgical experience for the residents and their surgical volumes are second to none. We are in the process of standardizing our fellowship programs with a clear description of the competencies and goals of each, and have instituted a quality review of each program every four years that includes particular attention to the fellows’ feedback concerning their experience of fellowship. Our medical students enjoy a well-organized rotation in ophthalmology, beginning with a half-day interactive session. Each medical student receives a complimentary undergraduate ophthalmology textbook written by DOVS faculty before proceeding to clinics and surgery, where they receive an excellent clinical immersion.

We have worked hard to hear and respond to our trainees’ voices in order to ensure their experience is as positive as it can be. Issues such as harassment are actively dealt with and clearer processes are being instituted in the Department. Our faculty education about microaggression, harassment, and abuse continue to raise awareness among the
teachers of issues that can create negative experiences and impede learning. Wellness has become an important topic, especially highlighted by the pandemic, and we have instituted opportunities such as the resident retreat, fellow evenings, and faculty evenings to educate all participants on how to stay mentally healthy and resilient through the stressors we commonly face in academic medicine. Guests such as Mamta Guatam, a leading expert on physician wellness and physician stress and burnout, have joined us for an evening’s lecture and discussion on these topics, allowing faculty to develop and enhance tools for maintaining wellness and battling burnout.

Our processes have improved, most notably regarding recruitment. Our recruitment processes now follow a strict protocol, in alignment with the TFoM. Every recruitment is advertised internationally. A recruitment committee is struck to capture representation from subspecialty clinical, research, and education leadership, while ensuring there is parity in the gender representation and diversity within the committee. Leadership from our EDI is present on all committees, and each committee receives a review of unconscious bias and EDI prior to initiating its work.

Research productivity in the Department continues to grow and we continue expand our research funding, niches, and number of scientists. Over the course of the last decade, 3 new research scientists have been recruited to the Krembil Vision Sciences program, 1 new research scientist has been recruited to the SRI, and 3 clinician scientists have been recruited to DOVS: 2 at UHN and the Krembil, and 1 at SHSC and SRI. These scientists come together with a focus on stem cell and regeneration medicine, and retina, glaucoma, and corneal research. Our clinician scientists will help focus our translational research, and strengthen the link between our research scientists and clinicians. The Electrophysiology Diagnostics Unit is a critical piece to support the Inherited Retinal Disease Research group, which is already implementing gene therapy studies. The creation of an Ocular Cytokine Lab will also help drive clinical and surgical research at DOVS. With a recent $50 million donation to the Donald K. Johnson Eye Institute, the Krembil Vision Research Unit is poised to continue its world-class research and innovation, and seek to expand its research and clinician scientist pool. Over the last ten years, the Vision Science Research Program has been able to dedicate $5.2M to fund graduate students in vision science research in order to create the new generation of basic scientists and clinician scientists.

We have recognized the need for well-trained ophthalmic medical personnel. In 2012, there was no formal training of ophthalmic medical technicians, technologists, or orthoptists in the GTA. An ophthalmic medical technician was developed in 2015 in conjunction with the Kingston Ophthalmic Training Centre, and in 2018, a certified ophthalmic medical technologist training program came into being at KEI.

Over the last decade, it has become clear there are still areas of weakness within DOVS that require our active attention. Toronto is a large and diverse area, and the opportunity for entrepreneurship in private medicine continues to grow, as the government finds it increasingly difficult to fund all timely clinical and surgical needs. We have seen the expansion of private ophthalmology clinics and surgical centres throughout the GTA, and these centres have drawn many academic faculty, who may spend a portion of their week...
at work in such a centre. Some full-time academic staff have in fact opened such centres themselves. The draw of private medicine pulls our faculty from academic practice, and risks the minimizing of the research and educational priorities. We need to ensure that there is appropriate clinical space and surgical time for our faculty at the academic centres, thus allowing them to complete all their clinical and surgical activities at the academic centres, and preventing the need to seek private practices to see patients or perform surgery. While DOVS has become more integrated over the last decade, we still tend to function as silos within the hospitals. While it is vital that a strong Department of Ophthalmology exist at each hospital, a centralized Eye Institute can bring the faculty together, allowing for important clinical and research exchanges, enhanced clinical and surgical function and efficiencies, enhanced trainee experiences, and a higher function of clinical research. KEI has grown over the last decade and has accomplished many of these functions; continued growth of the Eye Institute, whether at KEI or elsewhere, will only further enhance all the academic pillars of the Department. It is also clear that the Eye Institute needs a clinical and surgical presence elsewhere in the GTA. It is difficult for patients to travel downtown and with the expansion in Toronto, DOVS needs a presence north of the core in order to ensure it has the patient load to accomplish the necessary clinical research and clinical and surgical education.

While our advancement activity has grown significantly, expansion needs to be a priority moving into the future. We need to fund research chairs and professorships to be able to accomplish our future goals, and we need to seek funds for future academic sites. I would venture to say it needs to be the overarching priority of the next chair.

It has been a true privilege to serve as Chair of this Department for the last decade and work with this very talented faculty. I believe I have accomplished the majority of my goals and I am thankful to my leadership team, to whom so much of the credit goes. The future is very bright and I look forward to being a part of the Department as we attain new heights.

Sherif El-Defrawy, MD, PhD, FRCSC
Nanji Family Chair in Ophthalmology and Vision Sciences
Professor and Chair, Department of Ophthalmology and Vision Sciences
Temerty Faculty of Medicine, University of Toronto
Ophthalmologist-in-Chief, Kensington Eye Institute
Figure 1. Strategic Directions and Goals of the DOVS.
2. People

2.1 Structure

The Department of Ophthalmology and Vision Sciences is made up of 171 faculty members (Figure 2), including 31 full professors, 21 associate professors, 51 assistant professors, and 68 lecturers. There are 57 full-time clinicians, 57 part-time clinicians, and 44 clinical adjunct faculty. There are also 11 status only (research scientists) members in the Department. There are 30 residents and 35 clinical fellows in the program.

<table>
<thead>
<tr>
<th>Appointments by Rank</th>
<th>Clinicians</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointments</td>
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<td>Professors</td>
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<tr>
<td>Lectures</td>
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<tr>
<td><strong>APPOINTMENTS BY RANK</strong></td>
<td>57</td>
<td>57</td>
<td>44</td>
</tr>
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</table>

The Department has 10 committees and eight clinical services that ultimately report to the Chair. The 10 committees are the Executive, Departmental Appointments, Departmental Promotions, Undergraduate Medical Education (UME), Residency Program, Fellowship, Continuing Professional Development, Global Health, and Equity, Diversity, and Inclusivity (EDI) Committees. The eight clinical services are retina and vitreous, glaucoma, cornea and external disease, glaucoma, uveitis, paediatric ophthalmology and strabismus, oculoplastics, and ophthalmic pathology.

The Vice-Chair, Education, is responsible for UME, post-graduate medical education (PGME), and CPD. The Vice-Chair, Wellness, Global Health, and EDI, is responsible for those portfolios. The Vice-Chair, Clinical Affairs, is responsible for the eight subspecialty clinical services as well as quality assurance (QA) within the Department. There is also a Vice-Chair, Clinical Research, and a Vice-Chair, Basic Research.

The DOVS is governed by the Executive Committee (Figure 3), which meets monthly and oversees all aspects of the Department’s function. The Executive Committee is comprised of the Chair, Vice-Chairs, Education Leads, Hospital Chiefs, and the Departmental Appointment Committee Chair (Figure 3). The Departmental Appointments Committee (DAC) meets immediately after each Executive meeting. The Department Chair regularly attends meetings within the TFOM (Clinical Chairs, All Chairs, and Clinical Relations Committee) as well as leads or attends meetings of other ad hoc committees.
The majority of academic full-time faculty are located at one of the six fully affiliated TAHSN academic centres (Figure 4), and the majority of the part-time and adjunct faculty are located at one of the three associate-member TAHSN hospitals (Michael Garron Hospital, North York General Hospital, and Trillium Health Partners) or other community hospitals in the Greater Toronto Area, including Humber River Regional, Lakeridge Health, Markham Stouffville, Southlake Regional, and William Osler Health System. Some adjunct faculty are not associated with a hospital and operate within private practices while playing an important role in our undergraduate education program.

<table>
<thead>
<tr>
<th>Hospitals</th>
<th>Clinicians</th>
<th>Other</th>
<th>Total</th>
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<tr>
<td><strong>TAHSN Hospitals:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital for Sick Children</td>
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<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Mount Sinai Hospital</td>
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<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Unity Health/St. Michael's</td>
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<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Sunnybrook Hospital</td>
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<td>UHN-TWH &amp; PMH &amp; KEI</td>
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<td>Toronto East General Hospital</td>
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<td>Trillium Health Partners</td>
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<td>North York General Hospital</td>
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<td>Office Based Physicians</td>
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<td><strong>APPOINTMENTS BY HOSPITAL:</strong></td>
<td>58</td>
<td>57</td>
<td>44</td>
</tr>
</tbody>
</table>

Figure 3. Members of the DOVS Executive Committee.

Figure 4. Appointments by Hospital.
The organizational structure of the Department is outlined below (Figure 5). It should be noted that the Department Chair reports directly to the Dean of Medicine.

Figure 5. Organizational Structure of the DOVS.
The Department features several other standing committees (Figure 6):

- **Clinical Service Chiefs Committee**
  - Meets at least biannually.

- **Eight Clinical Subspecialty Committees**
  - Retina and Vitreous, Uveitis, Cornea and Anterior Segment, Glaucoma, Neuro-Ophthalmology, Pediatric Ophthalmology and Strabismus, Oculoplastics, Ophthalmic Pathology
  - Each subspecialty committee is chaired by the subspecialty chief, who leads biannual meetings of their staff.

- **KEI Research Committee**
  - Chair and representatives from each site and subspecialty meet monthly to adjudicate research proposals and award funds.

- **Promotions Committee**
  - Meets weekly from September to December to adjudicate and support those applying for promotion. Meets on an ad hoc basis during the second part of the academic year.

- **TORIC Committee**
  - Meets monthly to plan the Toronto Ophthalmology Residency Introductory Course.

- **EDI Committee**
  - Meets on an ad hoc basis to plan EDI sessions and education.

- **Global Health Committee**
  - Meets on an ad hoc basis to plan and oversee global health endeavors.

Other ad hoc committees come together for specific functions, such as the Resident Selection Committee, which convenes regularly from December to March to review, interview, adjudicate, and select new residents for the coming academic year. Another is the Practice Plan Committee, which meets to review the amount of support for research and other academic endeavors from all academic hospital sites. The Strategic Planning Committee meets to review the strategic plans of the Department and ensure that the DOVS is on track to achieve its goals. The Quality Committee meets regularly in the second academic term to review all the QA projects and prepare quality rounds that the Department holds on an annual basis. Each of our symposia has a planning committee which meets regularly over the 1.5 years prior to the symposium to plan the event, including inviting international speakers and planning all programming. The Vice-Chair,
Education, strikes and is a member of these committees, and the Executive Committee assigns the chair or co-chairs for each symposium.

2.2 Administrative Support

The university administrative support is comprised of a business officer (Elizabeth den Hartog), a UME/PGME Program Administrator (Sandra Gauci), an Executive Assistant to the Chair (Ashiya Chawala), a Finance and Media Administrator (Maggie Lam) and a Fellowship, Faculty Development, Global Health, and EDI Administrator (Julie Thompson). To coordinate the teaching and trainee schedules, each affiliated hospital site has an education administrator who supports all education programming.

The Department works closely with the Temerty Faculty of Medicine administrative support to coordinate undergraduate electives and clerkship rotations, as well as undergraduate education and all residency/fellowship learning. The DOVS also works closely with TFoM administration in CPD to plan and coordinate symposia each year.

The Department will be converting the business officer position into a managerial position, Manager of Administration, over the next year. This will be a senior staff member in the DOVS with responsibility for ensuring highly efficient and impactful administration of operational, financial, technical, and human resources. This role will also involve facilities planning and coordination in support of the teaching and research activities of the Department.

2.3 New Faculty Appointments, 2012-2021

Between 2012 and 2021, there were 61 new recruits to the DOVS (Figure 7). The KEI and KVRC have proven to be instrumental to the recruitment of academic full-time faculty, as there is little space at the fully affiliated academic hospitals for new faculty. This has allowed the DOVS to recruit two new geographic full-time (GFT) neuro-ophthalmologists, a medical retina specialist, a surgical retina specialist, a uveitis specialist, and two glaucoma specialists, as well as three comprehensive ophthalmologists. Recruitment of full-time academic staff at the KEI has allowed for job sharing and end-of-career transition, which will be discussed later in the report.

The DOVS recognizes the importance of having comprehensive full-time academic ophthalmologists on faculty to drive research, education, and administration within the Department. As such, there is at least one full-time comprehensive ophthalmologist at four of the five fully affiliated sites. In addition, the current residency program director is a comprehensive ophthalmologist at Sunnybrook Health Sciences Centre (SHSC), and the associate program director who will eventually transition to program director is a comprehensive ophthalmologist at the KEI. Both these individuals prioritize resident medical/surgical education and recognize the importance of resident exposure to comprehensive and subspecialty training.
Part-time and adjunct faculty recruitment has been important particularly with respect to UGME and educating medical students. The University of Toronto is one of the few medical schools in Canada that still retains a formal clerkship rotation in ophthalmology. The DOVS feels that this program makes an important contribution in creating a well-rounded physician upon graduation, providing unique and valuable differentiation as one of Canada’s premier medical education institutions.

The DOVS has been successful in status-only research scientist recruitment, primarily in partnership with the hospital research institutes. Through the Donald K. Johnson Eye Institute and the Krembil Research Institute, there has been recruitment of three basic scientists and two clinician scientists. In addition, there has been recruitment of one clinician scientist and one basic scientist through the Sunnybrook Research Institute.

Over the last decade, the DOVS has refined its internal processes for recruitment to ensure that the highest degree of fairness and transparency are maintained when hiring new faculty. A Recruitment Committee is now mandatory to recruit any faculty to a full-time position at any hospital or the KEI, ensuring that hiring practices remain completely objective and only the best candidates are appointed to the Department.

New Academic Appointments

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<tr>
<th>Year</th>
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<th>Part-Time</th>
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<th>Status Only Researcher</th>
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<td>2</td>
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</tbody>
</table>

Figure 7. New Appointments, 2012-2021.

Each recruitment committee requires the Director of EDI and Vice-Chair, Faculty Development, EDI, and Global Health, to be present on the committee. Efforts are made to ensure there is gender and ethnic diversity on the committee. Each committee discusses EDI and unconscious bias prior to the selection process. The Recruitment Committee is advisory to the Executive Committee, which makes final decisions regarding appointments. According to the TFoM guidelines, positions are advertised nationally and internationally.
2.4 Faculty Reviews and Reappointments

Faculty members are subject to regular annual reviews. Each full-time faculty member has an annual review with the Chair of the Department, as well as the Hospital Chief. These sessions review academic deliverables in research, education, clinical work, leadership, and administration. The annual review also allows for positive feedback and recognition to be given directly to the faculty member, and presents the opportunity for a discrete, face-to-face discussion between the faculty member and the Chief and Chair regarding any issues or problems. Surgical teaching is regularly monitored with feedback provided to each surgeon every six months. Feedback from our trainees at all levels is reviewed at the appropriate educational committee and taken forward to the Executive Committee.

2.5 Faculty Development and Leadership

The Department has come to recognize the importance of faculty development and, indeed, this is one of the strategic priorities outlined in the DOVS Strategic Plan. A Vice-Chair, Faculty Development, Equity, Diversity, and Global Health, was appointed in 2018, and a Director of EDI and Director of Global Health were appointed in 2019. This team has driven many initiatives to enhance faculty development and well-being.

2.5.1 Mentorship and Wellness at the DOVS

One initiative that the Vice-Chair, Faculty Development, Global Health, and EDI, has instituted is a mentorship program where all faculty select a mentor they meet with on a biannual basis at minimum. These informal liaisons allow for discussion regarding work/life balance, strategies for success in academic medicine, and strategies for minimizing stress and coping with the difficulties encountered in an academic career. The mentorship program has more recently been expanded to trainees as well, and allows them to express any difficulties they are encountering and garner advice from a trusted faculty member, along with perspective on career options and directions.

In addition to creating valuable relationships that assist in navigating the heavy demands of medicine, the mentorship program also serves as an informal leadership training process. New and emerging leaders receive more formal leadership training through courses offered at the University of Toronto and the university-affiliated hospitals, but these discussions serve as peripheral opportunities to focus on specific areas of development with established leaders on a one-to-one basis. Regarding formal leadership training, the NEAL (New and Evolving Academic Leaders) program is one such course offered through the TFoM. It is an excellent program developed to enhance competency in the four practices of academic leadership: (1) intrapersonal, (2) interpersonal, (3) organizational, and (4) system. All new and emerging leaders at the DOVS are encouraged to enroll in this program. The Department covers all costs for the course and ensures that the individual is given the time to complete the program.
These faculty development initiatives have served to keep personnel at the DOVS motivated, connected with senior leadership, and productive. Individuals are enabled to possess a clear view of their career trajectories, enabling them to immerse themselves fully in their work-at-hand, resting assured that they are constantly moving towards their long-term goals. While there is always room for more growth to be achieved in this area, the Department has taken a significant stand on the importance of education and nurturing faculty to ensure high morale and mental well-being. These positive aspects in turn fuel greater productivity, but it should be noted that these drivers are not viewed as means to an end. Only by being truly invested in the individual and personal success of its staff has the Department been able to produce successful outcomes in these activities. The DOVS is exceptionally proud of the strides made in this area over the last 10 years.

Below is a sample of some other recent efforts that have been made to support faculty development and leadership at the DOVS:

- In the last few years, a series of evening symposia and workshops were instituted for faculty to allow for the discussion of difficulties encountered at every stage of an academic clinical career and how to deal with these difficulties. For example, one gathering focused exclusively on the transition to retirement at the end of a career—both the pearls and pitfalls associated with this transition.
- The Department has also organized workshops to teach faculty how to prepare a teaching dossier and package for academic promotion.
- An evening was held for the entire Department discussing the unique issues women experience in medicine and academic ophthalmology.
- Women in Ophthalmology sessions occur on a regular basis; these sessions occur sometimes with only women and other times open to all membership to build male allies.
- A wellness discussion evening focusing on physician stress and burnout, and ways to deal with it.

In 2017, Dr. Agnes Wong, our previous Vice Chair of Wellness and previous Chief at HSC, began to focus her interests on mindfulness, compassion and wellness. She is now an ordained Buddhist monk and regularly offers mindfulness training sessions to our faculty. In her most recent endeavor (which will begin in January 2022), she is co-facilitating a mindfulness and compassion course consisting of 5-weekend modules spread over 9 months. The course provides guidance to cultivate mindfulness, compassion, and self-compassion. It also covers essential topics, including systems thinking, non-violent communication, and integrity, that are critical for our well-being as we work in a highly complex healthcare environment. Dr. Wong has facilitated such courses for our national society as well as for all the ophthalmologists in Ontario free of charge.
2.6 Gender and Diversity at the DOVS

Almost one-third of the DOVS faculty (29.8%) are women. Of the 51 female staff, eight are full professors (25% of total), five are associate professors, 12 are assistant professors, and 26 are lecturers. Viewing by commitment, 15 are full-time (30% of total), 17 are part-time, 14 are clinical adjunct faculty, four are status only, and there is one epidemiologist. In addition, two out of five vice-chair roles in the Department and three out of eight subspecialty service chief roles are currently filled by women.

Amongst the DOVS trainees, the proportions present a greater balance, demonstrating the continued push towards greater equality by the Department and the broader medical field overall. Out of 30 residents, 10 are female (33%), and out of 40 clinical fellows, 18 are female (45%).

Based on recent survey data (Kletke SN, et al. *Can J Ophthal.* 2021; 56:203-205), the proportion of women in ophthalmology in Canada has been increasing, from 3.1% in 1970 to 20.5% in 2011. With female representation making up more than 30% of our faculty, the Department’s gender diversity statistics rank far above the national average, with similar proportions of women attaining the rank of full professor and filling full-time and leadership roles. As established national ophthalmology leaders in the EDI field, the Department views efforts towards gender diversity and EDI as a continuous initiative. While the DOVS certainly takes pride in the progress it has made so far, the Department’s goal is to create an environment of equity among gender, ethnic, and cultural groups, not just to lead in statistical measures. The Department will continue to view creating environments of equal opportunity as a critical activity, as well as a key effort to ensure the greatest possible talent is drawn to the DOVS.

2.7 New Leadership Appointments in the Department

Since 2012, there have been 5 changes in the Ophthalmologist-in-Chief position at the DOVS-affiliated hospitals:

- Dr. David Wong assumed the Ophthalmologist-in-Chief position at Unity Health St. Michael’s Hospital in 2015.
- Dr. David Yan became Ophthalmologist-in-Chief at Sinai Health in 2017.
- Dr. Asim Ali took on the position of Ophthalmologist-in-Chief at the Hospital for Sick Children in 2018.
- Dr. Ken Eng became the Ophthalmologist-in-Chief at SHSC in 2021.
- Dr. Efrem Mandelcorn became the new Ophthalmologist-in-Chief at UHN in 2021.

Within the Department, the following new appointments were made:

- Dr. Allan Slomovic became the Vice-Chair, Education, in 2015.
- Dr. Valerie Wallace became Vice Chair, Basic Research, in 2017.
- Dr. Radha Kohly became the Vice Chair, Faculty Development, Equity, Diversity, and Global Health, in 2018.
- Dr. Rajeev Muni became the Vice-Chair, Clinical Research, in 2018.
• Dr. Nupura Bakshi was appointed Director of EDI in 2018.
• Dr. Helen Dimaras was appointed Director of Global Health in 2019.
• Dr. Alex Kaplan was appointed Director of Alumni Affairs in 2018.
• Dr. Yeni Yucel was appointed Chair of the Departmental Promotions Committee in 2019.
• Dr. Edsel Ing was appointed as the Chief of the Neuro-ophthalmology Service in 2019.
• Dr. Dan DeAngelis was appointed as the Chief of the Ophthalmic Plastic and Reconstructive Service in 2018.
• Dr. Neera Singal was appointed as the Chief of the Cornea and Anterior Segment Service in 2019.

2.8 Promotions

The DOVS has a strong overall success rate for faculty members applying for promotion. The membership of the Promotions Committee is diverse, with representatives covering the full spectrum of clinical full-time, part-time, and adjunct appointments/researchers. There is an annual town hall regarding preparing the promotions application as well as focused mentoring to ensure the promotions dossiers are in optimal order before going forward to the decanal committee. The focused mentoring often involves several mentors and the applicant, and many hours are dedicated to this process.

From 2012 to 2021, the Department conducted 28 successful senior promotions (14 in the first five years and 14 in the second five-year period), including 13 promotions among the Department’s full-time faculty (Figure 8).

Since 2012, the number of full professors in the Department has increased by 11 and the number of associate professors has increased by 17. Academic promotion is recognized in our newsletters and year-end events, and a regular promotions event recognizing promotion to full professorship is held every 3 years for those promoted.
Senior Academic Promotions

<table>
<thead>
<tr>
<th>Year</th>
<th>Clinical</th>
<th>Other</th>
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</thead>
<tbody>
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<td>Full-Time</td>
<td>Part-Time</td>
<td>Adjunct</td>
</tr>
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<tr>
<td>2021-2022</td>
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</tbody>
</table>

Figure 8. Senior Academic Promotions.

Another indicator of the quality of our faculty is their involvement in leadership amongst the ophthalmology and greater medical community. Several of our members have been elected to serve in positions of leadership in national and international societies. Below is a (non-comprehensive) list:

- Sherif El-Defrawy: President, Association of Canadian University Professors of Ophthalmology, 2013
- Allan Slomovic: President, Canadian Ophthalmological Society, 2014
- Neeru Gupta: Vice President, International Council of Ophthalmology and Officer of External Affairs, Executive Board of the World Glaucoma Association, 2017
- Edsel Ing: Editor in Chief, Oculoplastics, Strabismus and Neuro-Ophthalmology. 2017
- Yvonne Buys: President, Canadian Ophthalmological Society, 2018
- Neeru Gupta: President-Elect, World Glaucoma Association, 2018
- Rajeev Muni: Editorial Board, Ophthalmology Science, 2021
# 3. Recognition

## 3.1 External Awards (Selected)

In addition to achieving strategic milestones set as a Department, the DOVS has also seen its individual faculty members prosper. Over the last 10 years, the Department’s faculty have continued developing personal reputations as some of the greatest achievers in ophthalmology in Canada and on an international scale. Some of the most prestigious honors awarded to Department staff have been selected and presented below to showcase the impact the DOVS staff have on their local, national, and global community.

