**Introduction**

Sections 1 through 2 of this manual refer directly to Objectives and Policies set out by the Royal College Ophthalmology Section.

The remaining sections define how the ophthalmology residency program at McMaster will effectively prepare its residents to satisfy the Royal College requirements and sit the Royal College examinations (described in section 2 and 3). Furthermore, the manual will expand upon the specific details and policies of the program on a more functional/day to day basis keeping in mind the daily challenges faced by residents, professors and other staff.

For general administrative information and university policies please see the Common Binder.

**Program Director’s Message**

The Residency training manual is now an 'online document' which will benefit all residents and faculty. Dr Rob Adam as a member of the Residency Training Committee is to be congratulated for all the hard work that he has done in developing this manual. The information contained herein is comprehensive, objective, critically important, and is meant to give the post graduate trainee a complete overview of many of the essential elements of our training program. It is complementary to the day to day teaching that takes place in our program. Over time, this manual will become more comprehensive as we, the teachers, and you, the residents, identify areas that require further development and perhaps, areas that are not so critical to your day to day activities. We not only welcome your comments, but encourage you to work towards a goal of making it an even better resource.

The manual also contains references and information regarding perspectives on postgraduate training that are common to all surgical programs. These perspectives fall under the jurisdiction and responsibility of the Associate Dean for Post Graduate Education at McMaster University. It is this interlocking, comprehensive, shared responsibility between all key players that leads to a complete post graduate training experience. To all our post graduate trainees and faculty members, many thanks for your input in helping make this manual a reality.

John Harvey, MD, FRCSC
Program Director
Division of Ophthalmology
jtharvey@mcmaster.ca

1. **Royal College Guidelines for Ophthalmology Training**

(Please see also the “Policies and Procedures” booklet.)
1.1 Definition
Ophthalmology is that specialty which concerned with the screening, diagnosis and management of optical, medical and surgical disorders and diseases of the eye, its adjacent structures, the visual pathways, and to the visual system.

1.2 General Objectives
Upon completion of the educational program, a resident is expected to be a competent ophthalmologist capable of assuming a consultant’s role in the specialty. The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research.

The knowledge of basic sciences necessary to the understanding and practice of the specialty (e.g. genetics, embryology, anatomy, histology, physiology, biochemistry, pathology, microbiology, immunology, pharmacology, optics & refraction including low vision) may be acquired by attendance at special courses in basic science or by spending periods of full-time training in basic science.

The ophthalmologist must possess a sound knowledge of the general principles of surgery and of medicine. Ophthalmology embraces some aspects of neurology, pathology, plastic surgery, dermatology, microbiology, and other specialties, and the candidate should have knowledge in these fields as they relate to this specialty.

Residents must demonstrate the knowledge, skills and attitudes relating to gender, culture and ethnicity pertinent to ophthalmology. In addition, all residents must demonstrate an ability to incorporate gender, cultural and ethnic perspectives in research methodology, data presentation and analysis.

1.3 Specific Objectives
At the completion of training, the resident will have acquired the following competencies and will function effectively as a:

Medical Expert/Clinical Decision-Maker
Specialists possess a defined body of knowledge and procedural skills, which are used to collect and interpret data, make appropriate clinical decisions, and carry out diagnostic and therapeutic procedures within the boundaries of their discipline and expertise. Their care is characterized by up-to-date, ethical, and cost-effective clinical practice and effective communication in partnership with patients, other health care providers, and the community. The role of medical expert/clinical decision-maker is central to the function of specialist physicians, and draws on the competencies included in the roles of scholar, communicator, health advocate, manager, collaborator, and professional.

General Requirements
Demonstrate diagnostic and therapeutic skills for ethical and effective patient care.
Access and apply relevant information to clinical practice.
Demonstrate effective consultation services with respect to patient care, education and legal opinions.

Specific Requirements

1. Elicit a history that is relevant, concise, accurate and appropriate to the patient's problem(s).
2. Perform an ophthalmological examination that is relevant, sufficiently elaborate, and appropriate.
3. Select medically appropriate investigative tools in a cost-effective, ethical and useful manner.
4. While collecting data by the three above means, demonstrate cognitive and process skills toward solving the individual patient's problem(s).
5. Demonstrate effective consultation skills in presenting well documented assessments and recommendations in written and/or verbal form in response to a request from another health care provider.
6. Demonstrate the attitudes and the skills necessary to retrieve and implement the information necessary to provide health care services to patients in meeting the needs and expectations of the community.
7. Access, retrieve, assist and apply relevant information of all kinds to problem-solving and introduce new therapeutic options to clinical practice.
8. Demonstrate medical expertise in situations other than those involving direct patient care (e.g. presentations, medico-legal cases, etc.).
9. Demonstrate insight into his/her own limitations of expertise by self-assessment.
10. Use all of the pertinent information to arrive at complete and accurate clinical decisions specifically in the fields of:
   - cornea/external disease
   - glaucoma
   - lacrimal/lid/orbit
   - neuro-ophthalmology
   - refraction and principles of optics
   - retina/vitreous
   - strabismus/pediatric ophthalmology
   - and emergency eye conditions
11. Apply knowledge and expertise to become competent in performance of technical skills relevant to ophthalmology, including:
   - interpretation of diagnostic imaging of the eye and visual system (including CT, MRI, and ultrasound images)
   - topical and regional anesthesia of the eye and periorcular structures
   - laser therapy including retinal, glaucoma and posterior capsule
   - cryotherapy of the eye and ocular adnexa
   - surgery for cataract, enucleation, eyelids, lacrimal apparatus, glaucoma, ocular surface (e.g. pterygium, conjunctiva) and strabismus
1.4 Communicator

To provide humane, high-quality care, specialists establish effective relationships with patients, other physicians, and other health professionals. Communication skills are essential for the functioning of a specialist, and are necessary for obtaining information from, and conveying information to patients and their families. Furthermore, these abilities are critical in eliciting patients’ beliefs, concerns, and expectations about their illnesses, and for assessing key factors impacting on patients’ health.

**General Requirements**

- Establish therapeutic relationships with patients/families.
- Obtain and synthesize relevant history from patients/families/communities.
- Listen effectively.
- Discuss appropriate information with patients/families and the health care team.

**Specific Requirements:**

1. Recognize that being a good communicator is an essential function of a physician, and understand that effective patient-physician communication can foster patient satisfaction and compliance as well as influence the manifestations and outcome of a patient's illness.
2. Establish relationships with the patient characterized by understanding, trust, respect, empathy and confidentiality.
3. Gather information not only about the disease but also about the patient's beliefs, concerns and expectations about the illness, while considering the influence of factors such as the patient's age, gender, ethnic, cultural and socio-economic background, and spiritual values on that illness, including the psychological, occupational and social consequences of visual impairment.
4. Deliver information to the patient and family in a humane manner and in such a way that it is understandable, encourages discussion and promotes patient’s participation in decision making to the degree that they wish.
5. Understand and demonstrate the importance of cooperation and communication among health professionals involved in the care of individual patients such that the roles of these professionals are delineated and consistent messages are delivered to patients and their families.
6. Demonstrate skills in working with others who present significant communication challenges such as anger or confusion, or an ethno-cultural background different from the physician's own.
7. When appropriate, effectively provide information to the general public and media about areas of local concern.
1.5 Collaborator

Specialists work in partnership with others who are appropriately involved in the care of individuals or specific groups of patients. It is therefore essential for specialists to be able to collaborate effectively with patients and a multidisciplinary team of expert health professionals for provision of optimal patient care, education, and research.

**General Requirements**

Consult effectively with other physicians and health care professionals.
Contribute effectively to other interdisciplinary team activities.

**Specific Requirements**

1. Identify and describe the role, expertise and limitations of all members of an interdisciplinary team required to optimally achieve a goal related to patient care, a research problem, an educational task, or an administrative responsibility.
2. Develop a care plan for a patient they have assessed, including investigation, treatment and continuing care, in collaboration with the members of the interdisciplinary team.
3. Participate in an interdisciplinary team meeting, demonstrating the ability to accept, consider and respect the opinions of other team members, while contributing specialty-specific expertise him/herself.
4. Describe how health care governance influences patient care, research and educational activities at a local, provincial, regional, and national level.
5. Effectively communicate with the members of an interdisciplinary team in the resolution of conflicts, provision of feedback, and where appropriate, be able to assume a leadership role.

1.6 Manager

Specialists function as managers when they make everyday practice decisions involving resources, co-workers, tasks, policies, and their personal lives. They do this in the settings of individual patient care, practice organizations, and in the broader context of the health care system. Thus, specialists require the abilities to set priorities and effectively execute tasks through teamwork with colleagues, and make systematic decisions when allocating finite health care resources. As managers, specialists take on positions of leadership within the context of professional organizations and the dynamic Canadian health care system.

**General Requirements**

Utilize resources effectively to balance patient care, learning needs, and outside activities.
Allocate finite health care resources wisely.
Work effectively and efficiently in a health care organization.
Utilize information technology to optimize patient care, life-long learning and other activities.
Specific Requirements

1. Understand how to function effectively in health care organizations, ranging from an individual clinical practice to organizations at the local, regional and national level.
2. Understand the structure, financing, and operation of the Canadian health system and its facilities, function effectively within it and be capable of playing an active role in its change.
3. Have an ability to access and apply a broad base of information to the care of patients in ambulatory care, hospitals and other health care settings.
4. Make clinical decisions and judgments based on sound evidence for the benefit of individual patients and the population served. This allows for an advocacy role primarily for the individual but in the context of societal needs when monitoring and allocating needed resources.
5. Be open to working effectively as a member of a team or a partnership and to accomplish tasks whether one is a team leader or a team member.
6. Understand population-based approaches to health care services and their implication for medical practice.
7. Facilitate access to local and national resources available for those with visual impairments (e.g. special needs education through the school systems, low-vision services, Canadian National Institute for the Blind).
8. Set realistic priorities and use time effectively in order to optimise professional performance.
9. Understand the principles of practice management relevant to ophthalmology.

1.7 Health Advocate

Specialists recognize the importance of advocacy activities in responding to the challenges represented by those social, environmental, and biological factors that determine the health of patients and society. They recognize advocacy as an essential and fundamental component of health promotion that occurs at the level of the individual patient, the practice population, and the broader community. Health advocacy is appropriately expressed both by the individual and collective responses of specialist physicians in influencing public health and policy.

General Requirements

Identify the important determinants of health affecting patients.
Contribute effectively to improved health of patients and communities.
Recognize and respond to those issues where advocacy is appropriate, including facilitating access to low vision services and other resources for the visually impaired.

Specific Requirements

1. Demonstrate an understanding of the following:
Determinants of health by identifying the most important determinants of health. Specifically, to encourage those behaviours which promote visual health and safety, and discourage those behaviours, which endanger patients’ visual health and safety. This can be applied at individual patient level, to a practice population, or at the general societal level.

Public policy for health by describing how public policy is developed; identifying current policies that affect health, either positively or negatively. In particular, to act to promote policies which: encourage appropriate visual screening of populations at risk for ocular disease; help to protect populations at risk of ocular injury; or provide appropriate resources to those affected by ocular injury or disease; and citing examples of how policy was changed as a result of actions by physicians.

2. Demonstrate an understanding of these concepts as applied to the following three levels:

- In the management of individual patients by identifying the patient's status with respect to one or more of the determinants of health (i.e., unemployment); adapting the assessment and management accordingly (i.e., the medical history to the patient's social circumstances); and assessing the patient's ability to access various services in the health and social system.

- In the analysis of a specialist's practice population work with the specialty society and other associations in identifying current "at risk" groups within a given specialty practice (e.g. Canadian Ophthalmological Society, Canadian National Institute for the Blind) and applying the available knowledge about prevention to "at risk" groups within the practice; and contributing "group data" for better understanding of health problems within the population.

- In relation to the general population by describing, in broad terms, the key issues currently under debate regarding changes in the Canadian health care system, indicating how these changes might affect societal health outcomes and advocating to decrease the burden of illness (at a community or societal level) of a condition or problem relevant to ophthalmology, through a relevant specialty society (e.g. Canadian Ophthalmological Society), community-based advocacy group, other public education bodies, or private organizations.

1.8 Scholar

Specialists engage in a lifelong pursuit of mastery of their domain of professional expertise. They recognize the need to be continually learning and model this for others. Through their scholarly activities, they contribute to the appraisal, collection, and understanding of health care knowledge, and facilitate the education of their students, patients, and others.

General Requirements
Develop, implement and monitor a personal continuing education strategy.
Critically appraise sources of medical information.
Facilitate learning of patients, house staff/students and other health professionals.
Contribute to development of new knowledge.