<table>
<thead>
<tr>
<th>Year</th>
<th>Award</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>Dr. Ike Ahmed ASCRS Binkhorst Medal, ASCRS</td>
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<tr>
<td></td>
<td>Dr. Brenda Gallie Appointed to the Order of Canada</td>
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<tr>
<td></td>
<td>Dr. Edsel Ing Excellence in Clinical Teaching Award, PARO</td>
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<tr>
<td></td>
<td>Dr. Molly Shoichet Women in Science Award, UNESCO</td>
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<td></td>
<td>Dr. Rand Simpson Lifetime Achievement Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. Myrna Lichter Innovator of the Year Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td>2015-2016</td>
<td>Dr. Elise Héon Franceschetti Medal, International Society of Genetic Eye Disease and Retinoblastoma</td>
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<tr>
<td></td>
<td>Dr. Gordon Squires Volunteer Award, Dean’s Alumni Awards</td>
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<tr>
<td>2016-2017</td>
<td>Dr. Samuel Markowitz Lifetime Achievement Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td>2017-2018</td>
<td>Dr. Ike Ahmed Award of Distinction (Innovator of the Year), Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. John Fowler Excellence for Educational Leadership in Ophthalmology Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. Sherif El-Defrawy Regional Mentor of the Year Award, Royal College of Physicians and Surgeons of Canada</td>
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<tr>
<td>2018-2019</td>
<td>Dr. Graham Trope Lifetime Achievement Award, Canadian Ophthalmological Society</td>
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<tr>
<td></td>
<td>The President’s Award, Canadian Glaucoma Society</td>
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<tr>
<td></td>
<td>Dr. Yvonne Buys Champions for Change Award, Women in Ophthalmology</td>
<td></td>
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<tr>
<td></td>
<td>Dr. Steve Arshinoff 100 Years of Change Century Medal, Canadian National Institute for the Blind</td>
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<tr>
<td></td>
<td>Dr. Ike Ahmed Clinical Innovator Award, American Academy of Ophthalmology</td>
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<tr>
<td></td>
<td>Dr. Rajeev Muni Innovator of the Year Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. Joseph Weinstock Lifetime Achievement Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. Rosa Braga-Mele Meritas Tabaret Award, University of Ottawa Alumni Association</td>
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<tr>
<td></td>
<td>Dr. Helen Dimaras Recognized as Leader in Global Health on Canadian Women in Global Health List, Canadian Society for International Health</td>
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<tr>
<td></td>
<td>Dr. Robert Pashby Lifetime Achievement Award, Canadian Society for Oculoplastic Surgery</td>
<td></td>
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<tr>
<td>2019-2020</td>
<td>Dr. Raymond Buncic Appointed to the Order of Canada</td>
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<td></td>
<td>Dr. Asim Ali Innovator of the Year Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
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<td>Dr. David Smith Ontario Lifetime Achievement Award, Eye Physicians and Surgeons of Ontario</td>
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<td>Dr. Kylen McReelis Ontario Medical Association Section Award, Eye Physicians and Surgeons of Ontario</td>
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<tr>
<td></td>
<td>Dr. Edsel Ing W.T. Aikins Award - Excellence in Individual Teaching Performance, University of Toronto</td>
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</tr>
</tbody>
</table>
3.2 Departmental Awards

The DOVS has built a culture of not just supporting and encouraging its faculty towards academic and clinical accomplishment, but of recognizing and celebrating that success. Celebration not only recognizes the excellence of our faculty and trainees, but also highlights how appreciated their efforts are. Faculty and trainee honours awarded to members of the DOVS are presented below (Figure 9).

#### Departmental Awards, 2012-2021

**BEST RESIDENT OVER 5 YEARS**
- 2012 Daniel Rootman
- 2013 Michael Wan
- 2014 Jennifer Calafati
- 2015 Theodore Christakis
- 2016 Hannah Chiu
- 2017 Panos Christakis
  - Jonathan Miceli
- 2018 Stephanie Low
- 2019 Stephanie Kletke
- 2020 Brian Ballios
- 2021 Amrit Rai

**CHIEF RESIDENT AWARD**
- 2012 Andrea Leung
- 2013 Chryssa McAlister
- 2014 Jennifer Calafati
- 2015 Joshua Manusow
  - Matthew Schlenker
- 2016 Cindy Lam
  - Patrick Yang
- 2017 Kay Lam
  - Amandeep Rai
- 2018 Stephanie Low
  - Stephan Ong Tone
- 2019 Reem AlNabulsi
- 2020 Brian Ballios
  - Alfred Basilious
- 2021 Bryon McKay
  - Samuel Minaker

**CHAIR’S AWARD**
- 2012 Elizabeth den Hartog
- 2019 Imran Jivraj

**MORRIS SHUSTERNMAN CME AWARD**
- 2012 Henry Kaplan
- 2013 Barry Sniderman
- 2014 Wing Chow Chan
  - Nancy Epstein
- 2015 John Fowler
- 2016 Wai-Ching Lam
- 2017 Catherine Birt
- 2018 John Fowler
- 2019 William Dixon
- 2020 Allan Slomovic
- 2021 John Lloyd
  - Amandeep Rai
## TORIC Awards

### Top TORIC Teachers Award

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<tr>
<th>Year</th>
<th>Winners</th>
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<tbody>
<tr>
<td>2014</td>
<td>Sherif El-Defrawy, Alex Levin, Allan Slomovic, Graham Trope, Agnes Wong</td>
</tr>
<tr>
<td>2015</td>
<td>Kashif Baig, Hall Chew, Sherif El-Defrawy, William Hodge, Stephen Kraft, Efrem Mandelcorn, Gary Miller, Neera Singal, Allan Slomovic, Graham Trope, Agnes Wong</td>
</tr>
<tr>
<td>2016</td>
<td>Sherif El-Defrawy, Hady Saheb, Stephen Kraft, Efrem Mandelcorn, Michael O'Connor, Ted Rabinovitch, Allan Slomovic, Raymond Stein, Graham Trope, Agnes Wong</td>
</tr>
<tr>
<td>2017</td>
<td>Hall Chew, Edward Margolin, Amandeep Rai, Arun Reginald, David Yan</td>
</tr>
<tr>
<td>2018</td>
<td>Efrem Mandelcorn, Michael O'Connor, Amandeep Rai, Michael Wan, Agnes Wong</td>
</tr>
<tr>
<td>2019</td>
<td>Jonathan Micieli, Rajeev Muni, Allan Slomovic, Ajoy Vincent, Agnes Wong</td>
</tr>
<tr>
<td>2020</td>
<td>Efrem Mandelcorn, Michael O'Connor, Graham Trope, Michael Wan, Agnes Wong</td>
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</table>

### Residents Awards to Faculty

<table>
<thead>
<tr>
<th>Year</th>
<th>Silver Needle Award</th>
<th>Resident Teaching Award</th>
<th>J.S. Crawford Teaching Award</th>
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<td>Catherine Birt</td>
<td>Agnes Wong</td>
</tr>
<tr>
<td>2013</td>
<td>David Yan</td>
<td>Hatem Krema</td>
<td>Nupura Bakshi</td>
</tr>
<tr>
<td>2014</td>
<td>Nupura Bakshi</td>
<td>Rajeev Muni</td>
<td>Sherif El-Defrawy</td>
</tr>
<tr>
<td>2015</td>
<td>Sherif El-Defrawy</td>
<td>Edward Margolin</td>
<td>Efrem Mandelcorn</td>
</tr>
<tr>
<td>2016</td>
<td>Rosa Braga-Mele</td>
<td>Sherif El-Defrawy</td>
<td>Rajeev Muni</td>
</tr>
<tr>
<td>2017</td>
<td>Rosa Braga-Mele</td>
<td>Gordon Squires</td>
<td>Edward Margolin</td>
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<tr>
<td>2018</td>
<td>Nupura Bakshi</td>
<td>Michael Wan</td>
<td>Rajeev Muni</td>
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<tr>
<td>2019</td>
<td>Paul Sanghera</td>
<td>Amandeep Rai</td>
<td>Asim Ali</td>
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<td>2020</td>
<td>Rosa Braga-Mele</td>
<td>Jonathan Micieli</td>
<td>Amandeep Rai</td>
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<tr>
<td>2021</td>
<td>Shaun Singer</td>
<td>Amandeep Rai</td>
<td>Michael Wan</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Millennium Award</th>
<th>J. D. Morin Award</th>
<th>Golden Suture Award</th>
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<td>Jeffrey Hurwitz</td>
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<td>2013</td>
<td>Wai-Ching Lam</td>
<td>Agnes Wong</td>
<td>Robert Pashby</td>
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<td>2014</td>
<td>David Yan</td>
<td>Gordon Squires</td>
<td>David Smith</td>
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<td>Shaun Singer</td>
<td>Hall Chew</td>
<td>Nancy Tucker</td>
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<tr>
<td>2016</td>
<td>David Yan</td>
<td>Shaun Singer</td>
<td>Nancy Tucker</td>
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<tr>
<td>2017</td>
<td>Rajeev Muni</td>
<td>Sherif El-Defrawy</td>
<td>Stephen Kraft</td>
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<td>2018</td>
<td>Hall Chew</td>
<td>Shaun Singer</td>
<td>Dan DeAngelis</td>
</tr>
<tr>
<td>2019</td>
<td>Sherif El-Defrawy</td>
<td>Radha Kohly</td>
<td>Kenneth Eng</td>
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<tr>
<td>2020</td>
<td>Shaun Singer</td>
<td>David Yan</td>
<td>Navdeep Nijhawan</td>
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<tr>
<td>2021</td>
<td>Hall Chew</td>
<td>Radha Kohly</td>
<td>David Yan</td>
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### BOS Award

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<td>2012</td>
<td>David Rootman</td>
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<td>2018</td>
<td>David Yan</td>
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### Research Day Awards

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<thead>
<tr>
<th>Year</th>
<th>Med. Student Prize</th>
<th>Alumni Prize</th>
<th>John Gaby Prize</th>
<th>Best Poster Award</th>
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</thead>
<tbody>
<tr>
<td>2012</td>
<td>Natalie Pankova</td>
<td>Talal Alabduljalil</td>
<td>Alejandro Lichtinger-Dondish</td>
<td>Rachel Leeder</td>
</tr>
<tr>
<td>2013</td>
<td>Krista Kelly</td>
<td>Matthew Schlenker</td>
<td>Roxane Hillier</td>
<td>Ken Olsen</td>
</tr>
<tr>
<td>2014</td>
<td>Yelin Yang</td>
<td>Hannah Chiu</td>
<td>Johanne Gonzalez-Rodriguez</td>
<td>Lee-Anne Khuu</td>
</tr>
<tr>
<td>2015</td>
<td>Michael Mak</td>
<td>Panos Christakis</td>
<td>Talal Alabduljalil</td>
<td>Nevena Vicic</td>
</tr>
<tr>
<td>2016</td>
<td>Alex Lai Chi Tam</td>
<td>Victoria Leung</td>
<td>Yael Chavez</td>
<td>Jonathan Micieli</td>
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<td>Shicheng Tony Jin</td>
<td>Stephanie Low</td>
<td>Alaa Al Ali</td>
<td>Yael Chavez</td>
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<tr>
<td>2018</td>
<td>Tina Feifeli</td>
<td>Brian Ballios</td>
<td>Avner Belkin</td>
<td>Austin Pereira</td>
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<td>Saba Samet</td>
<td>Brian Ballios</td>
<td>Sameh Soliman</td>
<td>Matthew-Mina Reyad</td>
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<tr>
<td>2020</td>
<td>John Liu</td>
<td>Marko Popovic</td>
<td>Riddhi Dharia</td>
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<td>Prem Nichani</td>
<td>Austin Pereira</td>
<td>Wei Wei Lee</td>
<td>Jovi Wong</td>
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### Hospital Awards

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<th>Year</th>
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<th>MSH - Dr. Sigmund Vaile Award</th>
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<td>Matthew Schlenker</td>
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<td>Vivian Yin</td>
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<td>Theodore Christakis</td>
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<td>Joshua Manusow</td>
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<td>Alexander Kaplan</td>
<td>Hannah Chiu</td>
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<td>Alexander Kaplan</td>
<td>Kay Lam</td>
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<td>Stephanie Low</td>
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<td>Lili Tong</td>
<td>Angela Zhang</td>
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<td>2021</td>
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<td>Aaron Chan</td>
<td>Bryon McKay</td>
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<tr>
<th>Year</th>
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<th>KEI - KEI Award</th>
<th>TWH - Lim Family Memorial Award</th>
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<td>Michael Richards</td>
<td>Vivian Yin</td>
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<td>Patrick Yang</td>
<td>Michael Richards</td>
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<td>Matthew Schlenker</td>
<td>Dominik Podbielski</td>
<td>Ravinder Dennis Bhui</td>
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<td>Graham Belovay</td>
<td>Theodore Christakis</td>
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<td>Abhishek Sharma</td>
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<td>Victoria Leung</td>
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<td>Brian Ballios</td>
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<td>2021</td>
<td>Jason Kwok</td>
<td>Armit Rai</td>
<td>Michael Mimouni</td>
</tr>
</tbody>
</table>
Figure 9: Department Awards 2012-2021

Dr. Clive Mortimer Executive Awards

**UNDERGRADUATE**
TEACHING

- 2012 John Fowler
- 2013 Kenneth Eng
- 2014 Myrna Lichter
- 2015 Filiberto Altomare
- 2016 William Dixon
- 2017 John Fowler
- 2018 Daniel Weisbrod
- 2019 Kathy Cao
- 2020 Mark Mandell
- 2021 Hall Chew

**POSTGRADUATE**
TEACHING

- 2012 Gordon Squires
- 2013 Wai-Ching Lam
- 2014 Clara Chan
- 2015 David Yan
- 2016 Rajeev Muni
- 2017 Hall Chew
- 2018 David Yan
- 2019 Amandeep Rai
- 2020 Allan Slomovic
- 2021 Panos Christakis

**FELLOWSHIP**
TEACHING

- 2013 Hugh McGowan
- 2015 David Wong
- 2016 Wai-Ching Lam
- 2017 David Chow
- 2018 Asim Ali
- 2019 John Lloyd
- 2020 Catherine Birt
- 2021 Sherif El-Defrawy

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**HSC**

**DR. RAY BUNCIC HUMANITARIAN AWARD**

- 2013 Robert Pashby
- 2016 Wai-Ching Lam
- 2017 Mano Chandrakumar

**HSC - DR. ROBERT PASHBY AWARD**

- 2015 Hermina Strungaru
- 2016 Jonathan Micieli
- 2017 Alaa Al Ali
- 2018 Mahmood Showail
- 2019 Benjamin Jastrzembski
- 2020 Kate Leahy
- 2021 Sam Gurney

**HSC - THE CHAN AWARD FOR EXCELLENCE IN PAEDIATRIC OPHTHALMOLOGY**

- 2012 Joshua Manusow
- 2013 Joshua Manusow
- 2014 Alaa Al Ali
- 2015 Hannah Chiu
- 2015 Panos Christakis
- 2016 Crystal Cheung

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4. Education

Over the last 10 years, there has been an orchestrated effort to strengthen the Department’s undergraduate and post-graduate medical education (including fellowship training and continuing professional development). This includes the decision made in 2015 to move the administrative offices of the DOVS to the KEI and establish a Faculty Conference Centre at the KEI to house weekly Grand Rounds. Much of the impetus for changes over the last decade came from our Strategic Plan and from suggestions made during our external reviews in 2011 and 2017. Over the course of the last five years, all resident lectures and education sessions occur at the KEI Faculty Conference Centre (since the pandemic, our Grand Rounds are held virtually over Zoom). The resident dedicated educational half-day occurs Friday mornings; previously, when it took place Friday afternoons, many residents would not be able to complete their morning clinical duties and arrive on time. This often meant a start time of middle of the afternoon and the residents’ attention span sometimes waned, given the timeslot of the last block of the week. Residents now have no call coverage duties until the morning teaching sessions are completed at noon on Fridays. Moving Grand Rounds to Friday mornings from Thursday evenings has resulted in regular weekly Grand Rounds beginning at 7:30am with little difficulties for the residents to attend, as they have no clinical duties before the Grand Rounds. Prompt start of the half-day educational session immediately after rounds ensures full attendance. The new expanded Surgical Skills Lab at KEI is where the surgical skills course is administered and it is a resource the residents can use at any time to work on specific skills. There is a conference area in this lab to facilitate teaching sessions and allow space for the trainees to work. The Surgical Skills Lab is also used by fellowship programs to teach their fellows. Having the administration offices centralized, along with a conference room, has allowed the residency program director to have an office there and have access to the program assistant, who has an office in the same space. Residency Training Program committee meetings take place in this conference room, as does the Undergraduate Site Directors’ and Fellowship Committee meetings (of course, with COVID, these meetings are all virtual).

4.1 Undergraduate Medical Education

The DOVS undergraduate medical education office coordinates a variety of ophthalmology-related programs. The portfolio of programs is headed by the Director of Undergraduate Education and is supported by the full-time Education Coordinator, who works in tandem with the education coordinators in each of the hospital Departments.

Undergraduate teaching in ophthalmology is part of the TFoM Doctor of Medicine (MD) program and is a priority of the Department. Ophthalmology is a component in both the pre-clerkship and clerkship curriculum.
4.1.1 Pre-Clerkship (Year 1 and Year 2):

In 2017, the pre-clerkship portion of the curriculum was revamped. The new curriculum replaced the historical educational style of the ophthalmology course for medical students, moving from a predominantly lecture-based curriculum to an inverted classroom model focusing on self-directed learning. The new curriculum provides students with a framework to understand the anatomy and physiology of the eye, and the diagnoses and management of ophthalmological diseases. There is an emphasis on case-based learning (CBL). The course is run during Week 50 and 51 of Foundations, in Year 2. It is comprised of six hours of online preparatory material, two three-hour interactive lectures, one anatomy dissection lab session, and two case-based learning sessions that are both student-led and faculty-led. There are also two practical sessions (Integrated Clinical Experience, ICE), one on neuro-ophthalmology and another on the red eye/slit lamp skills that take place during the medical student’s pre-clerkship years.

Lectures

There are still six hours of lectures that the undergraduate medical students receive. The first three-hour block is an Anterior Segment lecture, held during Week 50 of the curriculum, and the second three-hour block is a Posterior Segment lecture, held during Week 51.

Anatomy Dissection Lab

There is one anatomy dissection lab during the two-week ophthalmology curriculum. Both human eyes and sheep eyes are utilized for this lab. The medical students get the opportunity to each do a dissection to better understand the anatomy and the relationships between the different structures within the eye.

Case-Based Learning (CBL) Sessions

Case-based learning is used to guide student learning following each lecture in Weeks 50 and 51. Cases are written as clinical problems that enable students to apply the newly acquired knowledge to a practical scenario. There is a tutor guide that is used for this session. Content of the clinical problem is relevant to the associated lecture; namely, an anterior segment problem in Week 50 and a posterior segment problem in Week 51. Students are in small groups and each session has one faculty tutor. Sessions run 2.5 hours in length.

Integrated Clinical Experience (ICE) Sessions

There are two ICE sessions offered in Foundations Year 2. These sessions have replaced the ASCM sessions in the traditional curriculum. ICE-1 is a neuro-ophthalmology clinical skills session. The session is interactive and there is a great deal of two-way communication. The neuro-ophthalmology session covers a wide variety of topics, including the neuro-ophthalmic exam, RAPD, anisocoria, INO, nystagmus, cranial nerve palsies, and visual field defects. ICE-2 is a clinical skills session that focuses primarily on ocular history, examination of the anterior segment using the slit lamp, and fundoscopy. Each session has one assigned faculty lead.
4.1.2 Clerkship (Year 3 and Year 4):

Clerkship spans Years Three and Four of medical school, and the students spend most their educational time at their respective academy or hospital.

Year 3: Core Clerkship

The core ophthalmology rotation is done in Year Three of clerkship. Ophthalmology is part of an eight-week block that includes Anesthesia, ENT, and Emergency Medicine. The one-week ophthalmology rotation starts with a half-day orientation session delivered at Kensington Eye Institute. This is a four-hour interactive session that reviews basic and clinical ophthalmology, the ophthalmic patient history and exam, as well as clinical skills. There are three days of clinic and a half-day in the operating room. On Friday morning, students take part in an interactive Pediatric Ophthalmology seminar delivered at the Hospital for Sick Children. Friday afternoon is usually reserved for self-study. It should be noted that all the interactive sessions are small group sessions with no more than eight clinical clerks present. The clinical experience is a one-on-one experience with the faculty member.

At the end of the eight-week block, there is a mastery exercise comprised of both MCQs and SAQs that requires a score of 60% or greater in order to pass the rotation. For this rotation, students are divided amongst five main sites, including:

- Toronto Western Hospital
- Mt. Sinai Hospital
- St. Michael’s Hospital
- Sunnybrook Health Sciences Centre
- Mississauga Academy of Medicine

There are two "satellite" sites that also accept core clerkship students in ophthalmology:

- Michael Garron Hospital
- St. Joseph’s Healthcare Centre (Etobicoke)

As clerkship time in Ophthalmology is limited, the teaching is concentrated. Therefore, it is recommended that students review the material covered during the pre-clerkship curriculum (Weeks 50 and 51). Most of the material in the course syllabus will reinforce the material learned during these weeks. It is also recommended that students review the material from ICE sessions in Ophthalmology, as these sessions were designed to provide the basic ocular examination skills on which the clerkship course will build.

Students are expected to independently review the course material found in the course syllabus, which is accessible via a unique online link that students have access to for 8 weeks. There are also self-study problem-based learning (PBL) cases on the course portal. Sections to be reviewed include: Cornea and Anterior Segment (the Red Eye), Lens and Optics, Glaucoma, Retina, Uveitis and Systemic Diseases, Neuro-ophthalmology, Oculoplastics, Pediatric Ophthalmology and Strabismus, and Ocular Emergencies and Trauma.
In clinic, students are responsible for examining patients, which involves taking a history and performing a relevant ocular examination, as well as formulating a differential diagnosis and plan of management. All patients seen in the clinic will be reviewed and discussed by an ophthalmology faculty member (or fellow or resident).

**Clerkship Course Objectives**

By the end of Ophthalmology Clerkship, the clinical clerk will demonstrate the foundation of knowledge, skills, and attitudes necessary for the practice of Ophthalmology from the perspective of the primary care physician.

Objectives are grouped under (A) General Competencies and (B) Educational Core Objectives.

(A) General Competencies:
- Medical expert/skilled clinical decision maker
- Communicator/doctor-patient relationship
- Collaborator
- Manager
- Health advocate/community resources
- Scholar
- Professional

(B) Educational Core Objectives:

By the end of the Ophthalmology clerkship rotation, the student should be able to demonstrate basic proficiency in the following skills:

1. **Directed ocular history:**
   - Elicit and characterize the chief complaint utilizing an understanding of the differential diagnosis and symptoms for common problems including visual loss, the red eye, and ocular trauma.
   - Extract pertinent information from:
     - Past medical history, including surgery and trauma
     - Family history of amblyopia, strabismus, glaucoma, and retinal detachment
     - Medications with possible ocular effects and toxicology
     - Review of systems

2. **Clinical techniques:**
   - Visual acuity measurement, visual fields evaluation, pupil exam, extraocular muscle evaluation, external ocular exam, slit lamp exam, IOP measurement, ophthalmoscopy

3. **Technical skills:**
   - Eyelid eversion
   - Application of an effective eye patch

**Year 4: Transition to Residency**

Clerkship in Year Four includes 12 weeks of elective time before the students enter the final course of medical school, called Transition to Residency. In this course, there is time designated for electives. The DOVS offers four-week ophthalmology electives. Finally,
towards the end of Year Four of medical school, there are review lectures during Fusion Week to prepare the students for their Medical Council of Canada Qualifying Examination (MCCQE), including a one-hour ophthalmology review lecture. Ophthalmology electives at the teaching hospitals are also available in Year Four of the MD program.

In response to suggestions by outside reviewers, changes have been made to our undergraduate medical school curriculum over the past ten years. The response from faculty and students to recent changes has been largely positive. In order to ensure that there is no variability in teaching quality between clinical sites and in order to enhance our undergraduate teaching, the following changes were implemented in 2017:

a) The undergraduate teaching committee, comprised of the undergraduate site leads, meets on a regular basis to review teaching assessments and strategies to enhance and standardize undergraduate teaching.

b) Feedback to each teacher at each hospital site is given based on student evaluations, specifying suggestions on how their undergraduate teaching can be improved upon.

c) As mentioned above, standardized half-day teaching, both didactic and practical, is given to each cohort of medical students on the first day of their weekly rotation in the ophthalmology clinic. This not only standardizes and reviews the knowledge base required for the clinic, but also acts as a clinical skills teaching session to standardize their abilities to utilize the instruments and equipment required to function well in the clinic. Student rotations have been revamped to provide more didactic and interactive teaching, one-on-one teaching of clinical skills, and rotation through a variety of clinics and at least half a day in surgery.

d) The DOVS has begun to explore new modalities of undergraduate education, including Internet-based modules and video-based learning that will be available in the next few months. In addition, several educational modules are available on the Departmental website.