Specific Requirements:
Participate in grand rounds, journal clubs, research day presentations, research projects, scientific presentations and publications to satisfy the requirements in the following areas:

Clinical

pose a clinical question in ophthalmology;
recognize and identify gaps in knowledge and expertise around the clinical question;
formulate a plan to fill the gap:
  o conduct an appropriate literature search based on the clinical question;
  o assimilate and appraise the literature;
  o develop a system to store and retrieve relevant literature;
  o consult others (physicians and other health professionals) in a collegial manner;
  o propose a solution to the clinical question;
  o implement the solution in practice. Evaluate the outcome and reassess the solution (re-enter the loop at 1.3.i. or 1.3. ii);
  o identify practice areas for research.

Research

pose a research question (clinical, basic or population health);
develop a proposal to solve the research question:
  o conduct an appropriate literature search based on the research question;
  o identify, consult and collaborate with appropriate content experts to conduct the research;
  o propose a methodological approach to solve the question;
where applicable, carry out the research outlined in the proposal; and defend and disseminate the results of the research; identify areas for further research that flow from the results.

Education

demonstrate an understanding of, and the ability to apply, the principles of adult learning, with respect to oneself and others;
demonstrate an understanding of preferred learning methods in dealing with students, residents, and colleagues.

Professional
Specialists have a unique societal role as professionals with a distinct body of knowledge, skills, and attitudes dedicated to improving the health and well being of others. Specialists are committed to the highest standards of excellence in clinical care and ethical conduct, and to continually perfecting mastery of their discipline.

**General Requirements**

Deliver highest quality care with integrity, honesty and compassion.
Exhibit appropriate personal and interpersonal professional behaviours.
Practise medicine ethically consistent with obligations of a physician.

**Specific Requirements**

1. Discipline - Based Objectives:
   - display attitudes commonly accepted as essential to professionalism;
   - use appropriate strategies to maintain and advance professional competence;
   - continually evaluate one's abilities, knowledge and skills and know one's limitations of professional competence, seeking advice when necessary and accepting constructive criticism gracefully.

2. Personal/Professional Boundary Objectives:
   - adopt specific strategies to heighten personal and professional awareness and explore and resolve interpersonal difficulties in professional relationships;
   - consciously strive to balance personal and professional roles and responsibilities and to demonstrate ways of attempting to resolve conflicts and role strain.

3. Objectives Related to Ethics and Professional Bodies:
   - know and understand the professional, legal and ethical codes to which physicians are bound;
   - recognize, analyse and attempt to resolve in clinical practice ethical issues such as truth-telling, consent, advanced directives, confidentiality, end-of-life care, conflict of interest, resource allocation, research ethics, etc.;
   - understand and be able to apply relevant legislation that relates to the health care system in order to guide one's clinical practice;
   - recognize, analyse and know how to deal with unprofessional behaviours in clinical practice, taking into account local and provincial regulations.

*Revised into CanMEDS format – 1999
Editorial revision – May 2004

1.9 Specialty Training Requirements in Ophthalmology

These specialty training requirements apply to those who began training on or after 1 June 1994.
Five years of approved residency training. This period must include:

1. One year of basic clinical training.
2. Four years of approved residency in ophthalmology, including
   - sufficient experience to achieve competency in performing:
     • topical and regional anesthesia of the eye and periorcular structures
     • laser therapy including retinal, glaucoma and posterior capsule
     • cryotherapy of the eye and ocular adnexa
     • surgery for cataract, enucleation, eyelids, lacrimal apparatus,
       glaucoma, ocular surface (e.g. pterygium, conjunctiva) and
       strabismus
     • surgical management of trauma to the eye, ocular adnexa and orbit
     • ultrasound examination of the eye, and interpretation of diagnostic
       imaging of the eye and visual system
   - sufficient experience to achieve competency in collecting and interpreting
     data, carrying out diagnostic procedures, making appropriate clinical
     decisions including recommending appropriate therapeutic procedures in
     the following specific domains:
     • cornea/external disease
     • glaucoma
     • lacrimal/lid/orbit
     • neuro-ophthalmology
     • refraction and principles of optics
     • retina/vitreous
     • strabismus/pediatric ophthalmology
     • trauma to the eye, ocular adnexa and orbit

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Editorial revision – May 2004

1.10 Ophthalmology Examination

Examination dates are subject to change without notice. Confirmation will be
provided in your appointment letter, approximately 2 months before the
examination.

Note: Please read the information in the language in which you intend to take the
examination as the sites and dates for the French and English examinations may differ.

Registration deadline
February 7, 2005

Site and dates of examination
Ottawa, June 17 and 18, 2005
Registration
Residents who intend to register for the examination must have:

- applied for assessment of credentials/training
- received from the RCPSC an official ruling letter confirming their eligibility for the examination

Registration forms for the examination are sent, on request, only to those who have been ruled eligible for the examination in their specialty or subspecialty. Residents who have applied for assessment of credentials/training and who are ruled eligible for the next examination session will receive information about the examination with their official ruling letter.

The Registration deadline is the last day for receipt by the RCPSC of the registration form for the examination. To avoid a late registration fee, applicants must request the registration form as soon as possible, preferably 6 to 8 weeks before that deadline. This does not apply to residents who are currently having their credentials/training assessed and have not yet received a letter confirming their eligibility for the examination. For these residents, the registration form for the examination will accompany the letter confirming their eligibility.

Last updated: 7 October 2004

1.11 Royal College Objectives of Training and Specialty Training Requirements
Click here for the Royal College Objectives of Training and Specialty Training Requirements in Ophthalmology

2. Format of the Comprehensive Objective Examination in Ophthalmology
Comprehensive objective examinations make it possible to obtain a more complete evaluation of the candidate's strengths and weaknesses. The important feature of comprehensive objective examinations is that candidates do not need to pass the written component in order to take the oral component. Success or failure is based on consideration of all components of the examination. The comprehensive objective examinations are considered a "whole" and cannot be fragmented. Candidates who are unsuccessful at this examination must, if within their period of eligibility, repeat all components of the examination.

2.1 Written Component
The written component consists of two three-hour papers. One paper is of the multiple choice type and contains approximately 150 test items. The other paper is of the short-answer type and consists of approximately 50 questions. Generic names are used for the drugs. Candidates are allowed the use of simple calculators (non-programmable). In the multiple choice written paper, the optics questions are grouped together, whereas the other questions are randomly distributed.

Both papers cover the principles and practice of ophthalmology and other fields related to ophthalmology.

### 2.2 Oral Component

The oral component consists of sessions of approximately 3 hours in duration. The candidate is asked questions on the principles and practice of ophthalmology, the basic sciences necessary to the proper understanding of the specialty, and the medical and surgical principles used in the practice of ophthalmology. Pathology was previously addressed in a specific session but will now be assessed throughout the oral sessions. The following is a guideline of the subject matter of ophthalmology, its basic science, and other related areas on which candidates may be questioned at the written and oral components of the examinations.

<table>
<thead>
<tr>
<th>Clinical areas</th>
<th>Main topics</th>
<th>American Academy of Ophthalmology Basic and Clinical Science Course Reference Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refraction</td>
<td>Refraction, contact lenses, low vision, optics, blindness, and related bioethics</td>
<td>3</td>
</tr>
<tr>
<td>Neuro-ophthalmology</td>
<td>Neuro-ophthalmology, medical orbit, systemic disease, neuro-anatomy, medical therapy, and radiology</td>
<td>4, 5, and 7</td>
</tr>
<tr>
<td>Strabismus</td>
<td>Strabismus, pediatric ophthalmology, genetics, embryology, congenital abnormalities, pediatric and strabismus surgery</td>
<td>4 and 6</td>
</tr>
<tr>
<td>Cornea</td>
<td>Cornea, external disease, inflammation, anterior uveitis, immunology, microbiology, and corneal surgery</td>
<td>4, 8, and 9</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>Glaucoma, visual fields, physiology, pharmacology, toxicology, and glaucoma surgery</td>
<td>4 and 10</td>
</tr>
<tr>
<td>Surgery</td>
<td>Lens, cataract, eye and orbit anatomy, trauma, orbit, eyelids, lacrimals, plastics, laser, anesthesia, informed consent, and complications</td>
<td>4, 7, and 11</td>
</tr>
</tbody>
</table>
N.B. The examinations are mainly clinical, however, a knowledge of the basic sciences related to the above clinical areas is expected, i.e. anatomy, histology, embryology, physiology, pharmacology, toxicology, biochemistry, endocrinology, immunology, microbiology, epidemiology, research methodology, and ethics. Surgery will include cataract, plastic, and orbit surgery. Other surgical questions will be covered under the appropriate clinical area. Questions in pathology, histology, and tumours will be covered under the appropriate clinical area (reference Section 4 of the American Academy of Ophthalmology - Basic and Clinical Science Course).

Revised October 2004
Last updated: 1 November 2004

2.3 In House Examinations to Prepare Resident for Royal College

Formal testing will include yearly written OKAP examination (Ophthalmic Knowledge Assessment Programme) as well as one mock oral. Informal knowledge assessment will be a component of rounds and academic halfdays. Consistent progress will be ensured through biannual performance reviews with the Program Director and exit evaluations at the end of each rotation (see ITERS below).

3. McMaster University Goals and Objectives in Ophthalmology

McMaster University, Division of Ophthalmology Residency Training Program General Goals & Objectives

The five year ophthalmology residency program consists a general internship year followed by four core ophthalmology years. The internship year focuses on general internal medicine and its sub-specialities. There are also some rotations and surgical specialities closely linked to ophthalmology. The internship year and the core ophthalmology years are described in further detail in the following sections.

Content and Sequence of Training
Please click the image below for a PDF of the content calendar:
### Mandatory Content of Training

<table>
<thead>
<tr>
<th>Description</th>
<th>Duration</th>
<th>Sites In Which This Training May Be Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PGY1 (Basic Clinical Year)</strong></td>
<td>12 months</td>
<td>McMaster University Teaching Hospitals (Hamilton Health Sciences &amp; St Joseph’s Hospital)</td>
</tr>
<tr>
<td><strong>PGY2 to PGY5 (Core Training in Ophthalmology)</strong></td>
<td>48 months</td>
<td>At McMaster Medical Center, Henderson Hospital and St Joseph’s Hospital mainly, but consults at other centres (Hamilton General Site) if patients cannot be transferred</td>
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<tr>
<td><strong>service based rotations include Retina; Glaucoma; Pediatric Ophthalmology &amp; Adult Strabismus; Lacrimal, Lids &amp; Orbit; Neuro-ophthalmology; Cornea/External Disease, General ophthalmology and Cataract (three 16 month cycles over the 4 years)</strong></td>
<td>Repeating rotations of 2 months duration in the PGY2 to PGY5 for 5 years</td>
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<tr>
<td><strong>U of T Basic Science Course</strong></td>
<td>6 weeks end of PGY1, beginning PGY2</td>
<td>U of T</td>
</tr>
<tr>
<td><strong>Lancaster or Stanford Basic &amp; Clinical Science Course in Ophthalmology</strong></td>
<td>7 to 8 weeks at end of PGY3 &amp; beginning of</td>
<td>Colby College, Waterville, Maine or Stanford University, California</td>
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<tr>
<td>Description</td>
<td>Duration</td>
<td>Sites In Which This Training May Be Taken</td>
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<tr>
<td>During PGY1</td>
<td>1 month</td>
<td>Any academic site approved by the Program Director</td>
</tr>
<tr>
<td>During PGY2-5</td>
<td>2 months per year (usually in summertime)</td>
<td>Any site approved by the Program Director</td>
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</table>

An International elective will be encouraged during the upper years of residency, as well as an elective spent with the Eye Van – a mobile ophthalmological diagnostic and therapeutic service that travels throughout rural Ontario.

### 3.1 Basic Clinical Training, PGY 1 Goals & Objectives

- **Internal Medicine** (general internal medicine, cardiology, neurology, endocrinology, infectious disease, dermatology)
- Plastic Surgery
- Neurosurgery
- Otolaryngology
- Elective
- University of Toronto Basic Science Course (see Section 7: External Courses Proposed for Residents)

### 3.2 Internal Medicine/Clinical Teaching Unit (CTU)

**Internal Medicine Objectives for Competency in CanMeds Roles**

**Communicator**

The resident will demonstrate the ability to establish a therapeutic relationship with the patient and family. This includes the ability to obtain and share pertinent information with the patient and the health care team.
**Collaborator**

The resident will demonstrate the ability to work effectively in a team environment, by contributing to interdisciplinary patient care activities and by consulting effectively with other physicians.

**Professional**

The resident will practice medicine ethically with integrity, honesty and compassion, always demonstrating respect for others. The resident's duties will be discharged reliably and they will always strive for excellence.