### 4.2 Postgraduate Medical Education

The DOVS has one of the largest postgraduate residency training programs in Canada, with approximately 30 ophthalmology residents in total. It is a direct entry, five-year program following the RCPSCs training scheme. A transition to Competence By Design (CBD) will take place beginning in 2023. There are four entry positions annually through the Canadian Residency Matching Service (CaRMS), as well as one to three positions for international medical graduates and/or foreign-trained medical graduates. As of July 1, 2021, there are 30 residents in our program, 20 of whom are Canadian medical graduates, and 10 of whom are international trainees.

The backbone of postgraduate education is the dedicated Program Director and their administrative assistant. Dr. John Lloyd, the current Residency Program Director, has demonstrated exceptional leadership and dedication in ensuring the program functions optimally. The Associate Program Director, Dr. Amandeep Rai, demonstrates an
enthusiasm for the training program and new ideas as he prepares to take over as program director in July of 2022. Dr. Rai, in his current role, has already demonstrated excellent leadership, and has the trust and the confidence of the residents in the program. The Residency Training Committee meets monthly to review all aspects of postgraduate education, and make appropriate recommendations and changes. The Postgraduate Committee has representation from all the hospitals in a variety of subspecialties, as well as resident representation from each postgraduate year of residency. This representation of residents on the committee ensures that they have a strong voice in the training program.

The University of Toronto recently underwent a regular RCPSC review of all of their PGME programs, including DOVS, on November 23, 2020. The Department received full accreditation, with the next scheduled review in the usual seven years.

4.2.1 Residency Program Curriculum

PGY-1

The PGY-1 year is designed to meet the requirements of the RCPSC to prepare the applicant for the Medical Council of Canada Qualifying Examinations Part II. Upon acceptance into the Ophthalmology Residency Program, the PGY-1 resident is seconded to other medical departments in the TFoM for training. During this time, PGY-1’s attend our Friday morning Grand Rounds and resident teaching rounds. They have training opportunities in plastic surgery, ENT, and neurosurgery. They also do a mandatory rotation in pediatrics on the Clinical Teaching Unit (CTU).

The first year of training is a general year, but is skewed to ophthalmology rotations and programs. During PGY-1, residents complete a 6-week basic science program in ophthalmology called the Toronto Ophthalmology Residency Introductory Course (TORIC). The program involves didactic lectures with slide presentations, wet labs, clinical skills education sessions, and dissection sessions. This course is attended by all the ophthalmology residents from all across Canada, as well as some international programs. Plans are underway for a review course for senior residents as well.

PGY-2 and 3 (Junior Residency)

During PGY-2 and 3, residents rotate through each of the five teaching hospitals and KEI, with an eye towards acquiring a solid foundation in the basic science and clinical aspects of medical and surgical ophthalmology, including ophthalmic emergencies and some subspecialty work. PGY-2 residents complete four-month rotations in general eye clinics, which involve exposure to all areas of ophthalmology and allow development of core ophthalmic knowledge and skills. Residents in PGY-3 complete two-month blocks of "vertical" medical and surgical ophthalmology rotations, with exposure to each of the subspecialty disciplines, including cornea/external ocular diseases, retina/vitreous, glaucoma, neuro-ophthalmology, and oculoplastics. They also complete a four-month rotation in pediatric ophthalmology at the Hospital for Sick Children.
A formalized surgical training curriculum was developed by Dr. Clara Chan and instituted into the resident education program in 2013. This program is held in the Surgical Skills Lab, begins in the PGY-2, and includes instruction on basic suture technique, scleral buckle suturing, basic cataract wound and suturing, basic plastics suturing, basic trabeculectomy techniques, and introduction to phacoemulsification, and assignments on the eye surgical simulator.

In PGY-3 and PGY-4, residents delve more deeply into each subspecialty, with vertical rotations and a period of time spent at the Hospital for Sick Children. Surgical skills are continued, with instruction on microscopes, instrumentation, suturing, trauma surgery, trabeculectomy, pars plana vitrectomy, strabismus suturing, and keratoplasty techniques.

**PGY-4 and PGY-5 (Senior Residency)**

Senior residents rotate through each of the five teaching hospitals and KEI. The emphasis during this period of training is on perfecting clinical skills in the general and subspecialty areas of ophthalmology, and to provide a solid foundation in all aspects of surgical ophthalmology. PGY-4 and 5 residents are primarily involved in surgical rotations, with a significant amount of time spent at KEI, where the majority of cataract and glaucoma surgical instruction occurs.

A "longitudinal" eight-month rotation in cataract surgery has been created at KEI. This rotation is "paired" with eight months of placements at the four adult "base" hospitals (two months each at Sunnybrook, HSC, Toronto Western Hospital, Mt. Sinai Hospital, and St. Michael's Hospital). Residents spend half their time at KEI and the other half at the adult base hospitals. The remaining four months of the year occur at the HSC, focusing on pediatric eye surgery. Residents will still spend some surgical time at KEI while at HSC.

PGY-5 residents have a flexible year that is designed to begin emulating the transition to practice year, which will be part of the new Royal College Competence by Design framework. Highlights of this year include involvement in a resident-run "cataract clinic" providing all aspects of care to cataract surgery patients, including pre- and post-operative management, and transition to a "senior back-up" on-call schedule. This year includes a longitudinal experience in glaucoma surgery at Mt. Sinai/KEI, as well as considerable elective and Royal College study time.

In addition, every senior resident performs an international elective abroad in the developing world and is strongly encouraged to complete a community elective in order to see community practice firsthand (unfortunately, with the pandemic, the international electives are on hold).

**Research**

Resident research is actively promoted within the program. Each resident is expected to complete one prospective research project during their residency. Dr. Matt Schlenker is the Director of Resident Research, and meets with each resident to review their research project and aid in planning the methods and data analysis. This project must be completed
by the end of training and is presented at the Departmental annual "Resident Research Day" in June.

Residents are also expected to complete one Quality Assurance (QA) project during the PGY-4 year. Residents receive lectures and seminars on quality assurance and have close supervision for their quality project. All quality projects are presented at a special Grand Rounds in the latter half of the academic year.

Residents attend weekly research rounds, presented by local, national, and international research scientists, and receive lectures in critical appraisal of the research literature and clinical epidemiology. Residents are supported by the Department to present their research at national and international meetings, and are given protected time for their research endeavours. Some residents will decide that they would like to pursue an academic career and would like to attain a graduate research degree. The Department has supported these residents in obtaining a Master's or PhD during their residencies through the Clinician Investigator Program at the TFoM. Dr. Tina Felfeli, one of our current residents, is enrolled in the PhD program in Epidemiology. For residents who wish to make research a significant part of their career and want to continue research during their residency training, opportunities exist for obtaining research funding, and initiating and executing on research projects concurrently while training. Another of our current residents, Dr. Jovi Wong, who has a PhD, is active in several research projects concurrently with her training and has received funding in support of her research. Dr. Marko Popovic, another resident who is very interested in a career as a clinician researcher, is doing his Master's concurrently, while also remaining involved in multiple research projects. The Program Director and committee are very attentive to our residents who are doing a significant amount of concurrent research in order to ensure that appropriate attention and time is dedicated to the clinical residency training for these individuals, as this is the priority during these years.

Seminars
A dedicated academic half-day is reserved on Friday morning for core resident lectures (9:00 am to 12:00 pm) given by local faculty and visiting professors. The educational curriculum of the teaching sessions is based on the American Academy Basic and Clinical Science manuals, but there are also lectures on ethics, practice management and initiation, politics in medicine, advocacy and self regulation, EDI, research methodology, and wellness. City-wide Grand Rounds (often with visiting professors) are held on Friday morning (7:30 am to 8:30 am) attracting world-class lecturers to the University of Toronto. In addition, there are journal clubs, subspecialty rounds, small group teaching sessions, and a resident surgical teaching course using state-of-the-art equipment.

Training Sites
The Department of Ophthalmology and Vision Sciences at the University of Toronto provides a fully integrated, comprehensive postgraduate training program. Residents rotate through five fully affiliated teaching hospitals and 1 IHF:
- The Toronto Western Hospital, University Health Network
Much of the surgical teaching now occurs at the Kensington Eye Institute (KEI), which is also the location of the Friday morning Grand Rounds and academic half day. Residents also rotate through specialty, emergency, and comprehensive clinics at KEI, and the PGY-5 residents run a cataract surgery clinic there as well. The resident does all the diagnostic testing on these patients, as well as any surgery. There is the opportunity to offer these patients specialty lenses such as toric, multifocal, and EDoF IOLs free of charge, allowing the resident to gain experience with these IOLs and a faster OR time. Free specialty lenses are a motivation for patients to have their surgery through the resident clinics. The Department has published on quality assurance studies demonstrating complication rates in resident cases are no higher than those of the faculty.

Residents also rotate through Princess Margaret Hospital Ocular Oncology Unit, where they gain experience in the diagnosis and management of ocular oncology.

There are no mandatory rural rotations, but residents have considerable elective and selective time during their senior years and are encouraged to pursue community rotations and electives.

**Changes Made to the Program Since 2012**

New initiatives implemented in the last ten years have continued to improve the delivery of our outstanding curriculum to the residents. Thesed initiatives include:

- The introduction of vertical rotations (in 2012) that allow each resident to spend one to three months in each specific subspecialty. Vertical rotations allow for greater immersion in each of the subspecialties. These vertical rotations continue to be modified and refined, depending on the resident feedback.

- Established rotation goals for each subspecialty with regular feedback and evaluations to let residents better understand their performance and gauge their progress.

- The establishment of a Resident Education Centre at KEI (in 2013), complete with a lounge, workstations, and wet-lab facilities.

- Introduction of a system to qualify and quantify surgeon teaching to ensure residents receive adequate surgical experience.

- The introduction of a mechanism to identify ineffective teachers from some courses and trim excess material from the curriculum.
▪ Development of a new surgical training curriculum that ensures significant surgical experience and volumes according to the RCPSC ophthalmology competencies.

▪ Grand Rounds have been moved to a more convenient time and are offered via videoconference (even pre-pandemic) for individuals with longer commutes.

▪ The development of a formal block focused on ethics, professionalism, and practice management.

▪ The additional increased cataract volumes at KEI in 2021 meant an increase in the surgical experience for each resident in PGY-4 and PGY-5, in spite of the surgicentre being closed for closed to two months because of the pandemic. These are permanent increases, meaning the surgical experience should remain at this volume going forward. Although the surgical training the residents experience involves much more than cataract surgery, this procedure is often used as an index, as it is the most common surgery performed by the comprehensive ophthalmologist. It is not uncommon to have graduating residents having done more than 1000 full cases.

As was noted in the 2017 external review, recent improvements to the Residency Program were enthusiastically endorsed by residents and faculty, including the allocation of OR time based on teaching performance, and the establishment of KEI as a “home base” for residents, and the move to make Grand Rounds more accessible.

Figures 10 and 11 show our resident tracking and evaluation sheets, identifying the type and complexity of the surgery, and the change in resident participation in recent years. Each sheet also clearly highlights the expected teaching target for each of the five levels of residents. Clearly defining expectations at each rotation sets attainable goals. Each resident receives an evaluation and completion of this sheet every day they are in surgery. The resident discusses the evaluation with the faculty and the resident must submit the sheet to the education tracking office.

![Figure 10. Cataract Resident Participation Tracking Sheet.](image-url)
Surgical resources for all faculty members are closely tied to surgical teaching requirements; a formalized system records the quality and quantity of all surgical teaching. These changes have resulted in excellent and improved surgical training for the residents, with a significant increase and decrease in the number of teaching cases and observation-only cases, respectively (Figure 12). The number of full cataract cases completed by each resident upon graduation has more than doubled over the last decade to close to 800 full cases.
4.3 Fellowship Training

The University of Toronto DOVS currently offers 12 fellowships in tertiary care subspecialties ophthalmology areas and this year is training 40 fellows.

- There are two surgical retina fellowships (accepting fellows into a 1- or 2-year fellowship, depending on the research component chosen by the fellow); one based at SMH with six preceptors, and one based at the TWH and SHSC with five preceptors.

- A one-year neuro-ophthalmology fellowship accepts one fellow annually and has three preceptors.

- A one-year medical retina fellowship accepts one to two fellows annually and has five preceptors based at TWH, MSH, Unity Health (St. Michael's Hospital), and SHSC. It involves training in adult and pediatric retina, as well as experiences in uveitis, IRD clinics, ocular oncology, and NICU training.

- Clinical research is also an important component of the fellowship training.

- There are two glaucoma fellowships (again, accepting fellows into a one- or two-year fellowship, depending on the research component chosen by the fellow); one based at SHSC and accepting one fellow annually with two preceptors, and one based at Trillium and TWH accepting three fellows annually with six preceptors.

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**Figure 12: Cataract Cases Performed by Residents.**
The cornea fellowship accepts three fellows annually for a two-year cornea fellowship based at TWH with seven preceptors.

The ophthalmic plastic and reconstructive surgery fellowship is an ASOPRS two-year fellowship, accepting one fellow annually with three preceptors, and is based at MSH.

A two-year ocular oncology fellowship, based at PMH, accepts three fellows annually and has three preceptors.

There are 5 fellowships based at the Hospital for Sick Children (HSC):

- A 1-year Pediatric Ophthalmology and Strabismus fellowship accepts 4 fellows per year and has 16 preceptors. A 1-year Pediatric Cornea and External Disease Fellowship accepts 1 fellow annually and has 2 preceptors
- A 1-year Retinoblastoma fellowship accepts 1 fellow annually and has 3 preceptors.
- A 1-year Ocular Genetics fellowship accepts 1 fellow annually and has 2 preceptors.
- A 1-year Pediatric Retina and Inherited Retinal Disease fellowship accepts 1 fellow annually and has 4 preceptors.

Our fellowship training programs are the largest in the country, and trains subspecialists for numerous national and international centres. The programs are overseen by the Fellowship Committee. The Director of the Fellowship Committee, Dr. Navdeep Nijhawan, is a member of the Executive Committee, and ensures close communication with the Residency Program Director and the Vice Chair Education. Close coordination between the Residency Program and Fellowship Committee remains a priority of this program. The residents report a tremendous benefit to having fellows in the program; the fellows offer them clinical and surgical support, as well as education. There is clear delineation between surgical cases going to the fellow and going to the resident.

Our fellowship program is run in conjunction with the Post Graduate Medical Education (PGME) Office.

Improvements to our fellowship training include:
- The hiring of an administrative assistant to support the fellowship program.
- The provision of a minimum salary for fellows.
- Standardization of the fellowship program curricula.
- Three four-year reviews of each fellowship program to mimic the RCPSC review of the residency program.
- Regular fellow evening programs to allow interaction between different fellows at different sites, and to allow for fellow-specific information and development sessions.
4.4 Continuing Professional Development

The Department recognizes the value of continuing medical education (CME) and organizes a number of fully accredited programs to offer a variety of learning experiences to our staff, trainees, and community professionals in order to enhance their skills and knowledge as clinicians, educators and researchers. The DOVS is always looking to expand CME activities, and make CMEs more readily available to our faculty and others.

The status of the CME programs at DOVS was recognized by the 2017 external reviewers as “one of the best, if not the best, in Canada.” At the time, the administrative director of the program at the TFoM mentioned that the DOVS was one of the best departments to work with in this regard, with programs that draw local, national, and international participants, and a highly engaged vice-chair, education, and director of CPD. The need for technology portals to provide CME and quality improvement were mentioned as priorities in future development in the 2017 review. We have, in fact, embraced the idea of virtual CPD over the last 5 years. We have placed our Grand Rounds on a virtual platform, and made them available to the ophthalmologists in the province of Ontario, as well as our alumni worldwide (at no cost). We have also made them available to the faculty and trainees of our global partners in Jamaica, Barbados, Trinidad and Tobago, Kenya, Uganda, and Ethiopia.

Trainees from across the University of Toronto are encouraged to attend and are given complimentary registration. Some of the symposia are detailed below; more can be seen on the DOVS website.

4.4.1 The National Eye Review

This one-day course is designed as a practical review, highlighting the most important clinical pearls and management options. The material is presented using TED-style talks with the idea of material being delivered in an engaging and entertaining format, facilitating better absorption of new information, which can then be subsequently easily recalled in the clinic.

The first set of lectures covered Emergency Ophthalmology (2017), the second Everyday Ophthalmology (2018), and the final talk covered Esoteric Topics in Ophthalmology (2019). The course went on hiatus with COVID but it is hoped the 2022 program will return.

Speakers are coached on speaking style, body language, and how to deliver a message in an impactful manner. It is unique in that there is no industry sponsorship. This course is as much faculty development as it is CME because of the extensive personal coaching our speakers received on how to best present their material at meetings.
4.4.2 The Walter Wright Symposium

The Symposium, in its 60th year in 2021, is the flagship annual CME event for the DOVS at the University of Toronto. It features an in-depth, up-to-date exploration of a specific subspecialty in ophthalmology. The title of the 2021 meeting held December 3 and 4 at the Metro Toronto Convention Centre was “Retina 20/20+1.” This was the first in person Canadian Symposium since the pandemic began nearly 2 years ago. The registration was limited to 380 guests to ensure proper distancing and safety and the symposium was a complete success.

This fully accredited event is drawing an ever-increasing national audience and even an international audience. Industry support remains important to the course, but as registration increases, there is some financial independence. All sponsorship is in strict adherence to the faculty guidelines on relationships with industry.

4.4.3 The Toronto Cataract Course

The Toronto Cataract Course brings together a local and international faculty to discuss the most relevant issues in cataract and anterior segment surgery. It features multiple modalities of instruction and is held in high regard across Canada. While industry figures in the financial support of the course, increasing attendance has increased revenues and allowed some independence from industry. Dr. Ike Ahmed is the course overseer and works with a program director and a planning committee every year to organize the symposium curriculum and arrange for the local and visiting faculty.

4.4.4 The Jack Crawford Symposium in Pediatric Ophthalmology

The world-renowned faculty at the Hospital for Sick Children arrange this annual symposium, supplementing their numbers with international guests who are experts in their field. In 2019, the 30th Annual Jack Crawford Day was entitled “Advances That May Change Your Practice in Paediatric Ophthalmology.” The day included topics relevant to both pediatric and general eye specialists including cross-linking news, orbital clues, understanding large-scale studies, vision screening, low vision upgrades, genetic testing, and more. In 2020, the meeting was deferred because of the pandemic but in 2021, The 31st Annual Jack Crawford Day Virtual Conference: Kids Beyond The Eyes, was held on the Zoom platform on April 16. The symposium in 2021 covered many relevant topics including:

- Disorders of the Zonule
- Role of VEP in Ophthalmology
- ROP in Canada: How are we doing?
- Case Based Emergencies
- Literature of 2020: Studies of the Year
- Optic Nerve Malformations and Associated Systemic Disorders
- Don’t be Afraid of Wiggly Eyes
- Finessing the Paediatric Eye Exam: Vision Beyond 20/20
This course relies mostly on the registration fees and depends very lightly on industry support. It is always very well attended and well received.

All the symposia offered by the Department carry a needs analysis to focus on the topics to be presented the following year. An in-depth course evaluation is used at the end of every course to incorporate the feedback received in order to enhance the course.

5. Research

DOVS research is carried out by the clinicians, clinician researchers, clinician scientists and basic scientists within the Department. They perform this research at their base hospitals and associated research institutes as well as KEI (Figure 13).

Figure 13. DOVS Research Teams.
The Department produces a large number of peer-reviewed publications, grants, and presentations, some of which are detailed in appendices to this report. What distinguishes this group of researchers is the large number of publications, presentations and grant dollars (over $67M in the last 10 years, Figure 14), arguably the largest of any academic ophthalmology department in the country. The other distinguishing feature is the breadth of research topics throughout the Department. These span basic research, translational work and clinical research to population research and clinical trials. As can be seen in Figure 15, our residents, fellows, and faculty have authored more than 1400 publications in the last 8 academic years, with impressive growth seen in the last two years.
Research in the Department can be broadly divided into two broad categories: *discovery science/basic and translational research* (Table 1), conducted at the Donald K. Johnson Eye Institute, Lunenfeld-Tanenbaum Institute, SickKids Research Institute, and the Sunnybrook Research Institute; and *clinical research* (Table 2), conducted at the Hospital for Sick Children, KEI, Mount Sinai Hospital, Sunnybrook Health Sciences Centre, St. Michael’s Hospital, Toronto Western Hospital, and Trillium Health Sciences Centre. Figure 13 provides a schematic of our research sites.

**Table 1. Major directions in basic and translational research.**

- Cellular interactions and signaling pathways that control ganglion cell survival and regeneration.
- Retinal development, connectivity, and photoreceptor protection and transplantation.
- The role of extracellular proteins in the developing and regenerating CNS.
- Neural cell reprogramming, with a focus on retinal cells and glial cells.
- Role of neuron-vascular interactions in retinal and brain disease, injury, and cancer.
- Developmental signaling in brain tumour initiation.
- Lymphatic circulation in the eye and its role in aqueous humor drainage, and the entry of cerebrospinal fluid into the optic nerve via the glymphatic system.
- Mechanisms controlling retinal injury responses.
- Development of the visual system, particularly the formation of the network between the eye and the brain in normal conditions and in eye diseases.
- Design new treatment and drug delivery strategies.
- Identify pathogenic mechanisms that contribute to neurological disorders with next generation sequencing, proteomics, electrophysiology and imaging.
- How to expand diagnostics in retinal imaging.
- Understanding brain mechanisms that cause abnormal eye movement.
- Exploiting eye movement for vision rehabilitation.
- Genetic characterization of inherited retinal disorders
- Principles of tumor suppressor genes and the regulation of activity of the retinoblastoma gene and protein.
- Endothelial to mesenchymal transition of the corneal endothelium and migration of the corneal endothelium.
Table 2. Major directions in clinical research.

- Ocular regenerative medicine
- Cytokine profile of ocular diseases
- Treatment of neurotrophic keratopathy with minimally invasive corneal neurotization
- Corneal crosslinking
- Inherited eye diseases and therapeutic modalities, including gene therapy.
- Cataract surgery research
- Optimal perioperative management
- Ophthalmic surgical instrument development and innovation
- Understanding low vision and low vision rehabilitation
- Microinvasive glaucoma surgery
- Health human resources in ophthalmology
- Provision of eyecare
- Surgical outcomes with corneal transplantation and keratoprosthesis
- Intravitreal therapeutics in retinal disease
- Mechanisms of age-related macular degeneration
- Tele-ophthalmology
- Therapy to treat inherited retinal diseases
- Novel therapeutic approaches for children with retinoblastoma.
- Approaches aimed at achieving optimal care and outcomes for childhood cancer patients globally
- Novel treatments for Fuch’s endothelial dystrophy.

In 2018, the position of vice-chair, research was split into two positions — a vice-chair clinical research and a vice-chair, basic science and translation research. This was done to ensure better input, assessment, and oversight of research activities in the Department. As well, a research committee was organized at KEI, with representation from each hospital department and subspecialty to drive translational research.

Residents and fellow are actively engaged in research, with dedicated blocks of time along with research infrastructure and support, and access to funding. Residents have had a significant number of peer-reviewed publications since 2012 and numerous research awards.

The strength and diversity of the DOVS research program was appreciated by the external reviewers in 2011 and 2017. In particular, the reviewers commended efforts to bring researchers and clinicians together. Recent successes include the Vision Science Research Program (VSRP), a partnership between the University Health Network (UHN) and the University of Toronto, which provides an opportunity for researchers to
collaborate and funds graduate students. As well, reviewers highlighted as “very successful” a recent study conducted at KEI on corneal crosslinking.

There are currently 8 faculty members in the DOVS that hold endowed university-hospital named chairs, including the recently established the Dixon Chair at Sunnybrook (See below). Increasing the number of endowed chairs in a priority and the Chair is working closely with the Temerty TFOM’s advancement team to drive fundraising that will support more research and endowed chairs. The goal is to grow this number considerably over the next 5-10 years in order to solidify the Department’s standing as a global leader in ophthalmic research.

Table 3. Faculty Members Holding Endowed University-Hospital Named Chairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Clinical Site</th>
<th>Named Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair in Glaucoma Research</td>
<td>UHN (Toronto General and Toronto Western Hospital)</td>
<td>Jeremy Sivak</td>
</tr>
<tr>
<td>Mira Godard Chair in Vision Research</td>
<td>The Hospital for Sick Children</td>
<td>Asim Ali</td>
</tr>
<tr>
<td>Dixon Family Chair in Ophthalmology Research</td>
<td>Sunnybrook Health Sciences Centre</td>
<td>Carol Schuurmans</td>
</tr>
<tr>
<td>John and Melinda Thompson Chair in Vision Research</td>
<td>The Hospital for Sick Children</td>
<td>Kamiar Mireskandari</td>
</tr>
<tr>
<td>Dr. Henry Brent Chair in Innovative Paediatric Ophthalmology Research</td>
<td>The Hospital for Sick Children</td>
<td>Elise Heon</td>
</tr>
<tr>
<td>Owen &amp; Marta Boris Chair in Stem Cell Vision Research</td>
<td>UHN (Toronto General and Toronto Western Hospital)</td>
<td>Allan Slomovic</td>
</tr>
<tr>
<td>Nanji Family Chair in Ophthalmology and Vision Sciences</td>
<td>Temerty Faculty of Medicine</td>
<td>Sherif El-Defrawy</td>
</tr>
<tr>
<td>Karen and William Barnett Chair in Ophthalmology</td>
<td>Temerty Faculty of Medicine</td>
<td>Robert Devenyi</td>
</tr>
<tr>
<td>J Ardeth Hill-Fighting Blindness Canada Chair in Ocular Genomics</td>
<td>Temerty Faculty of Medicine</td>
<td>Brian Ballios</td>
</tr>
</tbody>
</table>

The recruitment of clinician scientists is a complex endeavour involving not just finding appropriate candidates, but also ensuring that appropriate funding (compensation and start-up funds) and that research facilities are available. The Department is dedicated to expanding its clinician scientist numbers and has been working on all fronts to develop the ecosystem to support this endeavour. We have made a point of regularly accepting MD/PhD students into the residency program, with the idea of nurturing them as clinician scientists. We have also worked to adjust practice plans to develop the resources
required for the recruitment of clinician scientists and, finally, we are looking to enhance our fundraising to provide for these recruits. All these fronts are progressing well and we should be able to enhance our recruitments over the next few years.

One specific recommendation made in the 2017 external review was to streamline research administration to better manage pre- and post-award activities. Currently research occurs at the 5 different sites, each with their own research processes and research institutes. This setup makes centralization difficult. Nevertheless, this comment is valid and the leadership has been working on several strategies to better coordinate the DOVS research activities, including a centralized internal review of grants pre-submission, a centralized funds administration process within the TFoM, and a Department-wide research committee to review research proposals and secure further funds for Departmental research endeavours. There is a plan to hire an additional Departmental administrator to enhance our ability to centralize and manage pre-and post-research award activities.

Additional efforts encouraging research include:

▪ Expanded translational research, with 16 new translational studies started in the four years following the review.
▪ The expansion of clinical and research activities at KEI, including a surgical wet-lab.
▪ Expansion of surgical services at KEI beyond the initial role of providing cataract surgery.

Research Day

Every year, our students, residents, and fellows give presentations and display posters of their research. Awards are given to the best submissions in various categories.

6. Organization and Financial Structure

The Department’s operating budget consists of university base funding, teaching and rehabilitation funds received from the MOHLTC, postgraduate expansion funds (Pool A), international medical graduates (Pool B), and funds received from Visa-sponsored trainees (Pool C). These funds are used to administer the operational expenses. At the end of the 2012/2013 fiscal year, the Department had a carry-forward amount that adequately covered expenditures and sustained a steady state position. Since then, several factors have had an impact on the financial state, placing the Department in a vulnerable position to the extent that the Department's 5-year plan predicts a deficit for the end of 2017 budget year and a continuing, steady state, reduced annual amount.
Reasons for the reduction in carry-forward include:
1. Reduced central funding allocation.
2. Transfer of some salary costs to the Department from the faculty.
3. Loss of the annual research overhead funding through the relinquishing of the Eye Bank program to the Kensington Foundation Institution.
4. Annual increases in administrative staff salaries.
5. Reduced additional continuing education income.

Departmental trust funds currently support researchers and their projects. In addition, the Department receives educational grants for the major Departmental programs, including the Alcon Visiting Professor Program, Optometry Course, annual TORIC Course, and Residents Travel Fund. However, the Department’s endowed funds will allow the Department to continue to function and even expand. It is evident now, more than ever, that one of the most important functions of the Chair of the Department is advancement and the raising of funds to drive Departmental endeavors.

7. Resources and Infrastructure

In 2013, the administrative offices of DOVS were consolidated and relocated to 340 College Street, Suite #400, after being previously divided between Mount Sinai Hospital and UHN-Toronto Western Hospital. The Chair and his executive assistant were located at Mount Sinai Hospital for 11 years, while the other administrative staff had been at UHN-TWH for 23 years. Renovation and refurbishing of 340 College Street was funded by DOVS, and the Temerty Faculty of Medicine generously provided the rental fees.

Assistance from the Temerty Faculty of Medicine Space Office was provided for the centralization of the three new spaces at 340 College Street: the administrative offices in Suite #400 (2872 square feet), the Postgraduate Centre for the residents and the Surgical Skills Lab in Suite 1-7 (2287 square feet), and the Eye Bank of Canada in Suite #B1 (4173 square feet).

Since June 30, 2015, the University of Toronto has relinquished governance of the Eye Bank of Canada (Ontario Division), which was assumed by the Kensington Foundation. For some time, the University of Toronto Temerty Faculty of Medicine had noted concerns associated with operating a clinical entity in an academic setting and the consequent exposure to potential liabilities. Six employees received notice of termination. The University of Toronto assumed all costs associated with severance packages, and the evergreen grant funding agreement between the Ministry of Health and the University of Toronto ceased. The Eye Bank of Canada (Ontario Division) was assumed by Kensington Health allowing the Eye Bank to continue its excellent work and begin new innovative processes (automation, preparation of donor tissue for surgeons) as well as to embark on research protocols in eye banking.

In 2013, KEI working with the DOVS secured new funding for glaucoma, retina and cornea surgery. These surgical cases not only enhanced patient care in the GTA but allowed an expansion of resident and fellow surgical experience as well enhanced surgical research.
capabilities. As mentioned above, in 2015, a DOVS associated clinical space opened at KEI. This state of the art fully equipped clinic and diagnostic center allowed for recruitment of new academic clinicians and new opportunities for existing academic clinicians as well as medical students, residents and fellows. A second clinical space was added in 2017 allowing a total expansion of 9000 sq. ft. An electrophysiology lab was also added in 2018 with full electrodiagnostics for the GTA as well as research capabilities.

The Department’s IT infrastructure has remained current over the years and has been improved upon in response to the pandemic, with teleconferencing capability for Grand Rounds and tele-ophthalmology for remote clinical care. There is a plan to hire an administrative individual with time dedicated to IT to enable the Department to enhance its remote education/care offerings.

8. Alumni and Advancement Programs

8.1 Advancement

Over the past 5 years, the DOVS has been an excellent partner to TFoM Advancement. A focused approach to donor pipeline development, alumni engagement, and promoting the impact of the Department in communications has enabled support for the academic priorities of the Chair.

At the time of the last review, philanthropy was identified as an area with great potential, and a commitment was made to partner with the Advancement Office on alumni engagement and funding for Departmental priorities, including research. The last five years have been very successful in achieving these goals, both in generating funds and in meaningful engagement of alumni and the donor pipeline. Notably, a generous donation from the Nanji Family Foundation has established a five-year term Chair position, which is held by the Department Chair.

8.2 Philanthropic Funding – Summary

Over the past 5 years, over $5.6M has been raised for the Department of Ophthalmology and Vision Sciences. There were more than 400 distinct donors and 50 gifts were $25,000+. Highlights include the $1M gift in 2017 to establish the term chair and a $1M gift in 2020 to establish a Professorship in Ocular Genetics Research.

There are currently 8 faculty members in the Department of Ophthalmology and Vision Sciences that hold endowed Hospital-University Named Chairs (Table 3 above).
8.3 Donor Identification, Cultivation and Alumni Engagement

Over the last five years, there has been a focus on the identification, cultivation and solicitation of donors at all levels, with an emphasis on major gifts ($25,000+). Many different constituent groups have been engaged as prospective donors, including industry, business leaders and Temerty Faculty of Medicine alumni. Major gift proposals were developed (in the range of $25,000-$3,000,000) and presented to donors with a compelling case for support and a focus on the impact of the gift.

The Advancement team also engages previous donors to the Department with reporting on the impact of previous gifts. This is demonstrated in the annual stewardship reports, including detailed financial statements for endowed funds. It is a priority to provide excellent and meaningful stewardship to donors to continue to build a culture of philanthropy within the Department and pipeline of donors.

As of Summer 2021, there are 875 DOVS alumni, 168 of whom (19%) have been engaged with the Department in some way in the last 5 years (event attendance, participation in meetings with advancement, volunteerism and philanthropic giving, etc).

Advancement has partnered with the DOVS on a variety of events with support ranging from advisory to operational, including annual graduation events and receptions.

8.4 Communications

A concerted effort has been made to produce content that demonstrates the impact of the DOVS, and to amplify stories across the Temerty TFoM and University communication channels. This includes the Temerty TFoM’s Twitter (27,200 followers), Instagram (9,900 followers) and Facebook (7,340 followers).

The Office of Advancement benefits from a dedicated writer and alumni communications officer focused on advancement priorities and collateral. An example is the creation and subsequent amplification of the 2017 news story about the gift from the Gulshan & Pyarali G. Nanji Family Foundation. In the last 5 years, eight news stories featuring DOVS faculty members, students and alumni were posted to the Temerty FOM website and promoted on social media channels (Appendix II).

8.5 Transformative gift to the Temerty Faculty of Medicine

On September 24, 2020, the University announced a historic, $250 million gift – the largest in Canadian history. This gift will advance biomedical research and innovation, medical education, and health care in Toronto, Canada and beyond. The faculty members and learners of the Department of Ophthalmology and Vision Sciences, like many clinical Departments, will benefit from this investment, as there is significant funding for fundamental, translational, and clinical research.
Specifically, $10M of the Temerty Foundation gift was designated to assist with urgent COVID-19 priorities, such as isolation accommodation during the spring/summer 2020 wave of COVID-19. During this time, three trainees from the Department accessed isolation accommodation in hotels and short-term rentals, allowing them a safe place to isolate from vulnerable family members and roommates while they worked on the front lines in the hospitals. An additional two trainees from the Department benefited from transportation support (car rental) to allow them to safely commute to the hospital without using public transportation. Four international fellows from the Department received a contract extension from July – September 2020 to continue working in Toronto until it was safe to travel to their home countries.

The gift also enabled urgent upskilling and training to support redeployment of residents to the front lines of care, and significant continuing professional development was made available through the Temerty Medicine CPD Office.

9. Internal and External Relationships

Historically, coordination between the DOVS and its related hospitals represented a real challenge. The need to strengthen internal and external communications and build the profile of the Department was mentioned as an area in need of improvement in external reviews and was a priority item in the Strategic Plan.

Communication and relationships with hospital leadership is considered vital in moving toward the goals set out by the Department’s Strategic Plan. Initiating relationships with CEOs and vice presidents of the five academic teaching hospitals was an early priority and this has ensured clear communication between hospital and Departmental leadership, especially as significant changes occurred within the Department. Communication with the Dean of Medicine and the faculty leadership is also a vital aspect of ensuring the highest level of function within the Department.

To facilitate internal communication among faculty members, the DOVS created a Departmental Listserv of all faculty, residents, fellows, and students to disseminate information in a timely manner, and in 2015, began to distribute a regular electronic newsletter to engage and inform members of all news, appointments, awards, etc. These have included profiles of different Department members.

The Department has updated its website several times to better inform individuals seeking more information about its programs, services, and faculty, with a major revamping of the site completed very recently.

The Department hired a new advancement officer responsible, in part, for communicating with alumni via a variety of modes, including invitations to Departmental functions, hosting an alumni evening at major meetings, and corresponding with alumni at different times throughout the year.
The DOVS is a vast Department spread over multiple sites. There were difficulties in communication between the basic scientists and clinicians in the Department. Current strategies to bring these two groups together include a combined Grand Rounds, in which a common theme is presented both in the clinical realm by a clinician and in the research realm by a basic scientist. We have also instituted a faculty research day, featuring presentations by both clinicians and scientists regarding current research and work.

Communication with primary care physicians, optometrists, and the public has been enhanced with education evenings and CPD sponsored by the DOVS and its different hospital departments.

9.1 Physician Wellness

Supporting the emotional and physical wellness of all our members of the DOVS is an essential element in fostering the high performing, respectful, and sustainable community we seek. The appointment of Dr. Radha Kohly as vice-chair in charge of faculty development, brought a commitment to of greater emphasis on physician wellness both during training and in the period immediately following training has been an important accomplishment in this last decade. We have instituted opportunities such as the resident retreat, fellow evenings, and faculty evenings to educate all participants on how to stay mentally healthy and resilient through the stressors we commonly face in academic medicine. Guests such as Mamta Guatam, a leading expert on physician wellness and physician stress and burnout, have joined us for an evening’s lecture and discussion on these topics, allowing faculty to develop and enhance tools for maintaining wellness and battling burnout.

9.2 Equity, Diversity, and Inclusion

The Faculty of Medicine recently created and released a comprehensive Equity, Diversity and Inclusion (EDI) Action Plan, in support of the FOM’s key strategic pillar of “Excellence through Equity,” and recognizing that EDI is an essential prerequisite for achieving academic excellence.

The DOVS leadership made EDI a priority even before the TFOM mandated it. Under the current leadership, DOVS was the first ophthalmology department in Canada to have an EDI Committee and EDI roles as part of its leadership structure. Dr. Radha Kohly, MD, was appointed as Vice-Chair of Faculty Development, EDI, and Equity and Global Health, in 2017 and worked closely with the Director of EDI, Dr. Nupura Bakshi to spearhead many initiatives in wellness, faculty development and EDI.

The DOVS EDI Committee was formed in 2020 under the director of EDI, Dr. Nupura Bakshi. Dr. Bakshi has also co-facilitated an allyship workshop for the membership of Association of Canadian University Professors of Ophthalmology (ACUPO), is the chair of the EDI Working Group for the Canadian Ophthalmological Society (COS), and serves on the FOM Diversity Group.
The DOVS is ahead of the curve in nurturing our community and culture to support these important goals. As an indication of this, at recent ACUPO meetings on EDI that included all Department chairs and program directors across Canada, the DOVS leadership in attendance reported back that the Department is well ahead of other Canadian programs in this area and, in fact, has been designated unofficially as the “gold standard” that all other Canadian departments are striving towards.

The mission of the DOVS EDI committee is to enhance a culture of EDI, ensuring that these considerations are included in all Department activities and processes, including curriculum development and scholarship and are in alignment with the TFOM’s guidelines.

Figure 16. EDI Strategic Priorities

Strategic priorities will focus on five domains: 1. Education and Awareness, 2. Research and Scholarship, 3. Culture, 4. Policy and Administration, and 5. Partnerships.

Key initial priorities include development of EDI workshops and grand rounds, unconscious bias training, creation of a Departmental code of conduct, and a baseline needs assessment and survey. For this academic year (2021-2022), the EDI committee is expanding educational programming, developing a document outlining a Departmental standard of professional behavior, and gathering survey data on where the Department stands currently on EDI, engagement, and Departmental culture.
9.2.1 Expand EDI Education

Our EDI educational programs currently include an academic half-day CanMEDS block scheduled for fall 2021, and interdisciplinary EDI Grand Rounds focused on topics related to racism/Black health, allyship, and indigenous health/cultural safety. The Royal College of Physicians and Surgeons Canada CanMEDs Fall block 2021 includes a number of resident-oriented sessions dealing with EDI-related topics, including microaggressions and learner mistreatment.

We have sponsored several Interdisciplinary Grand Rounds focused on EDI, averaging three a year as of late. In March 2021, the Department hosted Nouman Ashraf, Assistant Professor and Director, EDI, Rotman School of Management, for a Grand Rounds entitled “Embracing our Duty of Care Obligation for Deeper Inclusion.”

In September 2021, Dr. Onye Nnorom, Assistant Professor and EDI Lead in the Department of Family and Community Medicine, discussed racism and Black health. It was one of our most-attended Grand Rounds, with over 200 participants.

Future talks are planned on allyship and indigenous health/cultural safety, an important topic given recent events in Canada. We are also designing a program to address unconscious bias and recently hosted a program for the Women Trainees in Ophthalmology Committee that included a discussion of the challenges women trainees have faced during COVID-19.

9.2.2 National Academic Physician Engagement and Culture Survey

IRB approval is currently pending for the National Academic Physician Engagement and Culture Survey, which will be disseminated to almost every academic ophthalmology program in Canada. This started as a local effort, but was expanded nationally after we saw the wide interest in this topic. The Committee is very interested to see what other programs are doing to promote EDI and how the efforts by DOVS compare.

9.2.3 DOVS Standards of Professional Behavior Statement

The DOVS Standards of Professional Behaviour Statement will be a code of conduct document that sets out basic expectations for professional conduct and helps to create a framework to foster an environment of EDI in the Department.

Every faculty member will be asked to sign the statement when appointed, and then annually at reappointment. The hope is the Statement, which will be circulated to the faculty before it is finalized, will send a continual signal and serve as a collective reminder of our commitment to EDI.
SPECIFIC EXPECTATIONS

As a Physician, I will:

• Interact with patients and families, visitors, employees, physicians, volunteers, healthcare providers and others with courtesy, honesty, respect, and dignity.
• Learn, provide care and communicate with professionalism, while ensuring patient’s safety, physical and mental well-being, regardless of the individual’s sociocultural construct.
• Apply my medical expertise without distinction and with fairness to all individuals.
• Advocate equitably for the needs of patients, regardless of the patient’s sociocultural construct, and support actions and actions that support socially-marginalized groups.
• Be considerate of the diversity of learners, staff, and patients, regardless of sociocultural construct.
• Refrain from conduct that may reasonably be considered offensive to others or disruptive to the workplace or patient care. Such conduct may be written, oral, or behavioural, including inappropriate words and/or inappropriate actions or inactions.
• Respect the personal boundaries of patients, colleagues, trainees and co-workers and their rights to privacy and confidentiality; refrain from physical contact outside the proper role of a physician.
• Avoid discrimination based on, but not limited to, age, gender, race, sexual orientation, national or ethnic origin, religion, marital or family status.
• Refrain from originating, colluding, dismissing, or accepting any form of microaggression or macroaggression, but rather collaborate to create a culturally, physically, and psychologically safe environment for all.
• Communicate any identified microaggressions, macroaggressions, harassment, or abuse through established reporting pathways with leadership in the Department or the Faculty of Medicine.
• Allow colleagues to disagree respectfully without fear of punishment, reprisal, or retribution.
• Make an effort to gain expertise on how to recognize personal bias and mitigate or eliminate its impact on patient care and interpersonal relationships in the department.

*Adapted from Code of Conduct, University of Toronto Department of Anaesthesia and Pain Medicine; CPSA Code of Conduct; CPSO Physician Behaviors in the Professional Environment; and Standards of Professional Behaviour for Clinical (MD) Faculty, University of Toronto Faculty of Medicine.

Figure 17. DOVS Standards of Professional Behaviour Statement Draft
10. Global Health

Global health is an area of study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Developing strong global partnerships to improve eye health is integral to enhancing DOVS’ global impact and influence.

Outreach, the activity of providing services to populations who might not otherwise have access, has long been a strength of DOVS. Multiple national and international initiatives within DOVS aim to improve eye health, including teleophthalmology to reach remote locales, and international partnerships focused on medical education and health service delivery. Several DOVS trainees undertake international electives, and staff and trainees alike participate in overseas missions and medical brigades on an ad hoc basis.

Building upon this rich history of service and global outlook, DOVS aims to integrate existing outreach initiatives within the field of global health, and encourage further partnership building, research, and innovation within this fresh framework. Experimentation and evaluation of DOVS global initiatives that are aimed at ensuring sustainable access to health services will build the evidence base for successful engagement with policy makers.

During our strategic planning process we outlined several priorities in global health that we hoped to accomplish over the next 5 to 10 years. Although the COVID-19 pandemic has certainly slowed progress on some fronts, many of our goals have been accomplished.

One priority was to track and formalize existing initiatives, such as our current involvement in the Caribbean, with three programs (Barbados, Jamaica and Trinidad) that are part of the University of the West Indies. Work is ongoing there to develop a collaborative program which will be affiliated with our Department and have interaction at all levels — clinical, research, and education (medical students, residents, potentially fellows, and consultants). In addition, work is ongoing to strengthen relationships in Sudan.

The Vice-Chair, Global Health, oversees the sharing of innovations and expertise globally through strategic partnering to advance global vision health and build international relationships. The Department intends to engage in and nurture additional effective and sustainable partnerships with other universities and targeted developing countries.

In 2015, our Strategic Plan outlined four specific expected outcomes for our global health efforts:

- Confirm the criteria for partnership engagement.
- Establish metrics to demonstrate impact of DOVS in global health and education.
- Established a Chair in Global Health.
- Participate in a greater number and in a greater scope of teleophthalmology projects.
10.1 University West Indies Outreach (Jamaica, Barbados, Trinidad and Tobago)

For the last decade, DOVS has been working closely with the Department of Ophthalmology at the University of the West Indies. A newly created residency program across the three campuses in Jamaica, Barbadoes and Trinidad and Tobago has allowed the West Indies to train their own ophthalmologists. Faculty from DOVS do an annual outreach to teach, see patients, and advise on administration as well as serve as external examiners for oral exams. Our faculty has been very closely involved in developing the residency curriculum with the UWI faculty, and have provided their residents access to the annual TORIC course as well as to our Grand Rounds and our resident teaching sessions. This partnership continues to flourish and new ophthalmologists graduate from the UWI training program every year.

10.2 CNIB Eye Van

The CNIB Eye Van (Medical Mobile Eye Care Unit) was established in 1972. The Eye Van is a custom-made transport truck and 48-foot trailer including reception and waiting areas, a vision screening area, and a doctor’s examination room. Special features include a hydraulic leveling system that allows for minor surgery to be performed on site, including a state-of-the-art SLT laser for treatment. The Medical Director of the Eye Van, Dr. Steve Arshinoff, a full professor at DOVS, oversees this clinic which covers over 6,000 kilometres each year and visits 30 communities in Northern Ontario providing care to close to 5000 patients annually. Residents have the ability to spend time on the Eye Van as part of their elective rotations.

10.3 Orbis Outreach

Orbis is a fully equipped eye hospital on board a DC-10 wide-body airplane. It has a regular faculty and staff comprised of health care professionals trained in the latest ophthalmic techniques (including pediatric ophthalmology) and brings on a visiting faculty of distinguished ophthalmologists for every mission to teach and perform surgery, lectures and clinics. This brings surgical knowledge and skills to health care professionals in low-income countries through hands-on training and lectures. Members of the DOVS family regularly participate as volunteer faculty including Drs. Jamie Oestreicher, Asim Ali, Peter Kertes and Sherif El-Defrawy. Residents will always accompany the volunteer faculty gaining a perspective on eye care in the developing world and the role of outreach from a global perspective.

10.4 Marginalized Urban, Homeless, Indigenous Populations

Dr. Myrna Lichter, a DOVS professor, has focused her career on the care of the urban homeless, the urban indigienous and the urban marginalized community. This has also become the focus of her research. She has published work on vision testing addressing the needs of patients living in very difficult conditions. Dr. Lichter has held eye clinics in many locations, including homeless adult shelters, youth shelters, family shelters,
women’s shelters, including VAW shelters (Violence Against Women). Residents have the opportunity to attend these clinics in order to gain insight into the difficulties in providing care to this very susceptible and fragile portion of society. Dr Lichter has published on the attitudes of Canadian ophthalmology residents and pre-clerkship Medical Students towards Homeless Individuals and the visual impairment and prevalence of ocular pathology in homeless children and adults globally. The opportunities she provides for our trainees brings greater awareness of the plight of the homeless, the marginalized, the new immigrants and the poor. Her work continues on the indigenous homeless in shelters and drop ins in Toronto and Hamilton and in conjunction with Dr. Helen Dimaras, investigating vision testing for urban indigenous children and youth.