**Scholar**

The resident will develop, implement and monitor a personal continuing education strategy that will include the ability to critically appraise the literature. The resident will develop teaching skills in order to facilitate the learning of his/her patients and peers.

**Manager**

The resident will utilize health care resources effectively to balance patient care, learning needs and outside activities. The resident will be able to utilize information technology to optimize patient care and life-long learning.

**Health Advocate**

The resident will identify the important determinants of health affecting patients. The resident will recognize and respond to those patient care issues where patient advocacy is appropriate.

**Evaluation of Resident's Performance in the CanMeds Competencies**

Please rate the resident's performance in the objectives listed below using the following scale:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>1 = Unsatisfactory</td>
<td>Many major deficiencies</td>
<td>4 = Very Good</td>
<td>No deficiencies of consequence</td>
</tr>
<tr>
<td>2 = Needs to Improve</td>
<td>Several important deficiencies</td>
<td>5 = Outstanding</td>
<td>No deficiencies (at appropriate level)</td>
</tr>
<tr>
<td>3 = Good</td>
<td>Satisfactory performance (at appropriate level)</td>
<td></td>
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**McMaster University Department Of Medicine Junior CTU Evaluation**

Objective: The resident will display effective CanMeds Competencies

| The resident will display effective doctor-patient communication skills (communicator) | 1 | 2 | 3 | 4 | 5 | N/A |
Establishes a trusting and professional rapport with the patient and family
Encourages full participations of the patient/family in decision-making and management
Can obtain an informed consent
Provides clear instructions and checks whether the patient/family understand
Verbally presents the patient's problems clearly, concisely and correctly in the clinical setting
Clear, concise and legible problem-oriented medical records

**The resident will display good collaborative team skills (collaborator)**

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</table>

Able to request and provide consultations with clear understanding of question being asked
Able to work effectively in an interdisciplinary team to optimize patient care
Has a straightforward and respectful approach with all health care professionals and peers
Takes on appropriate share of team assignments and assists others as required

**The resident is an effective manager (manager)**

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Displays organisational skills with effective time-management
Effectively uses information technology to optimize patient care and continued self-learning
Identifies and addresses issues related to discharge planning

**The resident will carry out his/her duties in a professional manner (professional)**

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<th>3</th>
<th>4</th>
<th>5</th>
<th>N/A</th>
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</table>

Recognizes limitations and seeks advice and consultation when needed
Exercises initiative within limits of knowledge and training
Discharges duties and assignments dependably and in a timely and ethical manner
Reports facts accurately, including own errors
Maintains appropriate boundaries in work and learning situations
Respects diversity of race, age, gender, disability intelligence and socio-economic status

**The resident will develop a plan for self-improvement (scholar)**

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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N/A</th>
</tr>
</thead>
</table>

Attends and contributes to rounds and other learning events
Accepts and acts on constructive feedback
Critically appraises sources of medical information and takes an evidence-based approach to diagnosis and management
Effectively uses opportunities to teach and supervise juniors (clinical clerks)

**Junior CTU Evaluation**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>N/A</th>
</tr>
</thead>
</table>

The resident is a health advocate
Identifies situations where patient advocacy is required
Acts as a patient advocate
PGY-1 Objectives for Clinical Skills in General Internal Medicine

Listed below are the General Internal Medicine specific objectives for PGY1 residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies. Manage common problems experienced by the general medical patient:

1. Cardiorespiratory
   - Chest Pain
   - Dyspnea
   - Cough
   - Wheeze
   - Hemoptysis
   - Hypotension/Shock
   - Cardiac Arrest
   - Murmurs
   - Palpitations
   - Seizure

2. Gastroenterology
   - Ascites
   - Abdominal pain
   - Hematermesis

3. Hematology
   - Fatigue
   - Bleeding diathesis
   - Lymphadenopathy
   - Unilateral leg swelling

4. Infectious Diseases
   - Fever/chills
   - Fever in immunocomprised host
   - Night sweats
   - Sepsis syndrome/septic shock
   - Skin erythema
   - Vaginal discharge

5. Nephrology
   - Oliguria
   - Dysuria
   - Hematuria
   - Common electrolyte abnormalities
   - Proteinuria
   - Polyuria

6. Neurology
   - Decreased Level of consciousness
   - Confusion
   - Ataxia
7. Miscellaneous
   o Coma
   o Headache
   o Dizziness
   o Weakness
   o Tremor
   o Syncope
   o Sensory Loss

8. Hirsutism
   o Breast Mass
   o Neck Mass

9. Psychiatry
   o Anxiety
   o Psychosis

10. Somatization

11. Rheumatology
   o Joint pain
   o Back pain

Competently perform the following procedures:

- Interpretation of diagnostic tests (EKG, Labs, Chest X-ray, ABG)
- Performance of EKG
- NG tube insertion
- Blood gases
- Intubation

**Evaluation of Resident's Clinical Performance on General Internal Medicine**

Please rate the resident's performance in the objectives listed below using the following scale:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Unsatisfactory</td>
<td>Many major deficiencies</td>
<td>4 = Very Good</td>
<td>No deficiencies of consequences</td>
</tr>
<tr>
<td>2 = Needs to Improve</td>
<td>Several important deficiencies</td>
<td>5 = Outstanding</td>
<td>No deficiencies (at appropriate level)</td>
</tr>
<tr>
<td>3 = Good</td>
<td>Satisfactory performance (at appropriate level)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 = Outstanding</td>
<td>No deficiencies (at appropriate level)</td>
<td></td>
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</tr>
</tbody>
</table>

**Objective 1: The resident will display effective clinical skills.**

**History and Physical**

<table>
<thead>
<tr>
<th>Rating</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Performs a focused, accurate and complete history
**Performs a focused, accurate and complete physical exam**
**Knows test characteristics of common physical exam signs**

<table>
<thead>
<tr>
<th>Utilization of Laboratory and Other Investigations</th>
<th>1 2 3 4 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can justify investigations ordered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can interpret clinical information and integrate it appropriately</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to retrieve and use information regarding test characteristics of common tests (ie. PPV, NPV)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem solving and Clinical Judgement</td>
<td>1 2 3 4 5</td>
<td>N/A</td>
</tr>
<tr>
<td>Good knowledge base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to synthesise clinical information and formulate patient problem list</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to incorporate newly learned information in subsequent assessment of patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows good judgement when setting management priorities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrates a systematic and organised approach to clinical problem solving</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Implementing a Management plan**

<table>
<thead>
<tr>
<th>1 2 3 4 5</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to assess and start initial management in acute emergency</td>
<td></td>
</tr>
<tr>
<td>Writes orders that are clear, comprehensive and correct</td>
<td></td>
</tr>
<tr>
<td>Is fully aware of the side-effects of therapies ordered</td>
<td></td>
</tr>
<tr>
<td>Monitors therapy appropriately</td>
<td></td>
</tr>
</tbody>
</table>

**Objective 2: The resident will display effective technical skills.**

<table>
<thead>
<tr>
<th>Displayed proficiency in the following technical skills:</th>
<th>Yes</th>
<th>Needs Improvement</th>
<th>Not Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NG tube insertion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arterial blood gases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECG interpretation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance of ECG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest X-Ray interpretation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Strengths and Areas Needing Improvement:**

- **Strengths:**
- **Weakness:**

Please indicate number of days of absence during rotation:_____________________

**Overall Evaluation:**

- Outstanding
- Exceeds Expectations
- Meets Expectations
- Needs Improvement
- Unsatisfactory

Date: _______________________________

Supervisor's Signature: _______________________________

Supervisor's Name: _______________________________
3.3 Otolaryngology Rotation

The resident will gain an exposure to otolaryngology as it pertains to the orbit and the peri-ocular structures including the nose and sinuses.

**Overall Objectives**

- to gain a solid grounding in the basic sciences related to otolaryngology
- to develop a broad knowledge base of the common otolaryngology disease conditions
- to learn how to diagnose and treat these conditions
- to learn to take care of most of the common otolaryngology emergencies

**Specific Objectives**

**Medical Expert**

The resident will learn to:

- Take a directed, complete otolaryngology history
- Perform an organized, complete examination using the otoscope, head mirror, headlight, nasal speculum, mirrors for indirect examinations, flexible nasopharyngoscope
- Appropriately order and interpret tests (e.g., hearing tests, imaging studies)
- Analyze and interpret the medical data in order to reach a differential diagnosis and provisional diagnosis
- Develop clinical judgment in formulating the treatment recommendation, with due consideration given to the role of co-morbidities, and the effects, risks, benefits, and timing of operative or non-operative treatments
- Carry out the treatment, and follow up the patients for their compliance, outcomes including complications, and concerns

**Knowledge Base**

The resident will be able to describe the fundamental features of the embryology, anatomy, histology, physiology, pathophysiology, microbiology, biochemistry, genetics and immunology of the:

- Auditory and vestibular system
The nasal and sinus cavities
The upper aerodigestive tract and adnexa
The neck
The salivary glands
The related neurological and cervicofacial structures

The resident will learn about the diagnosis, investigation, care and management of the most common pathologic entities:

Otitis
Types of hearing loss
Inflammatory conditions of the sinonasal complex
Pharyngo-tonsillitis
Voice disorders, including laryngitis
Neck masses (benign and malignant), and other common presentations of head and neck neoplasms

The resident will learn about the diagnosis, investigation, care and management of the common emergencies:

Epistaxis
Peritonsillar abscess
Epiglottitis
Foreign bodies
Neck abscesses and infections
Airway obstruction

Technical and Operative Skills
The resident will be introduced to the critical skills of otolaryngology operating room conduct and surgical assisting.

**Communicator**
To document via history and physical exam and daily progress notes on all inpatients
Be able to present patients accurately via phone or in person to senior colleagues whether they be staff or residents

**Collaborator**
To effectively collaborate with the senior resident and the staff person in patient care especially in burn care where liaison between the plastic surgery team and infectious diseases, GI, respiratory and critical care is so important

**Manager**
To be aware of all admissions to the service whether elective or emergency and to do daily rounds on all the inpatients
Health Advocate
To advise families and patients about risk factors for diseases that can be avoided ie smoking and atherosclerosis

Scholar
To learn using adult learning principles in gaining knowledge as well as participate in the education of medical students and paramedical personnel

Professional
To deal with all patient, family, and health care interactions with honesty.

3.4 Neurosurgical Rotation

Medical Expert/Clinical Decision Maker
The resident is to demonstrate an understanding and management of neurosurgical patients especially with reference to the peri-ocular region - he/she is to obtain an appropriate history and perform a physical examination on patients.

1. Basic knowledge of the anatomy and physiology of the central and peripheral nervous system.
2. Performance and interpretation of a neurological examination.
3. Indications and limitations of non-invasive and invasive investigative techniques.
4. Assessment and management of head injuries and appropriate differential diagnosis of altered level of consciousness.
5. Pathoanatomy, assessment and methods of investigation and management of injuries to the spinal cord, nerve roots, patterns of injury and their prognosis.
6. Assessment and management of spinal cord tumours, primary and secondary, and tumour like conditions.
7. Assessment and management of degenerative disorders of the spinal cord, and peripheral nervous system.
8. Assessment and management of peripheral nerve injuries.

Communicator

The resident is expected to demonstrate communication skills in both verbal and written form. He/she is to:
obtain informed consent related to a certain procedure.
Interact with health care professionals, including family physician, Emergency Room physician, radiologists, medical students etc.
Relate with nurses, OT, PT and other members of the health care team.

Criteria for the Evaluation of the Residents as a Communicator
Establishes a therapeutic relationship with patients and communicates well with family. Provides clear and thorough explanations of diagnosis, investigation and management.
Establishes good relationships with peers and other health professionals. Effectively provides and receives information. Handles conflict situation well. Prepares documentation that is accurate and timely.

**Collaborator**

Participate in interdisciplinary team considering and respecting opinions of other team members.
Identify and understand the role, expertise and limitations of all members of an interdisciplinary team working to achieve a goal related to patient care.
Work with other members of the interdisciplinary team to develop a plan for a general surgery patient or multiple injured patient.

**Criteria for the Evaluation of the Residents as a Collaborator**

Interacts effectively with health professionals by recognizing and acknowledging their roles and expertise.
Consults and delegates effectively.
Collaborates effectively and constructively with other members of the health care team.

**Manager**

Upon completion of the rotation, the resident understands how the neurosurgeon makes sound clinical decisions based on medical evidence for the benefit of the individual patient and the larger population.
Understands how the neurosurgeon works effectively as a team player and strives to accomplish the collective goals of the team.

**Criteria for the Evaluation of the Residents as a Manager**

Understands and makes effective use of information technology, such as methods for searching medical databases.
Makes cost effective use of health care resources based on sound judgement.
Sets realistic priorities and uses time effectively in order to optimize professional performance.
Understands the principles of practice management.

**Health Advocate**

Be able to identify risk factors in the individual patient, and counsel the patients on these factors.
Criteria for the Evaluation of the Resident as a Health Advocate

Understands the specialist role to intervene on behalf of patients with respect to the social, economic and biologic factors that may impact on their health.
Understands the specialist role to intervene on behalf of the community with respect to the social, economic and biologic factors that may impact on community health.
Recognizes and responds appropriately in advocacy situations.

Scholar

Self-directed learning with problem solving through research and education.

Criteria for the Evaluation of the Residents as a Scholar

Demonstrate an understanding and a commitment to the need for continuous learning. Develops and implements an ongoing and effective personal learning strategy.
Critically appraises medical information. Successfully integrates information from a variety of sources.
Understands the principles of adult learning and helps others learn by providing guidance, teaching and by giving constructive feedback.

Professional

Appropriate attitudes and empathy toward the patient, his family and health care personnel.

Criteria for the Evaluation of the Residents as a Professional

Demonstrates integrity, honesty, compassion and respect for diversity.
Fulfills medical, legal and professional obligations of the specialist.
Meets deadlines, is punctual, monitors patients and provides follow up.
Understands the principles of ethics and applies these in clinical situations.
Demonstrate an awareness of own limitations, seeking advice when necessary.
Accepts advice graciously.

3.5 Cardiology Rotation

Objectives for Clinical Skills in Cardiology
See Internal Medicine Goals and Objectives for general guidelines.
Listed below are the specific objectives for Cardiology residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.

At the end of the rotation the resident will be able to:
Manage common problems experienced by the cardiology patient:
- To acquire the skills to efficiently and effectively gather clinical data to diagnose and manage patients with a wide range of cardiac disorders
- Diagnosis and management of cardiac patients in the acute phase of illness through emergency room, primary and secondary referrals
- Consultative experience through ambulatory clinics and inpatient referrals
- To learn the basics of applied pathophysiologic mechanisms of cardiac disease processes
- Interpretive and some technical skills in selected investigative procedures such as exercise testing, electrocardiography and echocardiography
- Risk stratification strategies including clinical assessment, nuclear cardiology testing and appropriate referrals for cardiac catheterization
- To critically evaluate cardiology literature and contribute to learning of students, other physicians, other health care professionals and patients and families
- Principles of primary and secondary prevention of coronary artery disease and cardiac rehabilitation
- Sound approach to common cardiac problems including:
  - Acute myocardial infarction
  - Acute coronary syndrome
  - Chronic stable angina
  - Congestive heart failure (diastolic and systolic left ventricular dysfunction)
  - Hypertension
  - Atrial fibrillation
  - Syncope
  - Valvular heart disease (including endocarditis)
  - Cardiac arrest

Competently perform the following procedures:
- Central line insertion
- Swan-Ganz insertion
- Arterial line insertion
- Transvenous temporary pacing
- Cardioversion

**Evaluation of Resident's Clinical Performance in Cardiology**
See evaluation scales and tables in General Internal Medicine

**3.6 Endocrinology Rotation**

**Objectives for Clinical Skills in Endocrinology**
Listed below are the Endocrine specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.
At the end of the rotation the resident will be able to:

Manage common problems experienced by the endocrinology patient:
- Understand the epidemiology, etiology, pathogenesis, clinical manifestations, treatment and prognosis of: Hypo/Hyperthyroidism, thyroid nodules, adrenal insufficiency, excess, nodules, disorders of hypothalamus and pituitary glands, ovaries, testes, and sexual differentiation, metabolic bone disorders
- Understand the use of diagnostic tests used in diagnosing endocrine disorder
- Gain experience in management of diabetes mellitus and complications

Competently perform the following procedures:
- Discuss diagnostic issues and management options around a range of endocrine disorders
- Understand strengths and limitations of diagnostic tests and therapeutic interventions
- Understand endocrine disease as they relate to pregnancy
- Develop insight into endocrine and metabolic physiology
- Develop effective ways of communicating to patients to enhance their understanding and compliance with their regimen

Evaluation of Resident's Clinical Performance in Endocrinology
See Evaluation forms in General Internal Medicine

Specific Details of Endocrinology Rotation
Residency Rotation In Endocrinology and Metabolism Orientation Package
(Updated October 21, 2003)

Duration of Rotation
1-2 months (preferably 2 months)

Attending Staff Physicians

Dr. H.C. Gerstein
Chief of Division of Endocrinology & Metabolism
905-521-2100 x73371

Dr. J. Booth
Endocrinology & Metabolism 905-628-5700

Dr. S. Capes
Endocrinology & Metabolism (Victoria, British Columbia)

Dr. W. Harper
Endocrinology & Metabolism 905-540-3560

Dr. A. Prebtani
Endocrinology & Metabolism 905-521-2100 x44599

Dr. Z. Punthakee
Out-patient diabetes clinics only (i.e. no Endocrinology Clinics)

*Dr. William Harper is the Endocrinology (Specialty) Site Coordinator for Residents at the Hamilton Health Sciences. Residents should meet with Dr. Harper for an orientation as early on in their rotation as possible, preferably the first day or even before their rotation starts. He may be contacted at his office number (905-540-3560).*

**Description of Services**

**Philosophy**

The Division of Endocrinology & Metabolism encourages residents from the Core Medicine Program as well as residents from other specialty programs including family practice and obstetrics and gynecology to do electives within the division. Elective rotations are preferably two months in length in order to ensure an adequate exposure to the broad field of endocrinology. The primary focus of the rotation is an ambulatory one as most patients with endocrine disorders are managed in the out-patient setting. During this rotation there is also a strong emphasis on interdisciplinary inter-specialty interaction. Residents choosing an elective in endocrinology are expected to participate in a variety of out-patient clinics throughout the week, in-patient endocrine/metabolic consultation, and management of diabetes and pregnancy. Formal presentations of patients are encouraged, problems are identified and courses of therapy outlined. Residents are expected to develop a critical approach to problems in Endocrinology & Metabolism and to frequently access the literature and use the tenets of both evidence-based medicine and physiology-based medicine to solve problems and enhance knowledge.

**Out-Patient Clinics**

These form the bulk of the residents experience in endocrinology. Each resident is permitted to design a schedule according to his/her educational objectives. **It is expected that the resident will spend the majority of their time on their endocrine rotation in outpatient clinics (exception being made for afternoon clinics on post-call days and academic half-days).** No clinic is dependent on the resident’s presence. Thus, the resident can attend different clinics each week according to his/her preference, and may see patients with more than one attending endocrinologist on any given day.
Clinics in both general endocrinology and diabetology are available, according to the schedules below. The resident should attempt to balance his/her schedule to see both diabetes and patients with other endocrine disorders. Dr. Booth’s Tuesday afternoon clinic (4F-Clinic) focuses on diabetes in pregnancy and is a useful experience.

Clinics are available at all 3 sites of the Hamilton Health Sciences: McMaster University Medical Centre (MUMC), Henderson General Hospital (HDGH), and the Hamilton General Hospital (HGH). At MUMC the clinics are located in 3V3 while at the HGH they are located in the Outpatient Department. **Residents should call to verify clinics at least 1 day in advance.** This will ensure that they do not show up for a clinic that has been cancelled or already has too many students/residents in attendance. Other clinics are often available in that particular time slot should such a situation arise, but it would be impossible for the resident to get to an alternate clinic on time if it was located at a different hospital site. Therefore, residents are encouraged at the beginning of their rotation to verify the clinics they wish to attend as much as possible in advance (days or even weeks in advance). Clinics can be booked by contacting the attending staff’s secretary by the phone numbers listed by their names at the beginning of this document. In the clinics, the resident is given priority in seeing new consults and follow-ups of patients he/she has seen previously. These clinics offer a rich opportunity for one-on-one teaching.

<table>
<thead>
<tr>
<th>General Endocrinology Out-patient Clinics</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>Gerstein (Hend)</td>
<td>Booth (MUMC)</td>
<td>Prebtani (HGH)</td>
<td>Booth (HGH)</td>
<td></td>
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<tr>
<td>AM</td>
<td>Harper (HGH)</td>
<td>Punthakee (MUMC)</td>
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<tr>
<td>PM</td>
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<td>PM</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Diabetology Out-Patient Clinics</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td></td>
<td>Harper (MUMC)</td>
<td>Booth (MUMC)</td>
<td>Prebtani (MUMC)</td>
<td>Harper (10:00am-1:00pm, MUMC)</td>
</tr>
<tr>
<td>PM</td>
<td>Hunt (MUMC)</td>
<td>Gerstein (MUMC)</td>
<td>Booth (MUMC)</td>
<td>Booth (MUMC)</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>Punthakee (MUMC)</td>
<td>Booth (MUMC-4F)*</td>
<td>Gerstein (MUMC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In-Patient Endocrinology and Diabetology Consults
You will be assigned to cover inpatient consultations at 1 site only for the month, either MUMC or HGH. Be sure to speak with Dr. Harper at the beginning of the rotation to determine which site you are assigned to for the month. If you are on a two month endocrine rotation, then you will cover HGH one month and MUMC on the other. Inpatient consults are phoned into the staff endocrinologist on call who then may contact you if it is an interesting enough case with good educational value.

It is expected that residents will have already have had ample experience with routine inpatient diabetes care on their general medicine rotations. Thus, with the exception of managing admitted pregnant patients with diabetes in labor, in-patient diabetes care should not take preference over other educational opportunities such as outpatient clinics or teaching sessions. Inpatient endocrine consultations (adrenal disorders, pituitary disorders, calcium disorders, etc.) however, may provide an excellent learning opportunity and occasion for one-on-one teaching with the staff endocrinologist.

Diabetes in Pregnancy
Dr. Booth and Dr. Capes alternate seeing pregnant patients with diabetes on Tuesday p.m. at MUMC-4F Clinic. In addition, many of these patients are followed in the obstetrical clinic by the diabetic nurse educator (Edi Zimmerman) on Thurs a.m. clinics that run separately. In-patients on the obstetrical ward (MUMC-4A) are followed by the diabetic nurse educator and by an attending endocrinologist.

Other Educational Opportunities

1. Grand Medical Rounds:
   - Thursday at 0800 hours in MUMC 4E20
   - Friday at 0800 hours alternating weekly HGH/HDGH

2. Regional Endocrinology and Metabolism Rounds:
   - 3rd Tuesday of every month at 0800 in MUMC 4E20

3. Endocrine Journal Club
   - This is on the 3rd Tuesday of every month at 5:15PM at MUMC, Rm 3E26 (room may vary so check with Dr. Prebtani). Critical appraisal of a current journal article relevant to diabetes or endocrinology is undertaken. It is the responsibility of the internal medicine resident rotating through endocrinology to select and present the article at the JClub. Every month one of the endocrine staff will be assigned as a mentor to help the resident choose an article (and insure the resident does not choose an article that has already been recently presented!). Residents should contact Dr. Ally Prebtani (the Jclub Organizer) early in their rotation to find out who the endocrine staff mentor for Jclub is that month.

4. M.D.I. (Multiple Daily Injection) Class
These are held on Friday afternoons when no clinics are scheduled. These 2-3 hour sessions are a valuable experience if a resident wishes to observe patient interaction with diabetic nurse educators and dietitians first hand. All residents will have the opportunity if they choose to spend 1 Friday afternoon during their endocrine rotation in the M.D.I. Class.

5. Insulin Pumps
   - These are usually started and managed by the diabetic nurse educators. It can be a useful experience for the resident to attend a “pump start” with the diabetic nurse to become familiar with this equipment.

**Evaluation:**

The evaluation of each resident on the endocrine service will be a compilation of all the individual evaluations filled out by each of the attending staff that spent time supervising that resident. This will be facilitated by the Web Evaluation system. The final compilation ITER will be carried out by the Endocrinology (Specialty) Site Coordinator Dr. William Harper.

As part of the evaluation process residents will be expected to submit a final attendance sheet (see last page of this orientation package) indicating all the clinics they attended during their rotation. This way Dr. Harper will know which attending staff to contact for individual evaluations. As stated above, it is expected that residents will attend at least 8 clinics/week of their rotation with exceptions being made only for post-call afternoons. The completed attendance sheet must be given to Dr. Harper at the end of the rotation. It can be dropped off at his office (or sent via inter-hospital mail or by fax).

Dr. William Harper
Hamilton General Hospital
237 Barton Street East
McMaster Clinic, Room 627
Hamilton ON, L8L 2X2
Fax 905-521-1551

**Objectives for Endocrinology In-training Evaluation**

**Objectives for Clinical Skills In Endocrinology**

Listed below are the Endocrine specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.