10.5 Global Outreach: Uganda and Kenya

An annual outreach to Uganda and Kenya occurs, focused in Kampala and Mombasa. In Kampala, our faculty work with the ophthalmology residency program as well as the medical school to teach residents and faculty physicians. Surgical teaching provides education to trainees and faculty as well as service to the people of the country. In Kampala there are 24 ophthalmology residents but only to slit lamps and they have no retina or glaucoma lasers, which makes it difficult for trainees to get exposure during their three years of residency. This outreach allows the trainees an excellent experience and in time, reciprocation will bring trainees to Toronto for elective which will increase their breadth of knowledge and skills.

10.6 Global Health Case Study: Retinoblastoma in Ghana

In Ghana, a low-middle income country of 30.4 million people, 40% of whom are under the age of 16, there was no specialized retinoblastoma treatment centre and no national strategy for retinoblastoma. This is despite the fact that retinoblastoma accounts for about half of intraocular tumors seen in the Department of Ophthalmology at the Korle Bu Teaching Hospital (KBTH), the premier hospital in the country, and is the third-most common childhood malignancy at KBTH, after lymphoma and leukemia.

The clinicians at KBTH and at peripheral eye clinics around the country see between 64 and 69 cases yearly, most presenting with late disease both clinically and histopathologically.

Anecdotally, overall survival for retinoblastoma in Ghana is currently less than 50%. In 2010, survival was around 20%. The national health insurance plan covers surgery, but does not cover much of the treatment of this disease.

Dr. Vera A. Essuman, associate professor at University of Ghana Medical School and chief of pediatric ophthalmology at KBTH, headed an effort to improve the situation. She and her colleagues wanted to establish a comprehensive national strategy for retinoblastoma in Ghana, including the development of national clinical care guidelines and standard operating procedures. They also wanted to develop research capacity and explore the possibility of training collaborations, including resident exchanges. They knew
that the Hospital for Sick Children offered the ideal model and that the Hospital had helped Kenya develop a national retinoblastoma program, but had not yet made direct efforts to collaborate.

Then, in 2017, a child was diagnosed at 6 months with bilateral tumors. One eye was advanced and had to be removed, but the second eye had just a solitary tumor that needed focal treatment. However, this was not available in the country and the doctors at KBTH were unable to raise funds for out-of-country care, so they gave the child 12 cycles of chemo. At the end of the day, they had to remove the second eye at 13 months, and the child was enrolled into a blind school at the age of five years. There were also no funds for neural imaging. In August 2017, this child died in the hospital at the age of 5 years after starting to suffer from seizures.

Upset by the unnecessary loss, Dr. Essuman and Dr. Lorna, the pediatric oncologist at KBTH, decided to attend the One Global Retinoblastoma conference in Washington, D.C., in 2017, where she met DOVS faculty Dr. Helen Dimaras and Dr. Brenda Gallie. They offered to assist Dr. Essuman in her quest to develop a national retinoblastoma strategy in Ghana. They arranged for Dr. Essuman to come to Sick Kids as a research collaborator (with Dr. Dimaras) and a clinical observer in retinoblastoma care (with Dr. Gallie). With Dr. Dimaras’ help, Dr. Essuman drafted a strategy for Ghana, with the explicit goals of improving medical care for children with retinoblastoma nationwide, and, ultimately, improving survival to 80% within five years of plan implementation.

Currently, the draft national strategy is awaiting review and adoption by a national stakeholder team, and a national baseline survey for retinoblastoma is underway and almost complete. Dr. Dimaras is a co-principal investigator on this project, looking at number of patients in Ghana with the disease, identifying the stage of the disease, referral pathways, patient outcomes, and also, assessing institutional capacity for retinoblastoma management across the nation.

A national database has been developed as a pilot for a national registry for retinoblastoma, and there has been capacity development for care of retinoblastoma, whereby KBTH is able to provide care for every child in need, including laser treatment and intraarterial chemotherapy, with brachytherapy soon to be available as well. Importantly, no children are being sent out of the country for care, as had been common in the past. The care team has also, importantly, learned to write grants, has submitted four grant applications, and is hopeful they will receive more funding in the near future.

The COVID-19 pandemic has delayed implementation of the larger strategy, but has not affected management of the children. Capacity building continues, including the use of telemedicine.
11. Future Directions

The Department of Ophthalmology and Vision Sciences is a very strong academic department delivering excellence in postgraduate and undergraduate education, basic and clinical research and quality clinical care. It has tremendous depth in subspecialty representation and has unique expertise such as ocular oncology, retinoblastoma, pediatric cornea and glaucoma and as such receives consultations from across the country. The Department needs to maintain its strength in each of the subspecialties and needs to continue to promote the subspecialists from the different sites to work together in educational and research endeavors. Some subspecialties such as ophthalmic plastic and reconstructive surgery have no fulltime surgical specialists at any of the core hospitals. Two GFT oculoplastics specialists need to be recruited in the next Chair's tenure. UHN does not have an oculoplastic surgeon in spite of a very strong ophthalmology department and neurosurgery department. The fulltime oculoplastics recuits need to have a presence at UHN. Toronto is a large and diverse area, and the opportunity for entrepreneurship in private medicine continues to grow, as the government finds it increasingly difficult to fund all timely clinical and surgical needs. There has been expansion of private ophthalmology clinics and surgical centres throughout the GTA, and these centres have drawn many academic faculty, who may spend a portion of their week, working in these centres. Some full-time academic staff have in fact opened such centres themselves. The draw of private medicine pulls our faculty from academic practice, and risks the minimizing of the research and educational priorities. DOVS needs to ensure that there is appropriate clinical space and surgical time for our faculty at the academic centres, thus allowing them to complete all their clinical and surgical activities at the academic sites, and preventing the need to seek private practices to see patients or perform surgery. While DOVS has become more integrated over the last decade, we still tend to function as silos within the hospitals. While it is vital that a strong Department of Ophthalmology exist at each hospital, a centralized Eye Institute can bring the faculty together, allowing for important clinical and research exchanges, enhanced clinical and surgical function and efficiencies, enhanced trainee experiences, and a higher function of clinical research. KEI has grown over the last decade and has accomplished many of these functions; continued growth of the Eye Institute, whether at KEI or elsewhere, will only further enhance all the academic pillars of the Department. It is also clear that the Eye Institute needs a clinical and surgical presence elsewhere in the GTA. It is difficult for patients to travel downtown and with the expansion in Toronto, DOVS needs a presence north of the core in order to ensure it has the patient load to accomplish the necessary clinical research and clinical and surgical education.

A revision of the University of Toronto’s undergraduate curriculum was completed in 2017. Key elements of the program include a highly integrated curriculum with increased clinical relevance and earlier patient contact, effective use of technology and e-learning material with fewer passive lectures, a competency-based approach and assessment model focusing on frequent low stake exercises and feedback rather than infrequent high-stakes summative tests, and a greater opportunity for students to pursue individualized interests. This is the first time in two decades that there has been such a curriculum change and it has given the Department of Ophthalmology and Vision Sciences a
wonderful opportunity to completely revise and create a new curriculum. DOVS needs to continue to enhance and improve the undergraduate experience in ophthalmology to ensure our medical students get the best experience and to fully learn the ophthalmology needed.

The postgraduate program while functioning very well is about to undergo CBD. This will be a stressor on the educators of the department as well as the trainees. Efforts will have to be made by all to dedicate the time and work needed to make this transition a success.

Fellowship programs continue to undergo standardization with a clear description of goals and competencies that are common to each subspecialty. A regular review of each fellowship needs to continue to happen every 3-4 years with a mentor assessment conducted in an anonymous fashion. These reviews allow detection of any issues in the teaching program and enhance the fellowship curriculum.

A new program in certified ophthalmic medical technology (COMT) has been developed and implemented. This program needs to be expanded and incorporate teaching opportunities for its learners at other sites. Not only have Canadian studies identified the need for training of qualified COMT but have also demonstrated that ophthalmic practices can increase their overall productivity by adding COMTs to their staff as well as enhance the quality of the work. While there used to be an Orthoptics program in Toronto, that has closed many years ago. There are currently only two orthoptics teaching programs in the country. An orthoptics program is very needed and it will be important to create such a program in the next 5 years.

Clinician scientists are vital to the Department to provide a liaison between our basic and clinical researchers and to drive translational research in all areas of ophthalmology. The difficulty is supporting these clinician scientists to the same level as their clinical subspecialty counterparts. Efforts need to continue to secure research chairs and professorships to support the recruitment and retention of clinician scientists.
12. Report of Faculty Member

Dr. Peter Kertes  
Past Chief of Ophthalmology  
Sunnybrook Health Sciences Centre

Under Dr. El-Defrawy’s leadership, the last ten years have witnessed a tremendous sea change for the University of Toronto’s DOVS. His long list of accomplishments and innovations are surely detailed elsewhere in the review, so I will not dwell on the details, but focus instead on the themes that have driven that transformation.

The first is that of unification. The Department, prior to his arrival, was largely divided and structured in silos. We were sequestered in our respective teaching hospitals, and divided among our various subspecialties and research interests. This is not to suggest that this divisiveness was accompanied by any enmity or ill will, but it was clear that much could be gained by working together, particularly in terms of clinical care, teaching, and research. In the absence – so far – of a full-service, full-scale University of Toronto Eye Institute, his vision has been to unite us at the Kensington Eye Institute (KEI). Dr. El-Defrawy has achieved this by bringing significant volumes of subspecialty cornea, glaucoma, and retina surgery to KEI, and opening it up to those surgeons at all the teaching sites. Dr. El-Defrawy has overseen the creation, re-creation, and significant expansion of clinic space so that ophthalmologists from different sites can come to work together. And, out of nothing, he has fostered and developed an impressive clinical research enterprise at the Kensington site. The cornea cross-linking study is especially noteworthy. This was accomplished with a $3 million grant from the MOH, and is investigating the value and feasibility of corneal cross-linking in 1000 eyes with keratoconus. He invited every cornea specialist in the GTA to participate and made an uninsured service available to hundreds of patients who otherwise would not have had access. This served not only to create an infrastructure for large, collaborative clinical trials at KEI and to bring to work together the largest group of cornea specialists in the country, but the outcomes of this rigorous research endeavor will no doubt figure importantly in any decision made by our government and likely many other jurisdictions regarding whether or not to reimburse this novel treatment modality.

In our Department and others, resources can be concentrated in the hands of more senior ophthalmologists. New graduates, even exceptional ones, have difficulty accessing those resources and finding places to work. By limiting the number of cataracts that any one surgeon can do at KEI, Dr. El-Defrawy was able to free up resources for new graduates, who have committed to contributing to the Department’s academic enterprise in significant ways. The clinic space that was created also enables them to work without being exploited. In so doing, Dr. El-Defrawy has seen to it that our Department is not only strong today, but has a bright future as well.
Clinician scientists have traditionally been rare and short-lived in Ophthalmology. In a specialty like ours, with above-average clinical billings and, until recently, no real funding to support protected time for research, it has been a challenge to recruit and retain clinician scientists. Dr. El-Defrawy has worked tirelessly to identify, recruit, and fund some rising stars in our field, and has ensured that they have the financial and academic support they need to be successful. As a university department, we are closer than we have ever been to having a true academic enrichment fund that will provide enduring support to deserving researchers among us, so that they can devote the necessary time and attention to be productive and contribute to our field. He has overseen donations to our teaching hospitals and their affiliated research institutes that are literally orders of magnitude greater than any of his predecessors. This has created a culture that I have little doubt will provide mentors and role models to the next generation of ophthalmologists.

The third theme that has pervaded his time as chair has been education. Dr. El-Defrawy is truly the consummate teacher, and I believe that he gets more personal satisfaction from mentoring learners than from anything else that he does. If I remember correctly, the residents have given him at least one teaching award for every year that he has been part of our Department. But it is not just his contribution that has made our Department the best residency program in the country and one of the most recognized fellowship programs in the world. As one example, he has implemented a rigorous surgical teaching evaluation tool and tied access to OR resources to teacher effectiveness. It is not often that teaching and efficiency go together, but he has managed to have KEI be both the model of surgical efficiency that the MOH holds up for others to emulate and a center of excellence for surgical teaching as well.

So much has been achieved in the last ten years, and we are left poised for a very bright future. Many of these changes have been met with sometimes considerable resistance. Dr. El-Defrawy’s leadership style is such that even those that disagree never question his motivation or integrity. It is never self-serving. He does not bully or push initiatives through without broad consultation and understanding, nor does he back down from what he believes is the right direction to go and the right thing to do. Dr. El-Defrawy’s example, wisdom, and sincerity are remarkably compelling. We are truly fortunate to have had him as our leader for the last ten years. The next chair would do well to keep him close as an advisor.
13. Report of Learners

Feedback is a crucial part of any review. Included herein are two reports from learners within the Department: one from the chief resident (Dr. Jason Kwok), and one from a medical student (Bryan Wong).

13.1 Chief Resident Report (Dr. Jason Kwok)

It is with great pleasure that I write this report highlighting the incredible impact that Dr. Sherif El-Defrawy has had on the ophthalmology residency program at the University of Toronto during his term as chair. Known to residents as an approachable and kind mentor, Dr. El-Defrawy has been instrumental in shaping our residency program to be the best in the country. Personally, I have cherished my time working with Dr. El-Defrawy and it is clear from our interactions that he has the residents’ best interest at heart. What has most impressed me about Dr. El-Defrawy is his leadership during the pandemic. He has been incredibly supportive to the resident body through this difficult time, and we are grateful for his care and warmth. The residency program underwent significant changes through Dr. El-Defrawy’s term that will have a lasting impact on our program moving forward.

13.1.1 Best Practices

The surgical skills wet lab was relocated to the Kensington Eye Institute (KEI), making it easily accessible to residents. Equally important, the Eye Bank of Canada is in the same building; this unique arrangement allows our residents unparalleled access to cadaveric eyes for practicing surgical techniques. Personally, I spent many hours after clinic/OR in the wet lab practicing suturing techniques or corneal/glaucoma procedures; this is a transferrable skill that directly benefits us in the OR. In contrast, other residency programs lack access to such a great facility or ease of access to cadaveric eyes, or both.

The PGY-3 year was completely revamped to include "vertical" rotations. Previously, residents did not have fixed subspecialty rotations, and the exposure was varied. We now have a standardized curriculum that ensures each resident has a robust subspecialty experience that includes cornea, glaucoma, retina, neuro-ophthalmology, oculoplastics, and pediatric ophthalmology. The PGY-3 year is certainly now a strength of the program.

Cataract surgery is a core surgical skill that residents must master prior to graduation. A resident-focused surgical curriculum was established at KEI, the main surgical teaching site for our residents. This greatly benefited our residents, as we have seen an exponential increase in the number of full cataract cases completed in comparison to previous years. During the pandemic, the residents maintained steady operative exposure despite the OR shutdowns mandated by the province. This was accomplished in part due to the robust quality of our surgical program, but also with the opening of a new operating room at KEI. It was a priority for Dr. El-Defrawy and the program to have residents included in this new operating room, and residents were allowed to learn and perform surgery in this new room shortly after its opening. Personally, my cataract surgery
exposure has been excellent through the pandemic, and I am on pace to graduate with close to 1000 full cataract surgery cases completed in residency!

A resident wellness committee was established to improve resident morale and wellness during the pandemic. Armed with funding and strong support from our faculty leadership, the resident wellness committee established many quality-of-life improvements to enhance resident well-being. This included purchasing new furniture, a coffee machine, and refrigerator for the resident common area. The resident wellness committee also organized and hosted regular resident wellness events during the pandemic.

The Kensington Eye Institute expanded during my residency to include the formation of the Kensington Vision and Research Centre, a resident and teaching oriented clinic that has become a major asset to our program. The PGY2 resident rotating at Toronto Western Hospital now spends half of their time at KEI, which is valuable as they have additional access to a neuro-ophthalmologist to review difficult and complex cases. A resident cataract clinic was also established at KEI for the senior surgical residents. This clinic provides residents with experiences in consenting patients for surgery as well as with pre-operative cataract testing and evaluation. As a result of these experiences, senior residents are more prepared to transition to practice.

Improving resident academic performance has been a priority for the program over the last five years, and additional funding was allocated to purchase online subscriptions to ophthalmology question banks, which is a unique advantage of our program. Regular monthly block exams, in addition to our written and oral exams which take place once a year, were established to motivate residents to continue studying for the Royal College throughout the academic year and to keep residents up to date with our teaching schedule. Personally, I have found the quality of the block exams to be excellent and having regularly studied for these block exams, I feel very prepared to write the Royal College Exam at the end of my residency.

Moving our grand rounds and resident lectures to Friday morning has proven to be a stroke of genius! With respect to lectures, residents are no longer arriving late because clinics were running late, which occurred when teaching was previously on Friday afternoon. This was a problem for junior residents in particular; ironically, these are the residents who stand to gain the most from teaching, but who were routinely late. Moving grand rounds from Thursday evening to Friday morning has freed up several evenings per month: this time has been utilized for new resident activities including book clubs and surgical video review sessions. Meanwhile, grand rounds have become more efficient with a fixed start and end time.

Funding has been established to support international electives for senior residents. Our faculty have a myriad of relationships with international ophthalmologists and our alumni include fellows from across the world. This fund now helps our residents leverage those relationships and explore our interests. Due to the pandemic, I was unfortunately unable to travel abroad to participate in international electives, but used the funds instead to do a rural elective in Manitouwadge, a community in Northern Ontario, as part of the CNIB Eye Van initiative.
The learning needs of junior and senior residents are vastly different while on call. Junior residents are acquiring knowledge and skills, and often require help. Senior residents are looking to improve their surgical management of ophthalmologic emergencies such as globe ruptures. A new on-call schedule that addresses both needs was established. PGY-5 residents now function as "junior attendings": they provide back-up to junior residents every night and are also first call for surgical cases. This is a major shift in the structure of our program that will pay dividends for patients and residents alike.

13.1.2 Sources of Improvement

Over the last five years, I have appreciated Dr. El-Defrawy's commitment to continually improving the program. Currently, there are a couple areas in need of improvement that are being addressed:

Our wet lab curriculum is a strength in our program, and we are fortunate to have a longitudinal wet lab teaching that spans from PGY-2 to PGY-5. Historically, we have had four microscopes available in the wet lab, which made it difficult for all residents to learn together during a wet lab teaching session, as there are usually six residents per session. Over the last six months, the wet lab has undergone additional renovation and new equipment has been introduced. We now have three additional brand-new microscopes and phacoemulsification machines, in addition to the four microscopes/cataract machines previously present. One of our microscopes has also been linked to a television with recording capabilities, allowing residents the ability to view our teachers operate in real time. We are hoping that these changes will improve our resident wet lab experience.

The Kensington rotation for the PGY-5 residents has primarily been a surgical rotation. However, on days where residents do not operate, there were limited learning opportunities available to the senior residents. The expansion of clinical services at KEI has provided our senior surgical residents opportunities to participate in subspecialty clinics of their choice at KEI, including uveitis, neuro-ophthalmology, and retina. This will allow the PGY-5 residents to tailor their final year into a "mini-fellowship", if they wish, in subspecialty areas of interest.

13.2 Medical Student Report (Bryan Wong)

13.2.1 Best Practices

As a fourth-year medical student at the University of Toronto, I am grateful to have many memorable experiences learning from the passionate teachers and kind mentors in the Department of Ophthalmology and Vision Sciences.

One of my first experiences with the Department was as a research student at the Kensington Eye Institute. While working on a project on optical coherence tomography, I learned about approaches to its interpretation from retinal specialists and a neuro-
ophthalmologist. Through our discussions, I appreciated their dedication to teaching trainees and providing feedback to improve our research.

Excited by our initial project and wishing to be involved with more research, I worked as a summer student at KEI after my first year of medical school, where I got to know Dr. El-Defrawy. I appreciated how warm and welcoming he was, as well as the patience he demonstrated when teaching our team about intraocular lenses. That summer, he also invited me to join him in his operating room and clinics. There, he provided valuable advice about case presentations and visual field interpretation. As I kept his advice in mind and integrated feedback from additional faculty who I shadowed, I am grateful that their lessons have helped me develop into a better clinician as I provide care for patients now on my elective rotations.

The staff in this Department are incredibly adaptable to change. Even through the uncertainties of a global pandemic, I appreciate how they are always mindful of their learners. Since they switched their Departmental Grand Rounds and Annual Research Days to online formats last year, I am happy for the continued opportunities to learn remotely from the faculty and residents.

The world-class research, teaching, and clinical care of this Department are ultimately driven by the supportive culture that its members bring. My exceptional experiences with this community over the years have helped inspire me to pursue ophthalmology. From my interactions with the faculty, fellows, residents, allied health, and administrative staff, it is evident that this Department cares about its students and is always willing to help.

### 13.2.2 Sources of Improvement

Compared to other fields of medicine, there is little dedicated time and exposure to ophthalmology in the undergraduate medical curriculum. Eye-related concerns are often encountered in many fields of medicine, including family medicine, emergency medicine, neurology, and internal medicine. However, students who are interested in specialties other than ophthalmology may sometimes find parts of the ophthalmology content hard to apply to their areas of interest.

The recent changes to the ophthalmology curriculum are effective in emphasizing the connections between ocular and systemic health. Additionally, the online textbook and self-study cases are valuable resources for senior medical students.

However, serving as the Ophthalmology Clerkship Representative for my class during our third year of medical school, I received feedback from some peers expressing that they did not feel prepared enough to use the slit lamp comfortably during their clinical rotations. Although this may partially be due to the previous in-person orientations no longer being available because of pandemic-related restrictions, I believe that some additional orientation to ophthalmic equipment can help medical students feel more comfortable with the slit lamp examination and have a more enriching learning experience as a result. Being able to operate the slit lamp proficiently can help provide a better appreciation of
ocular anatomy and pathology. This understanding is useful for physicians in many specialties, as a variety of systemic diseases can manifest in different structures of the eye.

The Department’s Education Coordinator was considerate and receptive to this feedback. Collaborating with faculty members and residents, we developed a video describing the components of the slit lamp and the basic steps of an anterior segment examination. I look forward to the Department sharing this video with clerks over the upcoming months to help orient them to the slit lamp examination and enhance their clinical experience. In the future, as the Department may consider re-initiating the in-person orientation sessions, hopefully this video and additional resources can continue to supplement the hands-on learning for clerks.

14. Affiliated Hospital Reports

Each affiliated hospital has provided its own highlights with respect to clinical programs, education, and faculty achievements.

14.1 Hospital for Sick Children: Dr. Asim Ali, Chief

14.1.1 Staffing changes

New Hires
- Ashwin Mallipatna: Retinoblastoma and general ophthalmology
- Stephanie Kletke: Retinoblastoma
- Crystal Cheung: General paediatric ophthalmology, strabismus, and uveitis

Retirements
- Carol Westall

14.1.2 Honours and Appointments

Academic Promotions
- Arun Reginald to Assistant Professor
- Helen Dimaras and Ajoy Vincent to Associate Professor
- Asim Ali and Kamiar Mireskandari to Full Professor

DOVS Administrative Positions
- Helen Dimaras – Director of Global Health
- Kamiar Mireskandari – Chief of Paediatric Ophthalmology and Strabismus
- Dan DeAngelis – Chief of Ophthalmic Plastic and Reconstructive Surgery
- Rajeev Muni – Vice Chair, Clinical Research
Hospital for Sick Children Chair Appointments
- Asim Ali: Mira Godard Chair in Vision Research
- Elise Heon: Dr. Henry Brent Chair in Innovative Paediatric Ophthalmology – newly endowed chair
- Kamiar Mireskandari: John and Melinda Thompson Chair in Vision Research

American Academy of Ophthalmology Achievement Award
- Elise Heon
- Asim Ali
- Nasrin Tehrani

Other individual honours
Ray Buncic
- Appointed to Order of Canada and Order of Ontario

Ajoy Vincent
- Editorial Board Member, Documenta Ophthalmologica
- Associate Scientist, Hospital for Sick Children Research Institute

Stephen Kraft
- Elected to Executive Council of International Strabismological Association (ISA) 2018-2022 and Chair of Awards Committee for 2020 and 2022 meetings.

Kamiar Mireskandari
- President, Canadian Association of Paediatric Ophthalmology and Strabismus
- Co-author, American Academy of Ophthalmology Basic Science Course Text
- Editorial Board, Journal of the American Association for Pediatric Ophthalmology and Strabismus
- American Association of Pediatric Ophthalmology and Strabismus Honor Award

Agnes Wong
- Publication of new book “Art and Science of Compassion”, Oxford University Press

Asim Ali
- Awarded the Claude Worth Medal by the British Isles Paediatric Ophthalmology and Strabismus Association
- Awarded the Eye Physician and Surgeons of Ontario Innovator of the Year Award
- Completed the Advanced Health Leadership Program, Rotman School of Management

Helen Dimaras
- Editorial Board Member, Public Library Of Science (PLOS) Global Public Health
- Scientist, Hospital for Sick Children Research Institute
14.1.3 Educational Achievements

Michael Wan – Residency Director
Oversees introduction to Paediatric Ophthalmology (2 week hands-on program) and improved community strabismus surgery placements for residents.