At the end of the rotation the resident will be able to:

- Manage common problems experienced by the endocrinology patient:
  - Understand the epidemiology, etiology, pathogenesis, clinical manifestations, treatment and prognosis of:
    - Hypo/Hyperthyroidism/thyroid nodules
    - Adrenal insufficiency/excess/nodules
Disorders of Hypothalamus and pituitary glands
Ovaries, testes and sexual differentiation
Metabolic bone disorders.

Understand the use of diagnostic tests used in diagnosing endocrine disorders.
Gain experience in management of diabetes mellitus and complications.
Discuss diagnostic issues and management options around a range of endocrine disorders.
Understand strengths and limitations of diagnostic tests and therapeutic interventions.
Understand endocrine disease as they relate to pregnancy
Develop insight into endocrine and metabolic physiology.
Develop effective ways of communicating to patients to enhance their understanding and compliance with their regimen.

3.7 Infectious Diseases Rotation

Objectives for Clinical Skills in Infectious Disease
Listed below are the specific objectives for Infectious Disease residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.

At the end of the rotation the resident will be able to:

Manage common problems experienced by the infectious disease patient:

1. Manage common infectious diseases problems:
   - Cellulitis
   - Urinary tract infections
   - Community acquired pneumonia
   - Intravenous catheter related blood stream infections
   - Including bacteremias and fungemia
   - Infectious gastroenteritis
   - Prosthetic device related infections
   - Tuberculosis
   - Infectious endocarditis

2. Possess an approach to the following syndromes:
   - Febrile Neutropenic episodes in cancer patients
   - Infectious issues in HIV patients
   - Infections in burn patients
   - Pulmonary infiltrates in immunocompromised patients
   - Fever in the returning traveler
   - Employment of infection control principles

3. Knowledge of medical microbiology:
   - Knowledge of aerobic and anaerobic culture techniques
   - Gram staining of body fluid samples
   - Antibiotic susceptibility testing
- Therapeutic pharmacokinetic monitoring of commonly used antimicrobial agents

Competently perform the following procedures:

- Gram stain of body fluids with interpretation
- Lumbar puncture

**Evaluation of Resident's Clinical Performance in Infectious Disease**

See common evaluation forms for all General Internal Medicine.

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**3.8 Neurology Rotation**

**Objectives for Clinical Skills in Neurology**

Listed below are the Neurology specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.

**At the end of the rotation the resident will be able to:**

Manage common problems experienced by the neurology patient:

1. **Bilateral weakness including:**
   - spinal cord disease, central degenerative disorders
   - peripheral neuropathy, including Guillain Barre
   - neuromuscular disorders including myasthenia gravis
   - muscular disorders

2. **Unilateral or focal weakness including:**
   - focal cerebral lesions including stroke, masses abscess
   - unilateral spinal cord disease
   - mononeuropathies

3. **Bilateral numbness including:**
   - brainstem lesions
   - spinal cord lesions
   - peripheral neuropathies

4. **Focal or unilateral numbness including:**
   - TIAs
   - partial seizures
   - migraine aura
   - mononeuropathy

5. **Anosmia**

6. **Visual loss including:**
   - TIAs
   - cortical blindness
   - optic neuritis
   - optic nerve/chiasm/tract compression

7. **Diplopia including:**
8. Altered hearing, nystagmus, vertigo, dizziness including:
- labyrinthitis
- Meniere’s
- benign positional vertigo
- brainstem lesions
- cardiac arrhythmias, syncope, postural hypotension

9. Ataxia and gait disturbances:
- differentiating cerebral disease, posterior column disease, and large fibre sensory neuropathy
- classic patterns: Parkinson’s, apraxic/ataxic, hemiparetic, normal aging

10. Speech disturbances including:
- aphasia and dysarthria

11. Dementia and Delirium including:
- Alzheimer’s and other degenerative disorders, reversible causes of dementia
- acute confusional states

12. Coma

13. Involuntary movements including:
- tremors, benign essential tremor, Parkinson’s
- dystonia
- chorea
- myoclonus
- drug-induced movement disorders

14. Syncope including:
- cardiac causes
- seizure disorders
- vertebro-basilar insufficiency
- autonomic failure

15. Seizures including:
- management of status

16. Headaches including:
- tension headache
- migraine and cluster
- analgesic rebound
- trigeminal neuralgia

17. Regional Pain including:
- myofascial pain syndromes
- neuropathic pain
- postherpetic neuralgia
- complex regional pain

18. Urinary Incontinence and Impotence including:
- cerebral, spinal, cauda equina and peripheral nerve causes

Competently perform the following procedures:
3.9 Dermatology Rotation

Objectives for Clinical Skills in Dermatology

Listed below are the Dermatology specific objectives for Internal Medicine residents. It should be noted that not all objectives will be met on this rotation. Further learning takes place during related rotations, seminars and independent studies.

At the end of the rotation the resident will know:
- Enhance the visual diagnostic skills and related reasoning used in dermatology.
- Become familiar with a select list of dermatologic conditions commonly seen and best treated by the non-dermatologist.
- Gain familiarity with certain dermatologic conditions which require a high index of suspicion by all physicians because of their danger to life or risks to public health.
- Become familiar with dermatologic treatment regimens for the non-dermatologist and guidelines for appropriate referral of cases.
- Learn appropriate use of both systemic and topical dermatologic medications and their adverse events that may cause systemic disease.
- Diagnostic techniques related to the diagnoses of dermatologic conditions related to Internal Medicine.
- Become proficient in skin surveillance, especially early detection of skin cancer.
- Learn skin signs of systemic diseases related to the specialty of Internal Medicine.

Competently perform the following procedures:
- Basic punch, shave and excisional biopsies

Evaluation of Resident's Clinical Performance in Dermatology

See evaluation forms for General Internal Medicine

3.10 Emergency Medicine Rotation (St. Joseph's Hospital)

Emergency Medicine - CTU - Resident Orientation Guidelines

All residents are required to review the following orientation information, prior to starting rotation in the Emergency Medicine CTU Department.
1. **EM-CTU Shifts:** Junior residents are assigned to work between 16 to 18, ten-hour shifts. Senior residents are assigned 16 to 18, eight-hour shifts. If taking one-week vacation, shifts will be reduced (i.e. minus 4 shifts/week).

For the months of March to June, EM-PGY-5 senior residents will do 12 shifts for exam preparation. If taking vacation-time, shifts will be reduced to 10 (i.e. minus 2 shifts/week; as minimum shift requirement per month is 10). Senior residents in the Emergency Medicine Residency Program are required to complete two night shifts per month.

1. **Preceptor Program:** St. Joseph's Emergency Department CTU has a Preceptor Program during your rotation. This means that each resident is scheduled predominately with one or two staff physicians. You can expect approximately 50% of your shifts to be with these staff physicians. The remaining shifts are divided among the other staff members. Preceptor shifts are recognized on the schedule using an asterisk (*) and cannot be swapped or changed for any reason.

2. **ALL CASES** must be reviewed with the attending Staff Emergency Physician before being discharged or being referred to a consultation service. The amount of direct patient supervision will vary among staff physicians.

3. **Emergency Record:** You must sign the emergency department chart initially upon seeing a patient (sign in the resident designated area on chart, beside “Initial Diagnosis”). DO NOT SIGN CHART AT BOTTOM (this is designated for the emergency staff physician). You must indicate the time of initial patient assessment and the times of each reassessment. You must present the chart to the attending Emergency Staff Physician to be signed by them prior to any patient being referred to another service.

4. **X-Ray Reports and ECG’s:** All x-rays and ECGs should be reviewed with the attending emergency staff physician, before being entered into PACS system. Always review with the attending Emergency Physician before the patient is discharged or referred.

5. **Sharps Disposal:** The physician performing a procedure is responsible for disposing of “sharps” (needles, scalpel blades, etc.) from the procedure trays.

6. **EM-CTU Schedule:** Because of the intensity and nature of the work in the emergency department, residents are not scheduled to work more than four consecutive shifts. You must check your schedule very carefully. If you come in at the wrong time, expect to be sent home and to return at the assigned time. Residents must fulfill their full scheduled shift obligation and are **NOT permitted to leave any shift early without the permission of the SJH EM-CTU Director**.

7. **Shift Changes:** The CTU Director must approve ALL SHIFT CHANGES. To make your request in advance, contact the CTU Director, through the Program Assistant, at tel. 905-522-1155 x3112, or email: lrizzo@stjosham.on.ca. A suitable and agreeable shift swap must be arranged between residents, then be presented to the Program Assistant for consideration and approval. Note: Preceptor shifts cannot be changed.

8. **Unable to work shift due to illness:** If you are not able to fulfill your shift obligation, you MUST:
o Contact and advise the Emergency Staff Physician-on-Duty DIRECTLY, at tel. 905-522-1155 x3997. Messages are not to be left with the nurses or desk clerk; and
o Advise the EM-CTU Director regarding your missed shift (via Lisa @ x3112; leave message if after hours). *More than 2 consecutive sick calls will require a doctors note written to CTU Director.

9. **Academic Half Days:** You will note that by in large you have not been scheduled a shift during your academic half day (i.e. a day shift if your half day is in the morning). However, you may be scheduled to do a shift later in that day. If you are scheduled during your half-day, attendance at half-day will take precedence; however you are then expected to attend the remainder of your emergency department shift. Always advise the physician-on-duty when you are leaving, or returning, from your half day.

10. **Vacation and PL:** All vacation and leave-day requests will attempt to be granted, but must be made available to the CTU Director no later than 4 weeks prior to the start of the rotation. Approval of all time-off is at the discretion of the SJH EM-CTU Director.

11. **PGY1-EM Core Rounds:** (mandatory attendance). All PGY1s are expected to attend Emergency Medicine Core Rounds during their ED rotation. They are held off-site, every Tuesday morning at the Hamilton General Hospital (Piller's Conference Room) from 0900-1030 hrs. Attendance is taken and will be reflected on final evaluation. If you are scheduled for a 0700 hr shift, you are expected to report to the ED and leave at an appropriate time to attend these rounds. Note: Speakers and topics are posted on website: 
   [http://www.fhs.mcmaster.ca/emergmed/frameset_division.htm](http://www.fhs.mcmaster.ca/emergmed/frameset_division.htm)
   Check website regularly for updates and/or any cancellations. (NOTE: If you are scheduled for a 1600-0200 hr shift the evening prior to PGY1-EM Core Rounds you are not permitted to leave your shift early as you are required to fulfill your full shift obligation. Your attendance will still be expected at rounds).

12. **Mid Evaluation:** If doing a 2 month EM-CTU rotation, you will receive an interim evaluation, via e-mail from the CTU Director, at the end of the first month. The purpose of this feedback is to correct any concerns identified by the Emergency Staff Physicians or to confirm the appropriateness of your participation in the rotation. Any concerns that you may have regarding the rotation to date will also be addressed at this time.

13. **Resident Mail Slot:** located in (old) observation / charting area. Incomplete charts will be directed to the Resident's mail slot. Please check mail slot during every shift for mail and/or incomplete charts.

14. **ERP Duty Room (L-131):** Lockers, Greens. Due to very limited locker space in the Emergency Physician's Duty Room, you will have to find a vacant locker to store your belongings. Please do not use a lock, as lockers are shared. 'Greens' should be available in the duty room as well. Staff physician and resident schedules are posted in this room.

15. **Final Evaluation:** The CTU Director will hold a final (in-person) exit evaluation with each resident. Your attendance is mandatory. Your final evaluation will be posted on Web Eval.
16. Faculty Evaluation Forms: At the end of your rotation you will be asked to complete & return two Faculty Evaluation Forms. One will be on your preceptor, and the other on a staff physician (of your choice) that you had a significant amount of interaction with (could be + or - experience). Your evaluation of our department and staff physicians is important to us for feedback and to continually try to improve the educational experience in our department. Any written remarks are particularly helpful. You will be given these evaluation forms during your final evaluation/meeting.

The SJH Emergency Medicine Staff would like to welcome you to St. Joseph’s Healthcare.

We endeavour to make your experience with us an educational one and we hope you enjoy your rotation.

Please feel free to contact us with any questions or concerns.

Dr. K. Woolfrey  
SJH Emergency Medicine - CTU Director  
Lisa Rizzo, SJH EM-CTU Residency Program Assistant  
Tel: 905-522-1155 x3112  
Email Address: lrizzo@stjosham.on.ca

Helpful Hints for Interns, Residents and Clerks in the Emergency Department at St. Joseph's Hospital

This department is comprised of 4 main areas:

Critical Care (CC)  
- 10 beds including 2 crash rooms, used for cardiac monitoring
Observation (Obs)  
- 7 rooms and 2 Exam rooms (for gyne pts), this area is used mainly for admit to no bed pts, abdominal pains and anyone else we think may be admitted or staying for a prolonged period of time
Assessment (Assess)  
- 2 treatment rooms (suturing and procedures), 7 Assessment beds, and 5 Quick Care (chairs). The assessment area is used mainly for pts needing basic interventions
EPAU  
- 4 Suites (seclusion rooms), 2 interview rooms (chairs) and 2 rooms not with seclusion behind the locked door.

Orders

Any new orders or reassessments need to be placed on the desk in the appropriate areas, not put away in the chart slots.
When ordering x-rays or other diagnostic tests, you need to explain why you want them done, on the chart with the order. Eg. CXR r/o pneumonia
CAU Ó this is a short form used for ordering blood work, this includes
  o  CBC, lytes, BUN, Cr, Glucose, INR/PTT, Ck & Trop
Never take the nurses notes away from the desk.

EPT/EPAU

EPT is a consult service to be used for emergency/acute psychiatric services
EPAU (Emergency Psychiatric Assessment Unit)
  o  This unit (described above) is an area of the ER, with psychiatric nurses who manage the patient's care until discharge or admission to an in-pt unit.

SJH Emergency Medicine - CTU Scheduling Guidelines
July 2006-07
To: Residency Education Program Heads, Coordinators and Assistants;
At St. Joseph's Healthcare Emergency Medicine-CTU, we endeavor to make the experience for all residents (PGY1 to 5) as fulfilling and educational as possible. For these reasons, please ensure your residents are fully aware of our scheduling guidelines well in advance of starting their SJH EM-CTU rotation.

For each rotation month at SJH EM-CTU, junior and senior residents can request:

**Up to four (4) Request-days each month.** "Request-days" are requests only and are days that the resident would like to have off. These requested days will not affect the resident's vacation allotment in any way. They can be fragmented, or taken consecutively. Please note they are not guaranteed until the schedule has been prepared by the SJH EM-CTU Director.

**Vacation-time.** MUST be consecutively "one-week" in duration* (5 days, plus 2-day weekend) and be approved by core program. Fragmented vacation (i.e. less than one week in duration) will NOT be approved.

Residents can request up to 4 request-days, and one-week vacation, for each month they are doing a SJH EM-CTU rotation (vacation is based on a two-month rotation). If both vacation-time and request-days are requested - vacation time will take precedence. We will attempt to accommodate request-days, however these are optional and are NOT guaranteed.

**One-Month Rotations**
If a resident is only doing a one-month rotation through the SJH EM-CTU, vacation-time off is highly discouraged as this would not allow for an adequate teaching experience and proper evaluation.

**Academic Half-Days, Statutory Holidays, Lieu Days, and Program Functions**
Academic half-days will be fully supported and acknowledged on the schedule. NOTE: Statutory holidays / lieu days are NOT recognized during the SJH EM-CTU rotation, as residents are only scheduled to work approximately 16-18 shifts (no more than 4 shifts in a row) during one month. If taking vacation-time, they will be scheduled even less shifts.* Mandatory Program Functions will be fully accommodated providing adequate notice from core program of at least 4 weeks prior to start of rotation. Program Functions will not be accommodated if the SJH EM-CTU is notified after the schedule is prepared.

**Weekend Shifts**

All residents will be scheduled to work 2 (full) weekends, per rotation month. In the case where there are 5 weekends in a rotation month, they will be scheduled to work 2.5 weekends per rotation month.*

**Preparation of SJH EM-CTU Schedule**

The resident's working schedule (both junior & senior) will be prepared by the SJH EM-CTU Director, in conjunction with all official requests that have been received within the scheduling guidelines. The final schedule will be distributed to the resident, by e-mail, 2 weeks before commencement of rotation as per PAIRO guidelines.

**Submitting Request-days, Vacation, Professional Leave (PL) or any time off**

Vacation and PL requests must be officially documented on a "Request for Time Off" form, obtained through McMaster Postgraduate Education web site, or from core program. The completed form is to be sent to the SJH EM-CTU Residency Program Assistant (as per below) by fax, mail, or by e-mail.

'Request days' and mandatory Program Functions are not required to be on the form, however the SJH EM-CTU Residency Program Assistant needs to be properly notified by e-mail or fax, at least 4 weeks before the rotation start. All resident scheduling requests are fairly and equally reviewed, and consideration is given to the date that the request is received. Approval of all time-off is at the discretion of the SJH EM-CTU Director.

IF OFFICIAL DOCUMENTATION IS NOT RECEIVED WITHIN THE ABOVE SJH EM-CTU SCHEDULING GUIDELINES, THE RESIDENT’S SCHEDULE WILL BE PREPARED AND WILL BE FINAL. NO SCHEDULING CHANGES WILL BE MADE THEREAFTER.

REQUEST FOR TIME-OFF FORMS (AND SCHEDULING REQUESTS) TO BE SENT TO:
Lisa Rizzo, SJH EM-CTU Residency Program Assistant
Emergency Physicians' Office, St. Joseph's Healthcare
E-mail: lrizzo@stjosham.on.ca
Tel: 905-522-1155 x3112 Fax: 905-521-6017

*NOTE: ALL SCHEDULING REQUESTS MUST BE RECEIVED AT LEAST 4 WEEKS PRIOR TO START OF SJH EM-CTU ROTATION*
Questions or Concerns? Please contact the SJH EM-CTU Residency Program Office at: 905-522-1155, ext. 3112.
Thank you for your assistance and continued support.

Sincerely,
Karen Woolfrey
Karen G.H. Woolfrey, M.D., FRCP(C), FACEP
Assistant Professor & Deputy Director, Division of Emergency Medicine,
Department of Medicine McMaster University;
St. Joseph's Hospital EM-CTU Director & Research Coordinator.

3.11 Plastic Surgery Rotation

Please see link to Plastic Surgery Residency Manual

Plastic Surgery Rotation - HHS: Rotation

Specific Objectives & Orientation Document - General Objectives for All Residents:

Communicator
Timely completion of consults, progress and procedure notes to facilitate communication with referring physicians and other members of the health care team. Concise and accurate case presentations either in person by telephone to senior colleagues (staff or other residents), patient education and counselling.

Collaborator
Initiate, co-ordinate and correlate the management of surgical patients with physicians from other services (eg. Infectious diseases, internal medicine) and with allied health professionals (eg. OT/PT, nutrition).

Manager
Wisely manage of health care resources with cost-effective bed management strategies to provide optimal care to the surgical patient. Daily rounds and progress notes prepared for all inpatients.

Health Advocate
Counsel patients and families on healthy lifestyle choices to maintain health or avoid deterioration of health.

Scholar
Review surgical journals and other medical and surgical sources of information regarding diagnostic and therapeutic guidelines. Participate in the education of medical students and paramedical personnel. Participate in research activity to advance our field.
Professional
Professional interaction with health care personnel in the Emergency department, Short Stay Unit, in hospital wards should include good communication skills as well as treating all patients in an ethical manner.

Objectives for Junior Plastic Surgery
Residents (PGY1 and 2), Off-service Residents (General Surgery, Orthopedic Surgery, Emergency Medicine, Family Medicine, other programs)

Some topics will be more applicable to some specialties than to others (e.g. Orthopaedic Surgery residents need to focus more on hand injuries and bone healing while General Surgery residents need to know more about principles and techniques of breast reconstruction, wound healing and abdominal reconstruction techniques). Greater proficiency at technical skills is expected of residents in surgical programs (and Emergency Medicine) than in other programs.

Knowledge
General Wound healing Bone healing Tendon healing Nerve healing Anatomy - skin, hand, breast Physical examination - hand

Specific Hand Fingertip injuries Extensor tendon lacerations Flexor tendon lacerations Fractures and dislocations Infections Common "tumours" (ganglia, giant cell tumours) Common inflammatory conditions (stenosing tenosynovitis, DeQuervain's tenosynovitis) Compression neuropathies (carpal tunnel syndrome, cubital tunnel syndrome) Skin Skin grafts Basic skin flaps Malignancies (basal cell carcinoma, squamous cell carcinoma, melanoma) Common benign lesions Ulcer management Frost Bite Tissue Viability; Tissue viability assessment Burns Resuscitation/ABA (American Burn Association) Criteria for admission Electrical/Chemical/Thermal/Inhalational Appropriate wound care for same including specific anatomic sites Breast Breast reduction Breast cancer and postmastectomy reconstruction (principles, techniques)

Technical Skills
Hand Repair of fingertip injuries Repair of extensor tendon lacerations Closed reduction and appropriate splinting of simple fractures and dislocations Incision and drainage of simple hand infections Minor hand surgeries (trigger finger releases, carpal tunnel releases) Skin Harvesting skin grafts (split thickness, full thickness) Excision of lesions Debridement of ulcers, burns Escharotomies
4. Core Ophthalmology Training years
PGY2-5

- Retina
- Cornea/External Disease and Uveitis
- Glaucoma
- Pediatric Ophthalmology & Adult Strabismus
- Neuro - Ophthalmology
- General Ophthalmology
- Lacrimal, Lids & Orbits

The PGY2 through PGY5 years are divided into 3 cycles. Each Cycle consists of 8 2 month rotations (= 16 months). The 3 cycles (= 48 months) constitute the 4 years of core ophthalmology training. The 2 month rotations are 'man' or service based and the resident will travel with the 'man' or “service team” to clinic, O.R. or office. The rotations are not location based per se. Residents will have 3 exposures to each sub-specialty in each of the 3 cycles and it will be expected that learning will be graduated & incremental as the residents progress through successive cycles.

See CanMeds objective of Royal College objectives in section one of this manual.

4.1 Cycle 1 Goals & Objectives

1. Cycle 1 involves a 16 month period in PGY2 and PGY3. The resident will have completed the 6 week intensive TORIC (Toronto Ophthalmology Residency Introductory Course) at the end of PGY1 as an introduction to the specialty.
2. There are 2 month rotations in each of: Retina; Glaucoma; Pediatric Ophthalmology & Adult Strabismus; Lacrimal, Lids & Orbit; Neuro-ophtalmology; Cornea/External Disease, General ophthalmology and Cataract and 2 months elective.
3. The Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional components of each rotation are detailed in the sections that follow.
4. It is expected that residents will function at a 'beginner' level on these rotations as they begin to acquire knowledge and skills.
5. It is expected that residents will complete the American Academy of Ophthalmology Basic & Clinical Science Home Study Course successfully.
6. It is expected that residents will take a mock oral and complete the OKAP exam yearly.
7. It is expected that residents will complete their 'on call' requirements.

4.2 Cycle 2 Goals & Objectives
1. Cycle 2 involves a 16 month period in PGY3 and PGY4.
2. There are 2 month rotations in each of: Retina; Glaucoma; Pediatric Ophthalmology & Adult Strabismus; Lacrimal, Lids & Orbit; Neuro-ophtalmology; Cornea/External Disease, General ophthalmology and Cataract and 2 months elective.
3. The Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional components of each rotation are detailed in the sections that follow.
4. It is expected that residents will build on the knowledge and skills from Cycle 1 and make further progress in these areas.
5. It is expected that residents will complete the American Academy of Ophthalmology Basic & Clinical Science Home Study Course successfully.
6. It is expected that residents will take a mock oral and complete the OKAP exam yearly.
7. It is expected that residents will complete their 'on call' requirements.
8. It is expected that residents will attend the Lancaster or Stanford Basic Science Course during this Cycle.

4.3 Cycle 3 Goals & Objectives

1. Cycle 3 involves a 16 month period in PGY4 and PGY5.
2. There are 2 month rotations in each of: Retina; Glaucoma; Pediatric Ophthalmology & Adult Strabismus; Lacrimal, Lids & Orbit; Neuro-ophtalmology; Cornea/External Disease, General ophthalmology and Cataract and 2 months elective.
3. The Medical Expert, Communicator, Collaborator, Manager, Health Advocate, Scholar and Professional components of each rotation are detailed in the sections that follow.
4. It is expected that residents will build on the knowledge and skills from Cycle 2 and make further progress in these areas.
5. In this cycle it is expected that residents will take more responsibility clinically and that they will function as the primary surgeon in some surgeries as outlined in the rotation objectives below.
6. It is expected that residents will complete the American Academy of Ophthalmology Basic & Clinical Science Home Study Course successfully and that they will take some responsibility to teach more junior residents.
7. It is expected that residents will take a mock oral and complete the OKAP exam yearly.
8. It is expected that residents will complete their 'on call' requirements.
9. It is expected that residents will attend the following courses in this cycle; the San Antonio Course, the Future Focus Course and the AFIP Course.
10. They may attend the AAO meeting in this cycle.
11. The resident will have completed the minimum research requirements by the end of this cycle.