Nasrin Tehrani – Fellowship Director, Paediatric Ophthalmology and Strabismus Fellowship
Oversaw major review of fellowship and reorganized the structure of the fellowship to allow for more flexibility and improved strabismus exposure.

Ashwin Mallipatna – Undergraduate Director
Revamped teaching curriculum for undergraduate medical students in paediatric ophthalmology.

Helen Dimaras
Development of the Canadian Retinoblastoma Research Advisory Board (a mechanism to promote the involvement of patients as partners in retinoblastoma research)

New Fellowships
Paediatric Cornea and External Disease Fellowship:
- Directors: Ali and Mireskandari.
- Only fellowship of its kind in the world, now trained 6 fellows.

Paediatric Retina and Inherited Retinal Disease Fellowship
- Preceptors: Kertes, Muni, Vincent and Heon.
- Unique fellowship with one fellow trained.

14.2 Mount Sinai Hospital: Dr. David Yan, Chief

The Department of Ophthalmology at Mount Sinai Hospital has undergone a radical and complete transformation since 2017 when I started as Ophthalmologist-in-Chief. Phase 3A is the largest and most ambitious redevelopment in Mount Sinai’s history. It is part of a multi-year capital redevelopment project to transform the hospital's facilities and grow its internationally recognized clinical and research programs. The Department of Ophthalmology was designed as of the services undergo a complete redevelopment.

The redevelopment of the hospital gave the Department of Ophthalmology the unique opportunity to completely “rethink” the organizational structure to focus on the primary mission goals of excellence in specialty patient care, research and education. Prior to redevelopment, the Department was spread throughout the hospital in three separate locations and in two different buildings. The physician practices were set up in the traditional academic hospital model of a general hospital clinic attended by part time physician staff, and separate private practices of the full-time staff. Utilizing the resources afforded by Phase 3A redevelopment, the Department successfully lobbied the hospital
leadership to completely redevelop the space to transform it into a fully unified clinical, research and teaching facility. The total space allocated to the Department was expanded by ~50%, and the three disparate units of the Department were brought back together into a single enlarged facility. The private office and general eye clinic equipment and staffing were unified into a single administrative unit to streamline operational efficiency, resulting in greatly enhanced productivity. We believe that this will be the future model for all academic ophthalmology departments. A unified, multi-purpose clinical space fully shared amongst all the physician staff is combined with specially assigned technical and administrative staff to provide highly specialized patient care while maximizing the efficient utilisation of space. Sinai Health is the first ophthalmology department within the academic hospitals at University of Toronto to achieve full integration to a single organizational entity, allowing the physician staff to focus on its academic mission, unburdened of the administrative tasks commiserate to running a clinical practice.

Through generous donations and hospital support for redevelopment, the Department of Ophthalmology was able to replace nearly 100% of its equipment with new, state-of-the-art diagnostic and therapeutic tools to be able to provide the best in patient care. Equipment renewal over a relatively short 4-year period included: 1) Two new, top-of-the-line operating microscopes, 2) 3 new lasers for performing retina and glaucoma procedures, 3) 9 new examining lanes, 4) Ocular Coherence Topography for diagnosis of retina and glaucoma disease, 5) Fundus wide-field photography, 6) Visual field analyzers, 7) Top of the line ultrasound bio-microscopy machine for high resolution imaging. A new minor procedure room was constructed and equipped to expand the profile of oculo-plastics and other minor ophthalmic procedures that could be performed outside of the OR, consistent with the trends in ophthalmology towards expanded surgical care outside of the traditional hospital OR setting. Many time-sensitive procedures such as cancer care for eyelid tumors can now be performed in this setting. This expanded capability was especially invaluable during the COVID-19 pandemic which caused multiple shutdowns in our operating rooms.

Oculo-plastics at University of Toronto is centred at Mount Sinai Hospital, which is home to largest sub-speciality group in this area in Canada. The main clinical focus of this sub-specialty group is cancer care for lid and orbital tumors, in alignment with Sinai Health as a major centre for oncology care in Ontario. The oculo-plastics group has been expanded to include Dr. Navdeep Najhawan, Fellowship Director in the Department of Ophthalmology, University of Toronto. The oculo-plastics fellowship at University of Toronto is widely considered to be the most sought after in Canada, and is the only ASOPRS-certified fellowship program in Canada (American Society of Oculoplastic and Reconstructive Surgery). During the past 5 years, this fellowship program, which was previously based out of St. Michael’s Hospital, was moved over to Sinai Health. Recertification of the ASOPRS fellowship at its new home has enhanced the position of Mount Sinai Hospital as the premier site for oculo-plastics patient care and training in Canada.
In addition to the ASOPRS fellowship in oculoplastics, Mount Sinai Hospital has also expanded its fellowship training in the past 5 years to include a neuro-ophthalmology fellow under Dr. Ed Margolin and a medical retina fellow under Dr. Nupura Bakshi.

The complete redevelopment of the Department of Ophthalmology space and equipment along with the reorganization and full integration of the administrative structure has created the operational capacity and financial capability to recruit for a new full-time clinician researcher in oculo-plastics and ocular oncology. This recruit will be the first full-time oculo-plastics academic appointment at University of Toronto with dedicated resources and funding for research in this subspeciality area. Leveraging the largest oculo-plastics clinical service in Canada with a dedicated clinician-researcher will greatly enhance the academic profile and productivity of the oculo-plastics group both nationally and internationally.

Residency training is a central focus of the Department of Ophthalmology at Sinai Health. When the residency program was reorganized in 2017-18, Sinai Health increased its allocation of residents to 5 at any given time (PGY-2, PGY-3, PGY-4, PGY-5 x 2), the largest of any contingent at the 5 adult teaching hospitals in the University of Toronto. Unique to Sinai Health in the residency training programme are the subspecialty vertical rotations in oculo-plastics, neuro-ophthalmology, and glaucoma surgery. The excellence in residency teaching at Sinai Health has been widely recognized, and the highest number awards have been received by Sinai teachers in the past 5 years than any other hospital site within the University Department. This is a major accomplishment for our Department, as it is the smallest ophthalmology department of all the academic hospitals at University of Toronto. The strong commitment and enthusiasm for teaching has more than made up in quality of teachers what we lack in size of our department. Teaching award winners have included Drs. Nupura Bakshi, Ed Margolin, Rosa Braga-Mele, Dan Deangelis, Nancy Tucker, Fariba Nazemi and David Yan. We are very proud of all our teachers at Sinai Health and every teacher is highly dedicated to the educational mission of the department at all levels of medical teaching – medical students, residents, and fellows.

The obstetrics and gynaecology department at Sinai Health is one of the largest in Canada with a special focus on complex pregnancies and medical disorders of pregnancy. Based at Mount Sinai Hospital, and in partnership with The Hospital for Sick Children, the Ontario Fetal Centre (OFC) is the first in Canada, and one of only a few centres worldwide, to offer a fully comprehensive range of fetal therapy. The most premature and sickest of babies are the ones at greatest risk of retinopathy of prematurity (ROP), the most common cause of blindness in children. Sinai Health works in close conjunction with the neonatal department to provide expert care in ROP by Drs. Fariba Nazemi and Nupura Bakshi, two highly trained specialists in this area of subspecialty care. Medical students, residents and fellows all gain a unique exposure to ROP training during their rotations at Sinai Health. Ophthalmology and Obs/Gynae departments have recently collaborated on numerous research and QI projects to improve timeliness and continuity of clinical care in this critically important area of neonatal care.
The Leadership Centre for Diabetes at Sinai Health is a major referral centre for complex cases of Type 1, Type 2 and diabetes of pregnancy. The Ophthalmology Department has entered into numerous collaborative research projects with the Division of Endocrinology at Sinai Health over the past 5 years in diabetic retinopathy screening with our medical retina specialists, Drs. Keyvan Koushan and Nupura Bakshi.

All of the adult and pediatric ophthalmology departments at TAHSN hospitals play unique and invaluable roles in providing excellence in patient care, research and teaching. Mount Sinai Hospital, through its various contributions to oculo-plastics, neuro-ophthalmology, ROP care and glaucoma surgery teaching, are a vital partner to the overall academic mission of the University Department. A comprehensive redevelopment of the facility and complete replacement all ophthalmic equipment with state-of-the-art tools has been completed within the first four years of my tenure as Chief. More importantly, our department has been able to implement the “people culture” changes needed to create a fully unified, “eye institute” model of organizational structure most suited for TAHSN hospital sites with a strong academic mission focus. These successes have strongly positioned the Department of Ophthalmology at Sinai Health for further expansion of its clinical, educational and research roles for the next decade and beyond.

14.3 Sunnybrook Health Sciences Centre: Dr. Peter Kertes, Chief

14.3.1 Programmatic Alignment

Sunnybrook Ophthalmology has come to learn that for a small, clinical department to thrive in a large academic health sciences centre like Sunnybrook, it is critical to align with the hospital’s strategic and programmatic foci. And while we are identified with the Brain Science Program and have moved and grown to best align with it, the Department plays an important role in several other programs, and has made an effort to optimize and improve the service that it provides in those roles.

14.3.2 Brain Sciences Program

Having become an integral part of the Brain Sciences Program, Sunnybrook Ophthalmology feels especially aligned with the hospital’s strategic priorities. The addition of Arun Sundaram, a neurologist with subspecialty training in neuro-ophthalmology, to the full-time faculty has added an important clinical service that did not exist at Sunnybrook prior to his arrival. This has especially benefitted patients with stroke, neurosurgical trauma, multiple sclerosis, and other disorders of the brain. We have connected meaningfully with colleagues in Psychiatry, Neurology, and Neurosurgery in other ways and have multiple ongoing research projects embedded in care. We look forward to an ongoing and increasing collaboration and connectivity to this vital program, and to having an important and prominent place in the new Brain Sciences building.
14.3.3 Trauma, Emergency, and Critical Care and Cancer Programs

Although Sunnybrook Ophthalmology was always well-positioned to look after patients presenting with trauma to the eye, the addition of Harmee Gill, a fellowship-trained oculoplastics and orbit surgeon, has added an important dimension to the service that can be provided to those patients who present with trauma or with cancer around the eye or in the orbit. He has been able to forge close ties with colleagues in Plastic and Reconstructive Surgery, Otolaryngology, and Neurosurgery to allow our Sunnybrook patients to get the very best complex care for their trauma or cancer. When he first joined our Department, he was splitting his time between Sunnybrook and Mount Sinai. In 2017, he elected to make Sunnybrook his exclusive home.

14.3.4 Women and Babies’ Program

The smallest, sickest babies are at the greatest risk for developing retinopathy of prematurity, the most common cause of blindness in school-age children. Since 2003, Drs. Peter Kertes, Kenneth Eng, and Radha Kohly have provided weekly or twice-weekly (when necessary) screening of all at-risk babies in the Neonatal Intensive Care Unit, even when it was located in Women’s College Hospital. Over 500 screening exams are conducted yearly. Previously all babies that reached “threshold” disease requiring treatment were transferred to the Hospital for Sick Children, but in recent years and with different treatments, Sunnybrook Ophthalmology now has the capacity to treat those babies in the NICU, greatly improving the experience for the families involved. With our colleagues in Neonatology, we are in the manuscript preparation phase of a research project exploring the changing demographics of retinopathy of prematurity. Specializing as we do in “micro-prems,” we manage a disproportionate share of the high-risk retinopathy of prematurity in the city and by extension, the country. Remarkably, during those more than 17 years, only one baby has gone on to develop a retinal detachment.

14.3.4 Clinical Activities

Sunnybrook Ophthalmology is a high-volume outpatient clinical centre. The clinical activity had grown in response to new recruitment, and to demographic shifts in the community and beyond. More than 70% of patients come from outside the metropolitan area and the referral base for tertiary care in retina, glaucoma, cornea, and oculoplastics/orbit surgery extends beyond our LHIN to as far as Thunder Bay and the northernmost reaches of the province.

In 2012, Sunnybrook Ophthalmology was significantly under-resourced, especially with respect to access to OR time. This situation has improved considerably with the introduction and expansion of subspecialty surgery to the Kensington Eye Institute in
2013. As a result, before the COVID slowdown, the amount of time that patients have to wait for glaucoma and cornea transplant surgery had improved and we are hopeful that measures will be taken to help alleviate the backlog of cases that have occurred since the cessation of elective surgery in mid-March 2020.

The following tables summarize our clinical and surgical activity for each of the last 5 years.

Patient Visits

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<tr>
<td>Outpatient visits</td>
<td>62,052</td>
<td>61,928</td>
<td>59,812</td>
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<td>59,718</td>
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Intravitreal injections

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<th>Year April - March</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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<tr>
<td>Intravitreal injections (E147/E149)</td>
<td>9,992</td>
<td>9,880</td>
<td>10,996</td>
<td>10,740</td>
<td>11,223</td>
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Sunnybrook surgeries

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<tbody>
<tr>
<td>Number of cases</td>
<td>1,009</td>
<td>987</td>
<td>969</td>
<td>938</td>
<td>974</td>
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KEI surgeries

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<tr>
<th>Year Jan - Dec</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>1,429</td>
<td>1,475</td>
<td>1,518</td>
<td>1,401</td>
<td>1,442</td>
</tr>
</tbody>
</table>
14.3.5 Retirements

Dr. John Fowler, 2017

Dr. Fowler has been so involved in so many different areas and levels of teaching throughout his 40+ year career that it is hard to know where to begin. Family Medicine Residents rotate through our Department with regularity and, as a former Family Physician, Dr. Fowler had especially embraced this segment of his many teaching responsibilities. He came in early and expressly to teach and guide the family medicine residents through the ophthalmologic examination, one on one. Both soon after their electives and years after they had gone into the community to begin their practices, these learners have gone out of their way to tell me how valuable their learning experience with Dr. Fowler was and how important it has been for them in managing their patients with eye problems.

In the late 1970's, under the umbrella of the Ontario Medical Association, John began “A Day in Primary Eye Care”. He would enlist the help of ophthalmologists in the community to fill a one-day conference geared towards family physicians through a range of topics in ophthalmology to help and guide them in their care of ophthalmology patients. He did this annually for approximately 20 years and was singularly responsible for making this a highlight of the OMA curriculum.

In addition to his spectacular contribution and tireless efforts to promote and encourage teaching, Dr. Fowler is a wonderful man. His ethics have always been beyond reproach and he has been a role model for now generations of ophthalmologists and physicians of all stripes.

Dr. William Dixon, 2020

After an illustrious 50-year career as a cornea subspecialist, 27 of which were spent as the Ophthalmologist-in-Chief of our Sunnybrook Department, Dr. Dixon has decided to retire. He retired some years ago from surgery, an event that was marked by the creation of the Sunnybrook William Dixon Surgical Teaching award, then more recently from his practice, but his plan was to continue with a half-day per week resident clinic. With COVID, he elected to step back from that and decided to cease all clinical activity.
14.3.6 Recruitment

Dr. Radha Kohly

Dr. Radha Kohly is an MD, PhD who is fellowship-trained medical retina specialist and an assistant professor in the Department of Ophthalmology and Vision Sciences at the University of Toronto. She specializes in the diagnosis and treatment of diseases affecting the vitreous and retina. Dr. Kohly obtained a fellowship in medical retina from Moorfields Eye Hospital in London, England, after completing her residency in ophthalmology at the University of Toronto. She has a special interest in the diagnosis and management of inherited retinal diseases and uveitis, and is involved in the screening and treatment of retinopathy of prematurity in the Women & Babies program at Sunnybrook. She performs cataract surgery, with a special interest in patients with retinal diseases. Dr. Kohly was appointed Director of Faculty Development for the Department of Ophthalmology and Vision Sciences in 2013. Dr. Kohly completed the Education Scholars Program at the University of Toronto in the 2014-16 cohort, and the New and Emerging Academic Leaders (NEAL) Course in 2019.

Dr. Kylen McReelis

Dr. McReelis is a comprehensive ophthalmologist located primarily in Peterborough, Ontario. He is the surgeon-in-chief at Peterborough Regional Hospital. In 2012, he started a regional ROP screening program in Peterborough as a response to an unmet need where children were travelling back and forth to Toronto or Kingston for screening exams. Here at Sunnybrook, his main practice focus is a resident teaching clinic aimed at general ophthalmology skills for junior resident trainees supervising medical and procedural ophthalmology in a working clinic setting. The Department sponsored him to take the educational scholar’s program through the University’s Centre for Faculty Development as a formal training program longitudinally for 2014 to 2016. Dr. McReelis acts as the supervisor for community rotations for family resident learners in Peterborough on ophthalmology electives. In the past year, Peterborough has now become a mandatory PGY-5 community rotation for graduating residents from the Department of Ophthalmology at Queen’s University in Kingston. He directly supervises these learners in the OR and the office setting for their rotations. Currently, Dr. McReelis has sat for a number of years as the Tariff Chair for the Eye Physicians and Surgeons of Ontario, the OMA section for ophthalmology. This has involved extensive work with the section as the point person for the Health Services Funding Reform Quality-Based Procedures Committees. These have so far looked at cataract surgery, retinal services, and corneal surgical procedures.
Dr. Jason Noble

Dr. Jason Noble is a medical retina specialist. Board-certified in ophthalmology in Canada and the United States. Dr. Noble attended the University of Toronto for his undergraduate and medical studies, as well as his residency training in ophthalmology. He then pursued a fellowship in medical retina and diabetic eye disease at Harvard Medical School, where he trained at renowned institutions, including the Massachusetts Eye and Ear Infirmary and the Joslin Diabetes Centre. Dr. Noble has been actively involved in clinical research. He has published more than 45 manuscripts in peer-reviewed journals, and has presented at major national and international meetings.

Dr. Arun Sundaram

Dr. Arun Sundaram is a neuro-ophthalmologist and connects ophthalmology directly with the Neurology Department and the Brain Sciences Program. He was dual-trained in neurology and ophthalmology. In 1996, he earned his medical degree at Jagadguru Shree Shivarathreeshwara Medical College in Mysore, India. After graduating from medical school, he completed residency training in ophthalmology at Sri Ramachandra Medical College and Research Institute in Chennai, India, in 1999. Following an internship training in internal medicine at Nassau University Medical Center in New York, Dr. Sundaram completed a residency in neurology in 2007 at the Penn State University Milton S. Hershey Medical Center in Pennsylvania. In 2007, he then joined a three-year clinical fellowship in neuro-ophthalmology at the University of Toronto, under the supervision of Dr. James Sharpe, a world-renowned neuro-ophthalmologist. He recently earned a master’s degree from the Institute of Medical Sciences at the University of Toronto.

Dr. Harmeet Gill

Dr. Harmeet Gill is an oculofacial plastic and orbital surgeon, accredited by the American Society of Ophthalmic Plastic and Reconstructive Surgery (ASOPRS), and a double board-certified eye surgeon. He is a Diplomate of the American Board of Ophthalmology (DABO), and a Fellow of the Royal College of Physicians and Surgeons of Canada (FRCSC). Dr. Gill specializes in reconstructive surgery of the eyelids and face, orbit, and lacrimal system. He has a special interest in thyroid-related eye disease and cancers of the conjunctiva, periocular skin, and orbit. He has produced more than 30 manuscripts, abstracts, and chapters in the medical literature and presented his work at conferences around the world. Dr. Gill is currently participating in research evaluating innovative surgical techniques, aesthetic procedures, and evolving molecular and stem-cell therapies for cancers of the eye and orbit. He has received multiple research grants and awards for such projects.
Dr. Mojgan Hassanlou

Dr. Hassanlou completed her ophthalmology residency at the University of Ottawa and a fellowship in Cornea, External diseases, and Refractive Surgery at the University of Pittsburgh Medical Center. Her research interest is focused on artificial corneal engineering and effects of corticosteroids on recurrence of herpes simplex keratitis. She has presented her research at the Association of Research in Vision and Ophthalmology annual meeting 2013 and the American Society for Cataract and Refractive Surgery annual meeting 2014. Dr. Hassanlou has been involved in FDA studies on corneal crosslinking and was invited to moderate the crosslinking session of the Canadian Ophthalmological Society annual meeting 2015. Currently, she is involved in U of T ophthalmology residency teaching including cornea mock orals for PGY-5s, end-of-block cornea exam, and wet lab training for refractive surgery during TORIC.

Dr. Stephan Ong Tone

Dr. Stephan Ong Tone joined the Department in September 2020. He has recently completed a two-year clinical/research fellowship in Cornea, External Disease and Refractive Surgery at Massachusetts Eye and Ear Infirmary / Harvard Medical School. He will work closely with and share in the practice of our other cornea specialist, Dr. Hall Chew, and will in part take over from Dr. William Dixon.

From the translational research side, Dr. Ong Tone completed an MD CM and PhD in Neurological Sciences at McGill University, followed by Ophthalmology at the University of Toronto. As an academic ophthalmologist, he will lead a basic science laboratory focused on understanding the etiology of various corneal pathologies, with a particular interest in Fuchs endothelial corneal dystrophy (FECD). His clinical research investigated the regional variability in corneal endothelial cell density between guttae and non-guttae areas in FECD, for which he was awarded the 2018-2019 Best Clinical Trainee Research Award in Cornea and Refractive Surgery. As a fellow, Stephan was selected as the 2019-2020 Abelson Family Fellow in Cornea at Massachusetts Eye and Ear infirmary, and was awarded the 2019-2020 Claes H. Dohlman MD, PhD, Fellowship Award from the Dohlman Society, which recognizes outstanding clinical fellows training in cornea, refractive surgery, and external diseases. His basic science research interests in FECD include understanding the etiology of FECD and characterizing the molecular and phenotypic differences between normal and FECD corneal endothelial cells. To investigate the functional differences between normal and FECD corneal endothelial cells, Dr. Ong Tone developed a novel model using live cell imaging of corneal endothelial cells on ex-vivo specimens transfected with green fluorescent protein using lipid nanoparticles. These findings will likely have a clinical impact as the new surgical technique of Descemetorhexis without endothelial keratoplasty for the treatment of FECD relies on the migration of corneal endothelial cells. This work was presented at the 2019
American Academy of Ophthalmology annual meeting and was awarded Best Original Paper in Cornea. He also has a plan to establish a biorepository of patient specimens, aqueous humour, and blood samples from all FECD patients undergoing endothelial keratoplasty at the Sunnybrook Hospital and Kensington Eye Institute, so that these samples can be kept for future genetic and molecular studies on FECD. Furthermore, through preliminary discussions with Professor Chie Sotozono at the Kyoto Prefectural University of Medicine, he anticipates that the University of Toronto could be a future site for an upcoming Phase 4 multi-center clinical trial for cell therapy for FECD.

**Dr. Brian Ballios**

Sunnybrook along with UHN, the Krembil and KEI are pleased to have Dr. Brian Ballios as a clinician scientist in their departments. Dr. Ballios completed a clinical medical retina/inherited retinal disease fellowship at Harvard University’s Mass Eye and Ear Institute. His plan is to devote 70% of his time to basic science translational research.

From the research perspective, Dr. Ballios has a BScEng in Engineering Chemistry from Queen’s University and is a graduate of the MD/PhD Program at the University of Toronto in 2007. During his PhD and subsequent fellowship, under the supervision of Dr. Derek van der Kooy and Dr. Molly Shoichet, he worked to develop new approaches to the transplantation of stem cells and their progeny for the treatment of retinal degeneration. As a University of Toronto resident, Dr. Ballios held an academic appointment as a Senior Research Associate in the Department of Ophthalmology and Vision Sciences. His research was funded by the Foundation Fighting Blindness Canada, BrightFocus Foundation, Retina Foundation of Canada, and the Department of Ophthalmology and Vision Sciences. His goal is to continue to develop his research program as an ophthalmologist-scientist with a strong basic/translational research program, using clinical problems to inform the research. Brian’s interests lie at the intersection of retinal neurobiology and applied science, as related to stem cell biology and bioengineering, having developed the first injectable biomaterial-based delivery system for stem cell transplantation in the retina (Ballios, 2010) and demonstrated a method to differentiate stem cell-derived photoreceptors with unprecedented efficiency to replace damaged photoreceptors in retinal degeneration (Ballios, 2012). This unique cross-disciplinary experience in stem cell biology and tissue engineering has tremendous promise to develop new approaches to the transplantation of stem cell progeny for the treatment of retinal disease; to advance our ability to isolate and purify stem cell-derived photoreceptors by studying lineage fate specification in retinal progenitors; to activate endogenous retinal stem cells and direct them towards retinal repair; and, more recently, to develop new materials to act as vitreous replacements to aid in vitreoretinal surgery and ocular regenerative medicine applications.
14.3.7 Education

The education of medical students, residents, and fellows is a role that Sunnybrook faculty take a great deal of pride in and take very seriously. Although Sunnybrook is among the smallest of the teaching units that fall under the University of Toronto Department of Ophthalmology and Vision Sciences umbrella, the directors of postgraduate (John Lloyd) medical education, and faculty development (Radha Kohly) are members of our hospital Department. The disproportionate number of teaching awards given to Sunnybrook teachers is emblematic of how important and how much the faculty is appreciated in the university teaching program.