Rotation specific Goals and Objectives follow:
5. McMaster University Specific Educational Objectives for Ophthalmology Sub-Specialty Rotations

5.1 Cornea/External Disease

Medical Expert

An ophthalmologist's training must include an excellent foundation in the diagnosis, investigation and treatment of corneal and external diseases of the eye. This area includes common problems areas encountered in general ophthalmologic practice such as ocular surface infections as well as rarely encountered inherited and acquired corneal disorders. The ophthalmologist in training should acquire the skills of diagnosis, pathogenesis and treatment of corneal and external diseases, but also the skill of a critical and inquiring approach to diseases of the eye that will serve the trainee throughout their future career in ophthalmology.

The diagnosis of external disease problems of the eye frequently requires a team approach, with the ophthalmologist working closely with the clinical microbiology lab technician, other specialists in infectious diseases, and specialists in internal medicine, particularly in the field of rheumatology.

The primary objective for the cornea and external disease rotation is to allow the resident to diagnose, understand and manage common diseases of the cornea and the ocular surface. It is expected that much exposure of the resident with be during general out-patient clinics, both in hospital and in private attending's offices, and while on-call, where most of these patients are seen. There will be regular attendance at cornea and external disease clinics, both in the hospital out-patient clinics and in the cornea/external disease attending's private office, where appropriate. In addition, attendance at journal clubs, special lectures, & cornea and external disease teaching sessions is expected. Residents are advised to review the current ophthalmic literature and other information resources to expand upon their clinical experience. The residents are expected to read, understand and use the knowledge in the American Academy of Ophthalmology Basic Clinical Science Course, Section 8. The following course outline represents the core knowledge base expected to be mastered:

Part 1. Basic and Clinical Concepts of Cornea and External Eye Disease

- Structure and Function of the External Eye and Cornea
- Examination Techniques of the External Eye and Cornea
- Principals of Corneal Pharmacology and Surgery

Part 2. Ocular Surface Disorders
Residents will pass through three two-month rotations of Cornea/External disease experience during the residency program. An increasing and progressive level of understanding, management responsibility, and demonstrated competency within each two month experience is expected. Residents will observe, diagnose, and then manage corneal problems. By the final rotation residents are expected to manage complex cases and to teach junior residents within the full diagnostic and therapeutic spectrum of Cornea/External disease.

5.2 Retina

Medical Expert
Become proficient with appropriate examination techniques, including:

- slit lamp biomicroscopy with 78 and 90 D lenses and contact lenses
- indirect ophthalmoscopy
- direct ophthalmoscopy
- scleral depression
- retinal drawing
- A and B scan ultrasonography
- Interpreting fluorescein angiograms
- Interpreting ICG
- Interpreting OCT
- Assist in Vitreoretinal surgery
  * Perform Laser Photocoagulation
  * Perform Photodynamic therapy
  * Perform intravitreal injections

Knowledge of normal retinal anatomy and histology, and variations of fundus appearance related to race and age.

Knowledge of pathophysiology, diagnosis and management of:

- diabetic retinopathy
arteriosclerosis and hypertension retinopathy
macroaneurism
BRVO, CRVO, BRAO, CRAO
Maculopathies including ARMD, CSR, OHS, pathologic myopia, angioid streaks
Peripheral retinal degenerations
Retinal detachment, Retinopathy of Prematurity, Inherited genetic retinal disease

Ability to perform:

retinal photocoagulation therapy (PRP and treatment of retinal tears)
periocular injections
AC paracentesis

Understands indications and techniques of:

pneumatic retinopexy
scleral buckling
vitrectomy

Understands approach to postoperative endophthalmitis and can perform appropriate AC and vitreous taps and injection of intravitreal antibiotics
Knowledge of Pathophysiology, diagnosis and management of:

retinopathy of prematurity
inflammatory/infectious conditions including sarcoidosis, toxoplasmosis, syphilis, TB, endogenous endophthalmitis, AIDS retinopathy, CMV retinitis, and other HIV related conditions, serpigenous choroiditis, white dot syndromes
traumatic retinal conditions (commotio retinae, Purtscher's retinopathy, valsalva retinopathy, choroidal rupture.

Able to independently manage post operative vitreoretinal patients including knowledge of potential side effects and complication of intraocular gas tamponade and silicone oil
Knowledge of pathophysiology, diagnosis and management of:

hereditary and degenerative retinal conditions (retinoschisis, retinitis, pigmentosa, choroideremia, gyrate atrophy, etc)
neoplastic diseases - choroidal melanoma, choroidal metastases, hamartomas, retinoblastoma

The resident would start by learning the retinal examining and investigative skills. Following this he would observe and assist with these procedures. In the final cycle he would be performing these outlined tasks independently.
The remainder of the CanMeds objectives are shared with the other subspecialty rotations.
5.3 Glaucoma

Medical Expert
In general, our goal in training ophthalmologists is:

1. to provide excellent teaching of ophthalmology
2. to provide skillful care to patients with ophthalmic disorders
3. to nurture a critical and inquiring approach to investigating the unsolved problems of eye diseases

It is critical to understand the chronic slow progression of glaucoma and differentiate it from other eye disorders. A good understanding of the definition of glaucoma in particular intraocular pressure being a risk factor is very important.

Detailed history and examination key in differentiating primary open angle glaucoma (POAG) from low tension glaucoma (LTG), secondary open angle glaucoma (2° OAG), traumatic inflammatory or other type of glaucoma.

The primary objective for the glaucoma rotation is to be familiar with diagnosing and managing common glaucoma disorders. It is expected that there will be regular and punctual attendance at glaucoma clinics and rounds. In addition, attendance at Journal Clubs and special lectures is strongly encouraged. Each resident is also encouraged to initiate a research project that can be presented at a scientific meeting. The residents are advised to read the American Academy of Ophthalmology Basic and Clinical Science Course (BCSC), Section 10: Glaucoma. Other relevant BCSC Sections should also be reviewed. Review of the current medical literature (through information technology, literature searches, etc.) is also important. Competency in the surgical management of glaucoma (both intraocular surgery and laser surgery) is expected by the completion of the third glaucoma rotation.

Stratified Objectives

1. to demonstrate knowledge of the pathogenesis of the primary and secondary glaucomas (open and closed angle) and the natural history of each including low tension glaucoma and ocular hypertension;
2. to demonstrate knowledge of primary and secondary glaucomas in the newborn and in children;
3. to identify the pediatric glaucoma patient;
4. to describe the effects of raised intraocular pressure on the optic nerve head and discuss theories of mechanism of damage in glaucoma;
5. to demonstrate an understanding of the significance of the term "glaucoma suspect";
6. to take a history appropriate to the glaucoma patient with special reference to risk factors;
7. to begin to correctly interpret features of the anterior segment in the glaucoma patient including chamber depth, gonioscopy and any indicators of secondary glaucoma;
8. to begin to describe and to differentiate the optic nerve head in normal and in glaucoma patients;
9. to begin to understand the operating principles of visual fields machines;
10. to describe the appearance and evolution of visual field defects in glaucoma;
11. to identify and interpret visual fields defects in glaucoma patients and to differentiate them from defects due to other causes;
12. to demonstrate understanding of intraocular pressure - its control, its measurement and its variability;
13. to assess and to interpret intraocular pressure data and the effects of therapy;
14. to identify and interpret any co-morbidity in the eyes of glaucoma patients;
15. to demonstrate an understanding of pharmacology of systemic and topical antiglaucoma medications;
16. to apply that knowledge in any management of glaucoma patients;
17. establish trusting relationship with patients and their families;
18. discuss appropriate information with patients and their families;
19. consult effectively with other physicians and health care professionals;
20. contribute to Grand Rounds, Journal Clubs, etc.
21. begin to utilize resources effectively to balance patient care, learning needs, and outside activities;
22. utilize information technology to optimize patient care and life-long learning;
23. identify important determinants of health affecting patients (i.e., age, sex, lifestyle, poverty, culture, ethnicity, religion, etc.);
24. recognize the need for appropriate support and referral (i.e., low vision clinic, CNIB, other community-based resources/agencies, opticians, and optometrists);
25. develop a personal education strategy;
26. be punctual and responsible;
27. be organized, tidy, and well dressed;
28. keep accurate records;
29. recognize one's own limitations;
30. seek appropriate assistance when necessary;
31. exhibit appropriate behavior and attitude.
32. be proficient in slit lamp biomicroscopy with 78D and 90D lenses, gonioscopy, indirect and direct ophthalmoscopy;
33. to refract and to measure visual acuity taking into account pupil size;
34. to demonstrate an understanding of the principles of ophthalmic lasers and their application in the treatment of glaucomas;
35. to begin to perform argon laser trabeculoplasty, iridoplasty, iridotomy and transcleral cycloablation using ophthalmic lasers;
36. in the care of surgical patients:
   o to demonstrate an understanding of the levels of disability induced by glaucoma before operative interference is deemed advisable;
   o to perform regional and periocular retrobulbar injection techniques;
to be introduced to intraocular surgery with the beginning hands on experience;
- to be proficient in the handling of surgical ocular instruments in the laboratory;
- to demonstrate suture placement and knot tying in the laboratory;

37. Surgery:
- to demonstrate an understanding of the mechanism and application of operating room instruments and machines, including the operating microscope, lens fragmentation and aspiration instruments and vitreous suction cutters;
- to take measurements and assess the findings and to calculate lens power in patients needing intraocular lenses including axial length determination, keratometry, lens power calculation and endothelial cell appearance;
- to perform to the satisfaction of the surgical tutors the following glaucoma procedures including the management of intraoperative and postoperative complications. These procedures include:
  - trabeculectomy;
  - trabeculectomy combined with cataract removal;
  - iridectomy;
  - revision of drainage blebs; and
  - the use of wound modulating drugs.
- to perform to the satisfaction of the surgical tutors and following additional procedures:
  - diagnostic and therapeutic paracentesis of the anterior and posterior segments.
- to perform retrobulbar and regional anesthesia.

The student will be evaluated by an on-going process and deficiencies will be brought to their attention as soon as one is recognized. Unsatisfactory evaluations will be addressed on an individual basis.

It is expected that the student will also critically evaluate the preceptor so as to help he/she improve their ability to teach more effectively. The resident's evaluation of the instructor will in no way affect the final evaluation they are to receive.

5.4 Pediatric Ophthalmology

Medical Expert
Obtain & synthesize relevant general & ophthalmic history from patients/families/others

Obtain appropriate visual assessment, including:
- fixation preference
- recognition visual acuity
- understand forced preferential looking
Recognize the causes of amblyopia, and understand its treatment including occlusion, pharmacological agents and optical methods
Start refraction of children, including performing cycloplegic retinoscopy
Measure motor eye alignment with such tests as cover, cover-uncover, alternate cover-uncover, simultaneous prism & cover, ocular versions and ocular ductions
Understand, test and accurately assess sensory status with such tests as stereoaucuity, Worth 4-dot, Maddox rod & double rod, synoptophore and Bagnolini lenses
Perform & properly interpret other components (i.e. non-motility) of pediatric eye exam
Start to understand the diagnosis of strabismus, including classification & syndromes
Start to understand other (i.e. non-strabismus) diseases & syndromes involving the pediatric eye e.g. nasolacrimal obstruction, dacryocystitis, amniotecele, congenital & infantile cataracts, ptosis
Establish therapeutic relationship with patients/families
Discuss appropriate information with patients/families/health care team
Consult effectively with other physicians & health care professionals, including orthoptists and ophthalmic assistants
Contribute to grand rounds, journal clubs, etc.
Start to utilize resources effectively to balance patient care, learning needs and outside activities
Utilize information technology to optimize patient care and life-long learning
Identify important determinants of health affecting patients
Appropriate support & referral to low vision clinics, the CNIB, other community agencies, opticians and optometrists
Develop a personal education strategy
Be punctual & responsible
Accurate record keeping
Recognize one's own limitations
Seek appropriate assistance when necessary
Exhibit appropriate behavior/attitudes
Perform strabismus surgery including postoperative adjustment if adjustable sutures used
Perform nasolacrimal duct probing
Be able to initiate & follow anti-amblyopia therapy, recognizing the limitations of each method, endpoints and failure
Understand the treatment of amblyopia in complicated situations such as glaucoma, cataract and trauma
Perform accurate refraction of children, including accurate cycloplegic retinoscopy
Accurately measure motor eye alignment
Understand the mechanisms involved in sensory responses such as diplopia, visual confusion, suppression, and abnormal retinal correspondence
Synthesize the history & physical findings into a differential diagnosis, formulate and carry out a treatment plan, with appropriate follow up
Understand the diagnosis & classification of strabismus, such as the various esodeviations, esodeviations, vertical deviations, and A & V patterns, as well as syndromes such as Duane's, Browns, Moebius, double elevator palsy, and conditions such as myasthenia, dysthyroid, post-traumatic including blowout fractures, cranial nerve palsies and ocular & non-ocular causes of abnormal head posturing
Understand the medical pediatric diseases with ocular manifestations, such as juvenile rheumatoid arthritis, ophthalmia neonatorum, Downs, fetal alcohol syndrome & shaken baby syndrome
Be able to perform an adequate examination for retinopathy of prematurity, properly assessing its status & necessity for treatment
Understand the indications for the various pediatric eye surgeries such as strabismus, nasolacrimal obstruction including silicone intubation of the nasolacrimal system, ptosis & congenital cataract, and be able to obtain informed consent
Understand the various forms & causes of nystagmus
Understand pediatric neurophysiology, including cortical visual inattention/blindness, and the role of electrophysiological testing (e.g. ERG, VEP, EOG)
Continue a personal education strategy
Be able to diagnose and treat the more complicated medical & surgical pediatric eye diseases including anterior segment dysgenesis, ectopia lentis, optic nerve and retinal disorders, visual system disorders causing visual impairment as well as adult strabismus
Be able to establish a strong therapeutic relationship with patients and families, utilizing consultations and other health care professionals in an appropriate manner
Contribute effectively to grand rounds, journal clubs, and teaching to other health care professionals
Have an effective personal education strategy
Be inquisitive
Be an appropriate and effective patient advocate
Deliver quality care with integrity, honesty & compassion
Practice medicine ethically consistent with the obligations of a physician