Neurology residents also rotate through our eye clinic in the neuro-ophthalmology clinic, and form very productive and fruitful connections with the ophthalmology residents and learn a great deal from each other.

We are an important part of University of Toronto fellowships in Vitreo-Retinal Surgery, Glaucoma, and Neuro-Ophthalmology, are widely regarded as among the best fellowship training programs in North America and beyond, and have attracted outstanding fellows from all over the world. Our graduates are in practice and serve their communities all over the country and world, and bring renown and pride to the Sunnybrook and the University of Toronto names where they reside.

In addition, members of our Department have volunteered and participated in a wide variety of international development projects to educate colleagues in the developing world in order to help them better and more effectively manage their population in settings with very limited resources.

14.3.8 Faculty Education and Development

Dr. Kohly has been the director of the faculty development program since 2013 and has developed a TED-style review course and a mentorship program for our faculty.

Dr. Nancy Epstein took part in the Faculty of Medicine’s Quality Improvement Program, leads our Department’s Quality Improvement Committee, and oversees the PGY-4 residents’ quality improvement/quality assurance projects.

With the help and support of the University Department of Ophthalmology and Vision Sciences and Sunnybrook, two of our faculty completed the New and Emerging Academic Leaders (NEAL) Course: Dr. John Lloyd in 2016-2017 and Dr. Radha Kohly in 2018-2019.
Patient Safety Quality Improvement Rounds

These rounds began in 2017, in response to the Medical Advisory Committee mandate for every division/department to have a version of morbidity and mortality rounds. This is the ophthalmology version of such rounds. The structure of the rounds is case-based, where we will typically focus on an adverse patient outcome, near miss, or a complication/difficulty that one of us had been involved in, and then discuss and explore ways to better manage it and formulate strategies to avoid such mistakes in the future. All our full- and part-time staff are invited, as are our trainees, and we invite others depending on the issue being discussed. These rounds have been very well received, particularly amongst trainees, have led to substantive changes in the way we do some things, have forged closer ties with our colleagues in other fields, and we are unique amongst our TAHSN partners in having such rounds. These have continued and switched to virtual rounds during the pandemic.

14.3.9 Research

In the Department, it is clear that teaching and clinical excellence alone were not enough to excel at an institution like Sunnybrook; we also had to lead in research and innovation. For a small Department, we have had an impressive output of research and publications, and have attracted multiple grants in multiple areas from both peer-reviewed and industry sources. The industry-sponsored clinical trials in particular have generated considerable revenue to help support the hospital’s research enterprise. Of particular note is the Canadian Treat and Extent Analysis Trial with Ranibizumab (CAN-TREAT), a $11 million investigator-initiated multicentre trial of which I am the co-national principal investigator. Ours is the busiest and most productive clinical research program in the city, and among the busiest and most productive in the country.

What follows is a detailed list of the publications, presentations, and grants by members of our hospital Department. After that is a section labelled Scholarly and Professional Activities that details the many and myriad roles that members of our Department play on hospital committees, university Department committees, and at the provincial and national level, advising the Ministry of Health and Long Term Care in task forces and QBPs, and leading the Ophthalmology section of the Ontario Medical Association.

The Dixon Family Chair in Vision Science Research

In 2007, Ted Rogers donated $7.5 million to be divided as $5 million to endow a chair in vision science research to honour his friends and ophthalmologist, William Dixon, and $2.5 million to be used to update and purchase state-of-the-art equipment for what he wanted to be called the John and Liz Tory Eye Centre, to honour his friends and business associate, John and Liz Tory. Recruitment for the chair did not really begin in earnest
until the head of the Biological Sciences platform, Dr. David Andrews, was recruited and able to move to the Sunnybrook Research Institute. There had been a number of very promising senior scientists that have shown an interest and come to present and interview for the chair. We were very pleased to attract and recruit Dr. Carol Schuurmans from the University of Calgary to the chair in 2016. She has advanced her science considerably since coming, and forged productive collaborations with other Sunnybrook Research Institute scientists and with vision scientists across the city.

14.4 St. Michael’s Hospital: Dr. David Wong, Chief

14.4.1 Infrastructure

Clinical Space

For over ten years, most of the Ophthalmology Department, including the eye clinic and the retina offices, were located at 61 Queen Street on the 8th floor. A smaller unit housing the procedure room, glaucoma, and after-hours eye unit was in the hospital proper at 30 Bond Street. This fragmentation created issues, especially in optimal patient care, as visually impaired patients had to cross the street for minor procedures, as well as created confusion due to two separate building locations, depending on weekday or weekend care. Significant improvement occurred when the Ophthalmology Department consolidated to one building and moved to 7 and 8 Donnelly within the hospital, with the official opening finally on December 9, 2019, after numerous delays. The improved design, with more examination rooms and layout, especially on 8 Donnelly, have been extremely helpful to improve the patient experience and flow. The added examination rooms allow for multiple offices running concurrently without causing significant patient overflow, as was the situation when clinics were at 61 Queen Street. Fellows and residents now have access to proper examination rooms, whereas in the past for 61 Queen patients, they were using makeshift examination rooms from the laser rooms.

The clinic move and consolidation was a major accomplishment and undertaking. Given the spatial limitations within the hospital, there was no ability to have a temporary unit to perform ongoing patient care. With this major limitation, the whole Department, except for surgical services, had to close to pack, move, set up, and test before patient care was re-established. This closure for seven complete workdays was the largest departmental closure the hospital has performed. Emergency care was transferred to other eye units and we were able to have a mini eye unit within the Emergency Department to handle the emergency walk-ins during this time. Overall, it was a successful and complicated move, without any incursions or compromise in patient care.
Clinical and Diagnostic Equipment

In the last five years, the goal has been to further modernize the equipment to handle the patient volumes, but also to further the academic goals of education and research. All examination lane equipment was upgraded in a staged manner over a two-year period, given the delay and complexity of the move of the new clinic. This initiative was imperative to improve our patient care, as well as our core education of residents, medical students, and fellows. We have upgraded all of our OCT machines several times, with the most recent having exceedingly fast acquisition and OCTA (angiography without dye) capability. We have acquired the newest OCT technology using swept source technology, which is improved from the older spectral domain technology. Further improvements in imaging include wide-field angiography with our Department being one of the first in the city to acquire this technology. With the ability to view the far peripheral retina including vascular changes, we have been able to better serve our patients, particularly the large diabetic population. We have also upgraded our ultrasounds, including a portable rapid access system within our retina examination lanes and added fundus autofluorescence to round out our retinal diagnostic imaging section. Other upgraded diagnostics include corneal topography, A scan, and IOL Master technology. With all this new technology, we are not only able to offer the patients we serve the best possible care, but also work with these technologies in advancing research directives.

Operating Room Equipment

In the last five years, upgrade in our core surgical equipment was done. We moved to the newest vitrectomy and phaco machine platforms. We also upgraded two of our microscopes to the newest platform. As we upgraded our microscopes, we also upgraded our wide-angle viewing system. Wide-angle viewing surgery was pioneered at our hospital by the late Dr. Michael Shea. Until recently, we have been using the same technology system with some modifications, but it was limited, especially on the assistant viewing side, with the lack of stereoscopic viewing. Our new system allows for the assistant to view similarly to the surgeon in stereoscopic viewing, allowing for improved education for our learners. Acquisition to a 3D heads-up display surgical platform was also done two years ago and was one the first in the province. This has allowed further educational enhancements, as the surgeon, assistant, and everyone in the room is able to see exactly as the surgeon does. A second 3D heads-up display system will be in place (unfortunately delayed by COVID-19) and will allow our unit to be one of only a few centres globally to have two different 3D heads-up display systems, helping us to maintain our strength as a global leader in ocular surgery.

14.4.2 Staffing and Recruitment

Space in the old clinical area at 61 Queen Street and resources have limited the recruitment of staff; however, with staff attrition with retirements and phasing out, we have been able to add and adjust the Department’s complement.

We solidified the uveitis service by increasing the clinic to half a day a week, supported by two uveitis specialists, Drs. Derzko and Bakshi. The uveitis service shares many
patients with the retina service and works well together. Having duplication enables rapid second opinions and redundancy when one clinician is not available.

With an unknown timeframe as to when the Department would move and the need to maintain service, temporary one-year positions (Drs. Tran Le and Hannah Chiu) were created to fill in clinics that were vacant from vacations, conferences, and sick leave.

Dr. Mandel moved from courtesy to Active staff in 2016 as he took up a more active role in teaching.

Dr. Micieli was recruited to bring expertise with neuro-ophthalmology within the Department in 2018. There is crossover from the retina service, as well as a demand from the neurosurgery team when their internal neuro-ophthalmologist has not been available. His strong interest in clinical research complements our retina research and Departmental goals.

With the quick departure of Dr. Bujack in 2019 to the west coast, we brought on Dr. Alizadeh-Elbadi as a locum until a formal plan and search for cornea specialist would occur.

14.4.3 Clinic Services

Clinical Volumes

Clinical volumes in both the GFT offices and eye clinic have remained relatively steady in total numbers, ranging as noted in Figures 19 and 20. Over the past five years, we implemented several changes, including improved data collection and refinement. A data point that was not well captured was urgent/emergent referrals. A new code (OPE) was developed to capture any referral that needed to be seen within three days. A three-day window was decided to enable capturing weekend urgent consults that could be seen during the weekday.

Figure 19. Eye Clinic Volumes
The GFT offices are subspecialties mainly, with six actively busy vitreoretinal specialists and one glaucoma specialist. Our Department emphasis is vitreoretinal diseases of the eye and the high volumes are reflective of this service.

To minimize the continuing demand for ophthalmic care growth and increasing pressures on the clinic volumes, we sought, in the last five years, to serve more acute care cases, dealing with urgent and emergent patients and less with ongoing care. Figure 21 shows the metrics of OPE patients and the steady annual increases. Once patients are stabilized, there is a strong move to refer them back to the community for ongoing care. This is consistent with our mission as an acute care hospital. The clinic is better able to discharge patients back to the community, whereas the retina offices still have to maintain ongoing care with less retina specialists in the community.
Developing this data knowing the urgent and emergent volumes will help in future planning of the equipment and services the Department requires.

The diagnostic volumes in Figure 22 have been steadily increasing, consistent with the advancement in technologies and increasing expectations within the specialty, as well as the development in efficiencies.

![Total Diagnostic Volumes](chart)

**Figure 22. Total Diagnostic Volumes**

**Clinic Scheduling**

The eye clinic is staffed by non-GFT ophthalmologists and supports many various clinics. To give the full-service support with various subspecialties and educational environment to residents and medical students, several ophthalmologists with subspecialty training in various fields are required. Due to space limitations, it is not possible to hire them as full-time GFTs. As various staff retire and leave, clinics are being replaced with staff to fulfill our compliment, and offer more urgent and emergent services.
14.4.4 Academia

Medical Students
The Department is active in medical student education. Dr. Mandel took over the lead role for the Department in 2016 for the early medical student’s education.

Residents
With the restructuring of the residents’ scheduling and numbers by the university, we had to alter our clinics to accommodate the service and academic needs. There are now two residents from PGY-2 in the clinics. The PGY-3 is a year for more in-depth subspecialty clinics and with the strength of the Department in retina services, the PGY-3 usually spends most of the time with the retina group in the clinic and in the operating room. Several teaching sessions, in addition to the core teaching sessions at the university, are held with the residents at regular intervals by several staff.

With the majority of cataract surgery shifting to KEI, the surgical residents (PGY-4 and PGY-5) spend most of their time at KEI rotating with our SMH who operate there. Surgical residents will also spend time at SMH in subspecialty surgeries of retina, glaucoma, cornea, and oculoplastics.

Dr. Bakshi has taken over as site supervisor in 2018 after the departure of Dr. M. Bujack. To reduce calls and having the residents perform clerical work, a system was created to allow the Emergency Department to book appointments in the eye clinic for non-emergent care without the need to contact the resident on call. In addition, locating and switch board have been instructed to screen calls so only truly emergency and urgent calls are directed to the resident. Calls to the resident on call still occur for emergency care from internal and external sources.

Fellowship
In 2016, Dr. David Chow became head retina fellowship preceptor, giving the program a fresh changeover. With his involvement in the Retina Fellowship Forum program in the United States and with his international reputation, this move would enable the fellowship program to excel in its international reputation and attract a broader range of candidates. The clinical fellowship formally expanded to include two fellows per year in a two-year structured fellowship program.

With Dr. Giavedoni’s experience in fellowship education, a new fellowship introductory program was introduced in 2017 under his direction. This has been well received and tentative plans are to further expand the program, including to fellowship programs outside of Toronto.
In 2016, we initiated our retina research fellowship and permanently established it the following year with Dr. Rajeev Muni being the lead. This successful program has expanded, in 2019 having two retina research fellows.

Other programs include oculoplastics under Dr. N. Nijawan and glaucoma under Dr. C. Kranemann. Recently, a uveitis fellowship with medical retina under Drs. Derzko and Bakshi, and a neuro-ophthalmology and strabismus fellowship with Dr. Iizuka have been established. These fellows are also based in other hospitals/clinics, and come to SMH to provide care and help in the academic mission. They are not based at SMH daily and are here when clinics and surgery are performed, or when afterhours subspecialty care is required. (Appendix Clinical Fellows)

14.4.5 Research

Retina Research Unit

There are two units that work independently, but collaboratively. One unit is in the clinical retinal unit in the main GFT clinic that focuses on retinal surgeries and treatments of retinal vasculopathies, and is under the direction of Drs Muni and Wong. The other retina clinical trial unit is housed at 55 Queen Street and is devoted to dry macular degeneration (AMD) under the direction of Dr Shelley Boyd. Despite the limited space and resource allotment, the clinical trial units continue to build. In the clinical main GTF site, a clinical trials coordinator has been developed into a full-time position with another 0.2 FTE added in 2018 to help. The dry AMD research site has a separate research person that coordinates the dry AMD research and dry AMD registry. Prior to 2015, we only had two phase 3 retina studies and within the last four years, there have been five phase 3 RCT, with four others in the process of approval. Several phase 4 trials were also active. Our investigator-initiated trials (ITT) have been extraordinarily successful, leading to several publications. We have also expanded ITT with now at least eight internal studies. To further our RCTU, we supported one of our ophthalmic assistants to receive certification as a Certified Clinical Research Professional.

Glaucoma Research Unit

Dr. Gupta continues to pursue research in glaucoma in new therapeutic areas, with the most recent in ocular lymphatics, in conjunction with Dr. Yeni Yucel. This recent work potentially may be a landmark in the ophthalmic field. She has a full-time person coordinating her research work. (Appendix – Grants)
Retina Research Fellowship Program

This has been an extraordinarily successful program that we started in 2016 as a trial. Given its success, we continue to grow it in conjunction with the Retina Clinical Trials Unit. We have had five successful fellows complete the program under the direction of Dr. Muni, with the other preceptors’ Drs Altomare, Berger, and Wong. These fellows have been instrumental in furthering the clinical retina research.

Novel Programs

Teleophthalmology and diabetic retinopathy screening has been in development for several years at SMH with Dr. Wong. Working in conjunction with Ontario Telehealth Network (OTN), a network of diabetic screening units have been running in the downtown core, including a trial unit in a SMH family practice centre. Our previous work has indicated urban centres have the highest rate of unscreened diabetic retinopathy. Using screening units may reduce this unscreened diabetic retinopathy numbers.

Marginalized eyecare with the underprivileged and homeless population is under the direction of Dr. Myrna Lichter. It is a special area unique to Unity Health. Given St. Michael’s hospital catchment area of many of the homeless shelters and as an inner-city hospital, this program serves a significant need. Outreach clinics have been established where she brings her team. In addition, Dr. Lichter has bimonthly clinics where many of the marginalized eyecare patients are seen. In 2016, a mobile retina camera was initiated in the shelters and integrated in the teleophthalmology network, given the retina expertise of the unit. Any surgical pathology, including cataracts, seen in these patients are rapidly rushed to SMH surgeons who prioritize their care, given the transient nature of this population. In addition to the required unmet service need, multiple research projects have been launched to further understand the impact of eye diseases, management challenges, and improving methodologies, including incorporating new technology like teleophthalmology for the marginalized patient population.

Corneal Neurolization is a new surgical technique developed at HSC by Dr. Asim Ali, a pediatric cornea specialist, and Dr. Greg Brocher, a pediatric plastic surgeon. This technique has been brought in-house with the goal of knowledge and surgical transfer to Unity Health ophthalmic and plastic surgeons, with Drs. Clara Chan and Nav Nijhawan. Unity Health will be the adult centre to perform this surgery and educate globally. This technique reinnervates the cornea with grafted neuronal tissue from the leg to help patients who have neurotrophic corneas from trauma, tumours, and corneal infections such as herpes keratitis.

3D Vitreoretinal Surgery is a rapidly developing area in ophthalmic surgery. Several of our surgeons (Drs Chow, Altomare and Wong) are leading the surgical education with fellows and residents, as well as doing research into the strengths and weaknesses of this novel surgical technology. Unity Health will be one of the few centres globally to have 3D heads-up display technology for surgery from two separate companies, allowing for a
true assessment and allowing further development of this technology with the SMH ophthalmic surgeons.

Ocular BIOBANK is a development by Drs Gupta and Yucel that has ocular pathology tissue that can be sent to anywhere in the world. This unique endeavour allows researchers and educators to review their work against a gold standard pathology specimen.

14.4.6 Challenges and Concerns

Move Delay

The construction of the Department clinics on 7 Donnelly and 8 Donnelly fell significantly behind schedule by over three years for a multitude of reasons. Delaying the move caused a devastating, rippling domino effect, including the future planning of staffing, resources, and research endeavours. Several specific issues with the move were of additional concern. The construction company could not commit to a final fixed finishing date, but did give a move date that would be only a few months ahead; however, this date would be cancelled and rebooked with only a few months advance notice. This happened not once, but multiple times. These constant changes made previous existing plans timelines obsolete and much was placed on hold. Staff had constant stress with the repetitive changes. A significant amount of administrative time was used to reschedule and advise patients of where their appointments would be.

Given the complexity and lack of physical space in the hospital to decant various offices and patient care areas, the move occurred in stages, with a series of moves over a period of several months. Despite the care taken to minimize the impact, the effect was severe and difficult for patient care.

For the final move, the Department had to be completely close for one week to move all equipment from across the street at 61 Queen Street to the hospital, re-set up, and re-calibrate. As well, many new processes and systems specific to being in the hospital changed work flows significantly.

Change Management

Changing location can be difficult to many, given that some individuals have been in the 61 Queen location for over 20 years. Adding changes to logistics and processes such as having administrative and physician offices away from the clinical area is new to the Department. This single change was feared by many of the GFT physicians and their administrative staff.

For the eye clinic, sharing administrative space with another service, coupled with the reduced waiting space, needed to be managed. Managing the change of the inventory
control to a just-in-time process compared to the previous of large local storage was also required.

**Financial Decline**

The constant pressure in underfunding the hospital is a major challenge the has far-reaching consequences. Significant concern continues to loom when budgets are constantly announced that are underfunded and further trimming is required. With years of trimming, there is not much more gain in efficiencies to be achieved without compromising patient care. This challenge continues to propagate and affect all aspects of the Department.

**Operating Room Cuts**

The previous OR administration unfavorably cut ophthalmology time by 30% compared to many other OR services that were cut less. This caused significant pressure on increasing waitlists and delay in surgical treatment to eyes that are significantly visually impaired and with a limited window to repair. Despite pleas to revisit these unequal OR cuts, there was no change in this course. Part of the fallacy in thinking by the previous OR administration was the thought process that KEI would absorb ophthalmology cases. Given the majority of the Department’s surgical cases are in the retina, with many patients who are systemically ill, these patients cannot be done at KEI without sacrificing patient safety. Furthermore, KEI had incremental funding to do retina cases and funding was not transferred from Unity Health in order to do retina cases. The majority of cataract and cornea cases remaining at SMH are systemically ill patients that are high risk for surgery at KEI. There is no oculoplastic surgery at KEI. Thus, further SMH OR cuts hurt the access for these patients who cannot be done at KEI.

**Space**

The move has improved the space with newer facilities that are now up to standard of code and it is a vast improvement compared to the previous space. Unfortunately, bringing the standards to code, such as washroom and corridor sizes, has reduced the actual usable clinical space to what was theoretically possible on paper.

Having the Department spaced in three different parts of the hospital has brought significant challenges that still have not been overcome. Sacrifices to administrative logistics were made to minimize the impact on patient care.

**Clinical**

Despite the new space, there is still a significant lack of space that the Department requires to fully function and thrive. Waiting areas and examination rooms on 7D would ideally be increased to accommodate more. On 8D to maximize the clinical space and
with the new requirement of washroom size, the number of washrooms were reduced to the minimum. All rooms were dimensioned to minimal sizes to allow maximal number of rooms.

A major concern is the physical separation of the allocated space to three separate areas within the hospital. The Department was configured into the present sections to minimize patient movement and to minimize the impact on patient care; however, sacrifices to administrative logistics had to be made. Visually impaired patients, especially the elderly, do not move well. The area on 8CC where the GFT administration offices are located is physically separated, with no direct access to 8D. Access is only achieved by going down two floors and crossing a connecting hallway to catch another set of elevators to return to the same floor level, but in the other wing of the hospital. Administrative staff can do this better than visually impaired, elderly patients. It is not efficient for administrative staff and time is wasted in travelling. After lengthy discussion, it was concluded that there is a need to build a connecting hallway between 8CC and 8D, but the completion date is unknown.

The space on two floors increases traffic flow between the two floors and puts increased pressure on the three patient elevators. Elevator management for traffic flow is lacking and ongoing concern arises if elevators are in repair.

Administrative staff have their offices significantly away from the clinical area. There are ongoing challenges when patients arrive on days when the administrative staff are in their offices on 8CC and not in the clinical area on 8D. The patients may arrive to pick up, sign, or ask questions. Patients are not allowed to visit the 8CC administrative area. Therefore, administrative staff must travel the 5-10 minutes from 8CC to 8D to see and discuss anything with patients. If this is done several times a day, a significant amount of time is wasted on staff just travelling. Although another office may greet the patient, the patient waits until the administrative staff for that office arrives.

**Research Space**

There is no dedicated space given by the Hospital’s research section to help. Some space created by the clinical group has been made, but this is in another building at 193 Yonge Street, and significant wasted time is spent by the clinical research staff travelling between 193 Yonge and the clinical unit in the hospital. Presently, some clinical space on the floor has been used to double as clinical research space. Ideally, research space would be located near the clinical space, in order to have a tight integration between the two spaces. With our increasing research work, it is not feasible for the research staff to travel back and forth. Another issue is onsite storage space for research files and material. Onsite storage near the clinical research area is better than storage in an off-site location. With clinical space at a premium to manage patient care, it is difficult to give space for research purposes.
GFT Office Scheduling / Off-Site Offices

Despite the new space, the Department is still unable, despite its best efforts, to house all GFT in order to give each physician three days a week of clinical time. In addition, with the reduction in OR time, the OR schedule is not able to accommodate each retina GFT with two days a week of OR time, which was the standard previously. This has caused ongoing complexities in scheduling GFT clinics and OR management. The retina GFT staff, for over the last seven years, all work off-site on the days they are unable to get clinical or OR time at SMH.

Increasing Volumes

With an increasing elderly population and chronic diseases such as diabetes, there is an significant increase in ocular disease. Add the continuing increasing population into the city core, and the demands of the Department continue to rise as specified below. With the expertise of the Department, the unit draws patients from not only the GTA, but often, much of southern Ontario. Given we have 50% of Toronto's academic retina surgeons at SMH, we naturally draw on a significant number of retina referrals. To reduce volumes, various methods including a more rapid discharge of stable patients to the community, have been limited in success.

The eye clinic model has been adjusted to more acute care and it is now showing this shift to more acute management based on the tracking metrics we started in 2015. Although the actual volume of patients seen is slowly rising over the last few years, the ratio of acute referrals within 72 hours to more chronic visits has increased more dramatically. Many of these patients require more time, investigation, and management care. The challenge will be to maintain the same number of patients seen to the time required per person.

Recruitment

Bringing on new staff to deal with the increasing complexity and number of patients has been limited by the available resources, specifically, space. Ideally, a clinician scientist in retina diseases would complement this Department very well, but with the issues in previously discussed in this section, it is not feasible to hire without many of these issues first being resolved.

Unionization

With the unification of St. Joseph’s Hospital (SJH) with St. Michael’s Hospital (SMH), unions are pushing the SMH hospital administrative / technical staff to be unionized. Of concern is the high probability push of the union onto the administrative staff of the GFT physicians, which will be a first within the hospital. There is significant concern with GFT medical staff regarding the implications, impact, and effect on their offices.
Image Data Management

After going through a proper and lengthy RFP, the new Image Data Management system was chosen and has been operational since 2016; however, that chosen company decided to leave healthcare and end support. This gap is now being revisited in order to find another company to take it over.

Unified EMR

It is a challenge to have all GFT switch to the same EMR. At present, there are 3 separate EMR systems within the six retina GFT surgeons that were set up prior to 2014. Discussions have been ongoing to unify, but looming over these discussions is the hospital’s plan to move to a new data management system, including a unified ambulatory EMR. Although this is excellent for unifying and standardizing EMR data throughout the hospital, there is no hospital-based EMR capable of providing the proper ophthalmology workflow. The challenge will be to see if a separate ophthalmology-friendly EMR will be allowed to integrate into the hospital-wide EMR.

COVID-19

The unpreceded pandemic has turned over every stone. It has left in its path a backlog of patients to be seen and managed, as well as the disruption of well-established protocols and workflows. The ongoing challenge has been the constant changes to protect patients and staff. A major change in workflow has been increasing the appointment waits and increase the disinfecting of areas of patient care after each visit, including diagnostics. With physical distancing, the number of patients allowed to be in the waiting room areas is significantly reduced. This has also resulted in the inability to run three offices on 8D, thereby continuing the patient backlog. The reduced workdays at SMH has also caused MDs to seek places of work outside the hospital to care for their patients. This fragmentation of the Department is of concern. In the 7D eye clinic, a significant limitation to the number of patients seen in the clinic has been implemented also due to the physical distancing requirements and the lesser waiting room area. The has created a patient backlog for the patients regularly seen on 7D.

Operating time was initially drastically reduced, but incrementally, OR time has been reintroduced; however, there is no extra time to catch up on the backlog of patients.

14.4.7 Strengths

Innovative, Invested Group

The Department has a strong and innovative group of physicians. They have been instrumental in continuing the academic mission of excellence in research and education. They have continued their excellence in patient care. This collegial group have been able
to help each other and resolve issues that has faced the Department. I am proud of each of them and trust their unique abilities.

**Vitreoretinal Backbone**

The Department’s six vitreoretinal surgeons are the backbone of the Department. This niche ophthalmology subspecialty, with few centres capable of housing, has allowed the Department to stay strong and maintain the vast referral network. No other hospital or ophthalmology unit in the province has as many vitreoretinal surgeons in one location. It is known within the ophthalmic community that if there is a retina problem, send the patient to SMH for care. Having a large vitreoretinal centre allows for attraction to our surgical retina fellowship and recruitment for retina research. In addition, as a trauma hospital, vitreoretinal surgery is core to ocular trauma. Other ophthalmological services of cornea, glaucoma, uveitis, neuro-ophthalmology, and oculoplastics support the vitreoretinal service and add their own expertise.

**Patient Recognition**

Patient recognition for the salvation of their sight is strong, as seen by the grateful donations and comments sent to the hospital each year. This strength acknowledges the importance the Department brings to the community it serves.

**Hospital Support**

Ongoing support for the Department from previous and present senior administration with resources for the building of a new clinic are reassuring and important for the city and province. With new OR management, there is hope to restore OR time to levels seen before the drastic cuts.

**Darlene Gervais**

Ms. Gervais has continued her support from the previous chief, Dr. Alan Berger to myself, and clearly her abilities has allowed the Department to flourish and grow. Her role is more than the administrative assistant to the Chief of the Department and more of an assistant manager to the Chief. Her experience working at every position within ophthalmology gives her the unique ability to understand and resolve issues within the Department. Add her work ethic and reliability, and I can count on her to manage issues and resolve them well. She does the job of three and is outstanding.
14.4.8 Future Directions and Opportunities

Continue Research Growth
The clinical trials, with both investigator-initiated and phase 3 trials, will continue to grow under Drs. Boyd, Muni, Chow, and Wong. Dr. Boyd is also continuing her quest in dry AMD research in the lab and has a potential new therapeutic drug in development. Research is also expanding outside of retina with uveitis clinical trials with Drs Derzko and Bakshi. Dr. Gupta and Yucel continues their ground-breaking research into ocular lymphatics, and the relation to glaucoma and optic nerve disease. Cornea, with the neurolization program, is exciting and ground-breaking under Drs Chan, Nijawhan, and Ali (HSC). The unique, marginalized patient population research under Dr. Lichter is core to our social humanitarian research. Overall, further infrastructure and growth of clinical research will occur. Ideally, recruiting for basic and bench research would help the Department continue its striving for global excellence, should Department be able to secure appropriate resources and resolve many of the issues discussed previously. Given the Department’s strength is in retina, it is hoped an appropriate candidate can be recruited.

Strengthen Novel Programs
Our novel programs will need to be further supported and tied into the research programs. Each have their unique challenges and obstacles that will need to be resolved, including the impact on resources such as the operating room. However, these programs have the potential to make a significant patient impact and are worth pursuing.

Non-OHIP Services
With the increasing technology within ophthalmology that is not being reimbursed by the government, there is an opportunity to obtain reimbursement of these services from patients or third-party payers. The Department has several diagnostics such as Fundus autofluorescence and IOL master that are paid for by patients. The era has changed, and patients are willing to pay for these tests and services that add value to the management. Low vision services is another area that has the potential to bring revenue and this is being explored.
Staff Renewal/Recruitment

Dr. Berger to Dr. Bakshi

With the inability to recruit into the Department another clinician scientist surgeon, we have embarked on a transitional methodology. Dr. Berger has decided to slowly transition out of clinical practice at SMH. The retina group and Dr. Berger have agreed to have Dr. Bakshi slowly take over his medical retina practice. Over time, with further transitioning, we hope to recruit another vitreoretinal surgeon.

Eye Clinic MD Staff

Several non-GFT staff are likely to transition out of SMH in the coming years for various reasons, including retirement. This will be an opportune time to reorganize the clinics to fill in with subspecialty and acute care clinics, and less general clinics. Several subspecialties, including surgical glaucoma, have needs in serving the city. Planning will need to occur in conjunction with the university and Drs Gupta and Kranemann, who are the glaucoma staff at SMH. However, the limited space and resources at SMH makes recruitment difficult.

Integrating with Other Services

The Department move back into the hospital proper will allow increasing collaboration with other medical and surgical services in clinical care and research. This is already occurring with our neuro-ophthalmologist and further opportunities are promising.

Network Integration

With the network, there is opportunity to unify and develop new programs.

St. Joseph’s Hospital (SJH)

Several medical staff (Drs. Derzko, Bakshi, and Iizuka) are affiliated with SJH and SMH. Discussion on having both SMH and SJH ophthalmology clinical units join together has occurred in some preliminary meetings. Already, referrals within the network are occurring with greater frequency. Further discussions will occur in order to determine whether unifying the SJH eye division and the SMH eye department is advantageous to the network and patient care.

Providence Villa

There is an opportunity to utilize the occupational and physiotherapists at Providence Villa. A small ocular unit has been in operation there under Dr. John Fowler and recently was taken over by Dr. Tran Le with the amalgamation. We have been working with her to establish a low vision clinic that would be unique in the country using the specialized
facilities there, as well as the occupational and physiotherapists. This will be beneficial not only for low vision patient care, but also a wealth of potential research opportunities. A business plan to develop low vision has been completed, well received, and approved. Finalization on equipment was occurring prior to COVID, but was placed on hold. This will be revisited after the COVID crisis subsides.

**Outside Clinics**

**Overlea Dialysis Unit**

With diabetes being a big contributor to end stage renal disease and retinopathy, there is an opportunity in this community to establish a diabetic screening program with the recent establishment of a SMH dialysis unit on Overlea Drive. A business plan is being developed, but has been held up under COVID.

**Global Recognition**

With our increasing research and novel programs, global recognition of the Department and hospital should increase. This will further attract new research opportunities, improve our fellowship programs, and attract top candidates who desire to work at SMH and Unity Health Toronto. Also, with this increase in recognition, we hope to further tap the goodwill of our patients to further support the Department and the hospital.

**14.5 UHN-Toronto Western Hospital: Dr. Robert Devenyi, Chief**

The past ten years have been very exciting at the Toronto Western Hospital Department of Ophthalmology.

In 2016, through the generosity of Donald K. Johnson’s $10M donation, the Donald K. Johnson Eye Center was renamed the Donald K. Johnson Eye Institute. The mandate of this newly formed institute was to continue to integrate basic and clinical research with our subspeciality clinical activities.

We have recruited Dr. Alexander Kaplan, a medical retina and uveitis specialist, as well as Dr. Brian Ballios, who is a clinician-scientist with expertise in inherited retinal diseases and medical retina.

We also recruited two world-class basic researchers, Dr. Karun Singh from McMaster University and Dr. Michael Reber from Strasbourg, France.

In September 2021, we received a $50M donation from Donald K. Johnson, the largest give to eye care in the history of our country. This gift will be used to further advance our world-class clinical investigation unit, create additional Chairs for our basic researchers, and create named endowed fellowships in vitreoretinal surgery, corneal surgery, and glaucoma.
### Publications

#### July 1, 2020 – June 30, 2021


Arjmand P, Mandelcorn ED. Giant Retinal Tear Surgery Made Simple: Perfluoro-n-octaine as a short-term tamponade for repair of a rhegmatogenous retinal detachment with a giant retinal tear. Retina Specialist. 2020; 6(6); 9 – 12.


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### Appendix A

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Muni RH, Francisconì CLM, Felfelli T, Mak MYK, Berger AR, Wong DT, Altemare F, Giavedoni LR, Kohly RP, Kertes


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Al-Farsi N


Alnabulsi R


Altomare F


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Gizicki R, Chow DR, Mak M, Wong DT, Muni RH, Altomare F, Berger AR (Co-PA), Giavedoni L. Differences in Surgical Performance of Internal Limiting Membrane Peeling for Macular Hole Repair Between Supervised Vitreoretinal Fellows and Vitreoretinal Faculty at a Single Academic Institution


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Borovik A


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Brent MH


Buys YM


Calafati J


Campos-Möller X


Chan CC


Chandrakumar M


Chew HF


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Chow DR


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Masood I


McAlister CN


McReelis KD


Micieli J


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Rabinovitch T


Rai A


Richards MD


Rootman DS


Schlenker MB


Schuurmans C


Schwartz CE


Shapiro CM


Sharma A

Showail M


Singer S


Sivak JM


Slomovic AR


Smith D


Soliman SE


Somani S


Sorkin N


Steeves JKE


Steinbach MJ


Sundaram AN


Szego AA


Tehrani N


Teichman JC

Trope G


Tropepe V


Trussart R


Tyndel F


Varma DK


Vincent A


Wan MJ


Weisbrod L


Westall C


Wong AM


Wong DT


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Appendix B

Strategic Report

If reading this document as a print copy, please visit https://ophthalmology.utoronto.ca/ to find the 2017 Strategic Plan
Appendix C

Department Communications

Communications to Build Profile
November 2020: https://medicine.utoronto.ca/news/u-t-researchers-identify-eye-signature-als
December 2018: https://medicine.utoronto.ca/news/u-t-scientists-find-lack-fluid-flow-glaucoma
October 2018: https://medicine.utoronto.ca/news/touched-blindness-cancer-couple-invests-u-t-research
April 2018: https://medicine.utoronto.ca/news/u-t-team-develops-first-smartphone-visual-field-test
August 2017: https://medicine.utoronto.ca/alumni/eye-doctor-vision-dr-steve-arshinoff-pgme-79
June 2017: https://medicine.utoronto.ca/news/vision-giving-back
September 2016: https://medicine.utoronto.ca/news/uoftmed-alum-why-all-those-hours-anatomy-lab-make-us-better-doctors
Student Support Services

UNIVERSITY OF TORONTO STUDENT SUPPORT SERVICES

Temerty Faculty of Medicine

A range of support services, delivered through various offices, are available to students at the Temerty Faculty of Medicine. They include:

UNDERGRADUATE MEDICAL PROGRAMS

Office of Health Professions Student Affairs

The University of Toronto Office of Health Professions Student Affairs (OHPSA) supports students enrolled in the Temerty Faculty of Medicine, from the Doctor of Medicine, MD/PhD, Medical Radiation Sciences, Physician Assistant, and Occupational Therapy programs. The OHPSA has a multi-faceted range of programs that improve the quality of educational experience provided to students beyond the classroom. Some of the services offered include personal counselling and wellness, career exploration and counselling, and academic coaching.

Financial Assistance

The Student Financial Services Office administers non-repayable grant funding through the Temerty Faculty of Medicine Grant Program, the Temerty Faculty of Medicine MD Admission Bursaries, and the Enhanced Bursary Program. More than seventy-five percent of the students currently enrolled in the MD program receive some type of non-repayable assistance. MD students also receive a stipend of $750 per month through the Final Year Medical Student Bursary Fund program for total payment of $9000 during the final 12 months of study in the MD program. The bursary program is funded by the Government of Ontario and operated by the Ontario Medical Association.

Other services provided by this office include personal meetings with every incoming Year-1 student to discuss the costs of medical education, budgeting, funding strategies, and any questions or concerns the student might have. Support is provided to run workshops for pre-clerkship students on the topic of How Money Works. The workshops proved very successful, and led to the creation of an online series available to all medical students across Canada.
GRADUATE EDUCATION

**Graduate Student Financial Support**

In the Temerty Faculty of Medicine, graduate programs offer *doctoral-stream students support packages* at or above the University of Toronto minimum (i.e. Temerty Faculty of Medicine Harmonized Stipend Agreement). Graduate student support packages are derived from multiple sources including University of Toronto Fellowships, departmental and affiliated hospital/research institute internal awards (i.e., OSOTF awards) and student stipends from supervisors’ operating grants.

In addition, students apply for major external competitive studentship awards including, but not limited to, CIHR, NSERC, and independent foundations. Emergency grants and bursaries are also available. More information is available from the [School of Graduate Studies](http://www.utgsu.ca).

**Graduate Student Health and Wellness**

Students, enrolled in a research-stream MSc or PhD program, are eligible to apply for the *Leave of Absence (LOA) Stipendiary Fund*. When taking a LOA, a student is no longer eligible to receive graduate funding. The LOA Stipendiary Fund provides one-time only financial support to research stream MSc or PhD students who wish to take a LOA due to physical or mental health issues, with the hope they will return healthy and invigorated to continue their graduate studies.

In partnership with the University of Toronto’s Office of Health and Wellness, all Temerty Faculty of Medicine graduate students are eligible to access our on location wellness counsellors as well as other relevant information about supports and services available on campus. This particular service aims to connect students with a counsellor in a timely fashion in order to get the support that they need. Using the University of Toronto’s Stepped Care Model, a range of services and resources are provided for students to find the “right fit” based their level of distress, need, and readiness to engage. Recently, a new chat function called NAVI has been launched to help students find services or resources 24 hours a day, 7 days a week, 365 days a year.

Registered graduate students also have access to extended health benefits paid via incidental fees. Benefits include health and dental, travel insurance, and a conference bursary (via UofT Graduate Student Union). More information can be found at [www.utgsu.ca](http://www.utgsu.ca).
POSTGRADUATE MEDICAL EDUCATION

Resident Wellness

The Office of Resident Wellness was established to help support the well-being of the University of Toronto’s Postgraduate Medical Education trainees and to offer assistance to those encountering difficulties during training. One of the roles of the Office of Resident Wellness is to help residents develop the skills needed to maintain their own wellness as a resident and as a practicing physician.

DISCOVERY COMMONS

The Discovery Commons is the Temerty Faculty of Medicine’s information technology support unit, providing services to students, faculty, and staff. The following are services geared towards the specific needs of MD, PA program, doctoral-stream graduate, and professional master’s students:

- Audio Visual including lecture capture, videoconferencing, audience response system support
- Application Support including Learning Portal (Bb), UTORid, MedSIS, GradSIS
- Facilities such as drop-in student computer labs, bookable computer labs/electronic classrooms
- Technical support

ENROLMENT SERVICES

Enrolment Services is dedicated to providing quality support and resources that are responsive to the needs of students and graduates (safeguarding the accuracy, integrity, confidentiality and security of students’ and graduates’ academic records, and providing services relating to registration graduation and beyond). This office works closely with the Curriculum Office, the Academies, and the Office of Health Professions Student Affairs in providing student support.

Through this office, students can obtain information and advice on all faculty and university policies and regulations. Some of the services include: proof of registration or a letter of good standing for students wishing to secure a line of credit with a financial institution, for career sampling, observerships, or when applying for electives at other institutions. Enrolment Services also provides credentialing services to graduates of the MD program by completing and/or endorsing documentation relating to confirmation of education, confirmation of degree or Dean’s letters of support. The Director of Enrolment Services and Faculty Registrar is a Commissioner of Oaths and provides this service when documents for students or graduates require this level of verification.

MEDICAL ALUMNI ASSOCIATION

The University of Toronto Medical Alumni Association has been providing support for students and alumni since 1860.

For students, they offer financial assistance and awards as well as sponsoring Medical Society events and student support programs. They also support alumni by helping them organize class reunions and stay in touch with each other, and keeping them informed about their alma mater.
MEDICAL SOCIETY

The Medical Society Executive Council is the elected governing body of The Medical Society (MedSoc). The council represents medical students to the Temerty Faculty of Medicine, alumni, other faculties within the university, the medical profession, and the community at large. The council organizes a wide variety of student events and is concerned with both academic and non-academic aspects of student life. The council is also actively involved in serving as a liaison between pre-clerkship and clerkship students and aims at fostering a sense of community within the student body.

OFFICE OF INDIGENOUS MEDICAL EDUCATION

The Office of Indigenous Medical Education is home to Temerty Faculty of Medicine curricular co-leads in Indigenous Health Education, an Elder, and the Indigenous Peoples’ Undergraduate Medical Education (UME) Program Coordinator. This office provides a culturally safe space within UME, working to advance Indigenous community engagement and supports. The office also works to incorporate Indigenous teachings regarding medicine for all students to improve the discourse in Indigenous Medical Education. The office is developing a comprehensive outreach program, providing support to current Indigenous medical students and other students within the faculty who are looking to learn more about Indigenous people and Indigenous concepts of health and healing.

STUDENT SPACES: MEDICAL SCIENCES BUILDING

David C. Naylor Student Commons
This space is ideal for poster sessions, small seated events, and product information days. It is a high traffic area located at the building's main entrance where students can congregate (booking of space not required).

Ruth Kurdyak Medical Alumni Student Lounge
“A home for MD students on campus.” This is a modern space with a flexible layout that can be divided into two spaces to fulfill a variety of needs for students. One side can be closed off for activities like meetings (e.g., Daffydil rehearsals or yoga classes); this side of the lounge is also equipped with video conferencing equipment, known as a ‘looking glass,’ to help students downtown connect with their colleagues at the Mississauga Academy of Medicine. The other section of the lounge features a kitchen with microwaves and a sink, as well as a place to socialize over a game of foosball or pool.
St. George Campus

All University of Toronto undergraduate and graduate students have access to student services on all three campuses—Mississauga, St. George (downtown Toronto), and Scarborough—regardless of their “home campus.” The services and co-curricular educational opportunities provide a complement to the formal curriculum by engaging and challenging students to reach their full potential as learners, leaders, and citizens. At the University of Toronto (St. George Campus) these services are organized by Student Life Programs and Services, the academic division registrar offices, and the School of Graduate Studies. All these services combine to support the success of our students from the time they are admitted through degree completion and beyond. The Office of the Vice-Provost, Students offers students the opportunity to voice their concerns about student services, groups, and societies, and lodge complaints about discrimination. Students can find descriptions of processes, policies, and contact information.

Students have access to comprehensive physical and mental health care on campus including a medical clinic, travel medicine services, immunization, contraception, and sexual health education. Counselling and treatment options for psychological and emotional concerns include psychotherapy, group therapy and pharmacotherapy, as well as specialized assault counselling services provided both by the Health & Wellness centre and the Sexual Violence Prevention & Support Centre. In addition, a large number of wellness programs are provided, such as mindful meditation and workshops on coping skills and stress management.

Sport and recreational facilities and programs are provided to all students through both Hart House and the Faculty of Kinesiology and Physical Education.

Housing needs, including off-campus housing listings and resources for students living independently, are met through the Student Housing Service.

Coaching and education in the development of key learning skills—from time-management to overcoming exam anxiety—is provided through the Academic Success Centre (ASC). The ASC also partners with faculty to integrate success strategies and support into the curriculum.

Students’ career exploration and employment services are provided through a career centre offering resume and interview coaching, workshops, career resources, on and off-campus employment and volunteer listings, job shadowing, and career counselling.

Specialized services are provided for international students (orientation, advising, cross-cultural counselling), students with disabilities (academic accommodations, advising), students with children or other family responsibilities (advising, resources, subsidized childcare), Indigenous students (academic support, financial counselling) and lesbian, gay, bisexual, and transgender students (counselling, referrals, equity outreach, and engagement). The Anti-Racism and Cultural Diversity Office provides services to support University of Toronto members in fostering intentionally racially diverse and inclusive environments through the advancement of equitable practices, education, and training, and the provision of complaints resolution supports on
matters of race, faith, and intersecting identities as guided by the Ontario Human Rights Commission.

Participation in campus life and experiential learning are facilitated through Hart House (clubs, committees, events), the Centre for Community Partnerships (service learning and volunteer opportunities in community settings), and the Student and Campus Community Development (leadership development, orientation, recognition and support for student groups, activities). The Multi-Faith Centre supports the spiritual well-being of everyone on campus and provides opportunities for people to learn from each other through interfaith dialogue, arts, and social justice.
School of Graduate Studies

In addition to the services available to all students, graduate students at the University of Toronto have access to registrarial services and co-curricular programs at the School of Graduate Studies (SGS) that assist students in meeting their academic goals.

Administrative staff at SGS provides registrarial services to graduate students including, but not limited to, recruitment, admission, orientation, registration, fees, program progress, awards/financial assistance, and graduation. Fully equipped meeting rooms, which can be booked by student groups when not used for Final Oral Examinations, are distributed across two locations—the newly renovated 63 St. George Street (home of SGS Student Services) and 65 St. George Street. Financial advising and wellness counselling services are also available at 63 St. George.

Two multi-purpose spaces, provided by SGS, are dedicated to graduate students. The Grad Room is an accessible space on the St. George campus that provides University of Toronto graduate students with a lounge area and a multi-purpose space for academic, social, and professional graduate student programming. An additional lounge area for graduate students is available at 63 St. George, which provides graduate students with a quiet place to read, relax, or study.

Grad Room is home to the Graduate Professional Skills Program (GPS). GPS is a non-academic program presented by SGS consisting of a variety of offerings that provide doctoral-stream students a range of opportunities for professional skills development. The program focuses on skills beyond those conventionally learned within a disciplinary program, skills that may be critical to success in the wide range of careers that graduates enter—both within and outside academe. GPS aims to help students communicate effectively, plan and manage their time, be entrepreneurial, understand and apply ethical practices, and work effectively in teams and as leaders.

The Graduate Conflict Resolution Centre (Grad CRC) offers support to the University of Toronto graduate community in taking steps to prevent or resolve conflict. The Grad CRC services for students include peer-to-peer conflict coaching, where students connect confidentially with trained G2G Peer Advisors to talk about options and strategies for addressing a concern and available university supports and resources. The G2G Peer Advisors also facilitate workshops and connect across departments to share tips and strategies for early and effective conflict management. They facilitate connections to campus resources and help students to understand their options in dealing with supervision, escalating a concern, group work, lab/classroom dynamics, or any other challenging graduate school issue.

The Graduate Centre for Academic Communication (GCAC) provides graduate students with advanced training in academic writing and speaking. By emphasizing professional development rather than remediation, GCAC helps students cultivate the ability to diagnose and address the weaknesses in their oral and written work. GCAC offers four types of instruction designed to target the needs of both native and non-native speakers of English: non-credit courses, single-session workshops, individual writing consultations, and writing boot camps.