Methods

Regular & punctual attendance at clinics
Regular & punctual attendance at surgery
Completion of relevant sections of the AAO BCSC
Relevant sections of the Lancaster Basic Science Course in Ophthalmology
Attendance in Orthoptics
Cadaveric orbital dissection
Lectures
Journal Clubs
Journals, books
Scientific meetings, courses (as possible)
In the first cycle the resident would learn the techniques unique to examining children. In the second cycle he would be assisting at surgery and in the third cycle the resident could be doing his own cases.

Communicator
The resident will demonstrate the ability to establish an appropriate rapport with the patient and family. This includes the ability to adjust tasks to patient's level of ability/development as well as able to counsel patients and family members.

5.5 Neuro-Ophthalmology
Medical Expert
In general, our goal in training ophthalmologists is:

1. to provide excellent teaching of ophthalmology.
2. to provide skilful care to patients with opthalmic disorders.
3. to nurture a critical and inquiring approach to investigating the unsolved problems of eye diseases.

The evaluation of patients with neuro-ophthalmic disorders is often a time-consuming task. It is important to understand that all neuro-ophthalmic disorders require a detailed history and chronology of events. Often, this may require the resident to contact other physicians or optometrists for old records or visual fields. In addition, since we are often dealing with patients who have disorders of the visual pathways, neuro-imaging is an important step in the evaluation process. It is mandatory to personally review all previous imaging studies. This is how one becomes comfortable in viewing CTs and MRIs with confidence.

In addition to a detailed history and examination, the resident should familiarize themselves with 'typical' case presentations in neuro-ophthalmic conditions. This aids the physician in the management of the patient's complaints. Of course, some patients may be 'atypical' in the presentation of disease, but this will only serve to have the resident review the current literature for similar case reports.

The primary objective for the neuro-ophthalmology rotation is to be familiar with diagnosing and managing common neuro-ophthalmic disorders. It is expected that there will be regular and punctual attendance at neuro-ophthalmology clinics and rounds. In addition, attendance at Orthoptics Clinic, Journal Clubs, special lectures, neuroscience rounds, and neuroradiology rounds is strongly encouraged. Each resident is also encouraged to initiate a research project that can be presented at a scientific meeting. The residents are advised to read the American Academy of Ophthalmology Basic and Clinical Science Course (BCSC), Section 5: Neuro-Ophthalmology. Other relevant BCSC Sections should also be reviewed. Review of the current medical literature (through information technology, literature searches, etc.) is also important.
Stratified Objectives

Cycle 1

obtain and synthesize relevant and general and ophthalmic history from patients
obtain appropriate visual assessment, including
  o critical analysis of sensory afferent visual function
  o critical analysis of sensory and motor efferent visual function
  o gathering 'additional' information (old charts, collateral history, old photographs, previous visual acuities and visual fields, previous neuro-imaging, etc.)
recognize causes of unexplained loss of vision
recognize causes of diplopia
recognize causes of papillary inequality
recognize causes of visual disturbances
recognize causes of visual field defects
recognize causes of headaches and eye pain
recognize neuro-ophthalmic manifestations of systemic (and neurologic) disease
begin to understand the natural history of common neuro-ophthalmic problems
begin to understand the various tests of sensory afferent and efferent visual function
begin to understand the various types and interpretation of visual field tests (perimetry)
begin to understand the indications for and interpretation of neuro-imaging
begin to understand neuroanatomy as it relates to neuro-ophthalmology
begin to understand the need for diagnostic procedures such as tangent screen evaluation, forced duction testing, temporal artery biopsy, conjunctival biopsies, Tensilon/Prostigmine testing, cerebrospinal fluid analysis
begin to perform tangent screen evaluation, forced duction testing, temporal artery biopsy, conjunctival biopsies, Tensilon/Prostigmine testing
establish trusting relationship with patients and their families
discuss appropriate information with patients and their families
consult effectively with other physicians and health care professionals
contribute to Grand Rounds, Journal Clubs, etc.
begin to utilize resources effectively to balance patient care, learning needs, and outside activities
utilize information technology to optimize patient care and life-long learning
identify important determinants of health affecting patients (i.e., age, sex, lifestyle, poverty, culture, ethnicity, religion, etc.)
recognize the need for appropriate support and referral (i.e., low vision clinic, CNIB, other community-based resources/agencies, opticians, and optometrists)
develop a personal education strategy
be punctual and responsible
be organized, tidy, and well dressed
keep accurate records
recognize one's own limitations
seek appropriate assistance when necessary
Cycle 2
All of the above apply plus:

- be able to critically analyze the various components of sensory afferent and efferent visual function
- be able to thoroughly analyze and interpret various causes of unexplained loss of vision, diplopia, pupillary inequality, visual disturbances, visual field defects, and headaches and eye pain
- be able to discuss the neuro-ophthalmic manifestations of systemic (neurologic) diseases
- be able to thoroughly analyze and interpret various types of visual field tests
- be able to thoroughly analyze and interpret neuroimaging studies
- be able to thoroughly understand the natural history of common neuro-ophthalmic problems
- be able to thoroughly understand neuroanatomy as it relates to neuro-ophthalmology
- be able to thoroughly understand the need for diagnostic procedures such as tangent screen evaluation, forced duction testing, temporal artery biopsy, conjunctival biopsies, Tensilon/Prostigmine testing, cerebrospinal fluid analysis
- to be able to competently perform tangent screen evaluation, forced duction testing, temporal artery biopsy, conjunctival biopsies, Tensilon/Prostigmine testing
- to understand the indications for and interpretation of ancillary tests such as orbital echography, electrophysiologic tests (VEP, ERG, EOG, etc.), fluorescein angiography, color vision tests, and diagnostic pupillary drop testing
- continue a personal education strategy

Cycle 3
All of the above apply plus:

- be able to diagnose and manage complex neuro-ophthalmic conditions
- be able to establish a strong diagnostic and therapeutic relationship with patients, utilizing consultations and other health care professionals in an appropriate manner
- contribute effectively to Grand Rounds, Journal Clubs, and teaching to other health care professionals
- have an effective personal education strategy
- be inquisitive
- be an appropriate and effective patient advocate
- delivery quality care with integrity, honesty, and compassion
- practice medicine ethically consistent with the obligations of a physician

The student will be evaluated by an on-going process and deficiencies will be brought to their attention as soon as one is recognized. Unsatisfactory evaluations will be addressed on an individual basis.
It is expected that the student will also critically evaluate the preceptor so as to help he/she improve their ability to teach more effectively. The resident's evaluation of the instructor will in no way affect the final evaluation they are to receive. The remainder of the CanMeds competencies share similar particulars as other subspecialty rotations.

5.6 General Ophthalmology and Cataract

**Medical Expert**

Obtain & synthesize relevant ophthalmic & general history from patients/families/others

- Perform appropriate visual assessment, including visual acuity, visual fields, external examination, slit lamp examination & tonometry, and ophthalmoscopy, understanding proper use & care of instruments
- Start performing refractions
- Comes to a reasonable differential diagnosis for level, and starts formulation of an appropriate treatment plan
- Establish therapeutic relationship with patients/families
- Discuss appropriate information with patients/families/health care team
- Consult effectively with other physicians & health care professionals, including orthoptists and ophthalmic assistants
- Contribute to grand rounds, journal clubs, etc.
- Start to utilize resources effectively to balance patient care, learning needs and outside activities
- Utilize information technology to optimize patient care and life-long learning
- Identify important determinants of health affecting patients
- Appropriate support & referral to low vision clinics, the CNIB, other community agencies, opticians and optometrists
- Develop a personal education strategy
- Be punctual & responsible
- Accurate record keeping
- Recognize one's own limitations
- Seek appropriate assistance when necessary
- Exhibit appropriate behavior/attitudes
- Start to participate in extraocular surgery, as appropriate and under supervision, and participate in postoperative care
- Start the first half of the American Academy of Ophthalmology Basic & Clinical Science Home Study Course
- Attend the Stanford or Lancaster Basic Science Course
- Complete the Stanford or Lancaster Basic Science Course
- Complete the entire American Academy of Ophthalmology Basic & Clinical Science Home Study Course
- Synthesize history & physical findings into a differential diagnosis, formulate and carry out a treatment plan, with appropriate followup, particularly with ambulatory & ward consultations
- Continue to participate in extraocular surgery as appropriate under supervision, and participate in postoperative care
Continue a personal education strategy
Be able to diagnose and plan treatment for the more complicated medical & surgical eye diseases
Participate in intraocular surgery
Attend the Armed Forces Institute of Pathology course in Ocular Pathology
Be able to establish a strong therapeutic relationship with patients and families, utilizing consultations and other health care professionals in an appropriate manner
Contribute effectively and plan grand rounds, journal clubs, and teaching to other health care professionals
Have an effective personal education strategy
Be inquisitive
Be an appropriate and effective patient advocate
Deliver quality care with integrity, honesty & compassion
Practice medicine ethically consistent with the obligations of a physician
Attend the Future Focus course preferably in PGY 4 (given biannually)
Attend the Annual Meeting of the American Academy of Ophthalmology in PGY 5

**Methods**

- Regular & punctual attendance at clinics
- Regular & punctual attendance at surgery
- Attendance in Orthoptics
- Completion of relevant sections of the AAO BCSC
- Attend the Stanford or Lancaster Basic Science Course in Ophthalmology
- Lectures
- Journal Clubs
- Journals, books
- Attendance at scientific meetings, courses (as possible)
- Participate in a research project

The remainder of the CanMeds competencies share similar particulars as other subspecialty rotations.

### 5.7 Lacrimal, Lids & Orbits

**Medical Expert**
The resident will demonstrate knowledge of:

**Orbit**

- Orbital Anatomy & Physiology
  - Bony orbit
  - Bony apertures
  - Orbital soft tissues
• Periorbital structures
  • Cranial cavity
  • Sinus cavities
  • Nasal cavity

Evaluation of orbital disorders
• Pain
• Proptosis
• Palpation
• Pulsation
• Physical Exam and laboratory tests
  • Inspection
  • Palpation
  • Auscultation
  • Exophthalmometry
• Radiology Investigation
  • CT
  • MRI
  • Ultrasound
    • Plain X-Rays
  • Venography
  • Arteriography

Orbital Pathology
Classification & Management of orbital disorders
• Orbital disorders in children
  • Congenital anomalies
  • Infections & inflammations
  • Tumours
• Orbital disorders in adults
  • Infections & inflammations
  • Tumours
  • Thyroid eye disease

Orbital surgery
• Surgical spaces
• Anterior orbitotomy
• Lateral orbitotomy
• Orbital decompression
• Pre and Post operative care
• Complications of orbital surgery

Orbital trauma
• Orbital fractures
  • Le Fort fractures
  • Orbital roof and rim fractures
  • Blow-out fractures
• Orbital foreign bodies
• Orbital hemorrhage

The anophthalmic socket
ENUCLEATION

EVISCERATION

SOCKET RECONSTRUCTION

EXENTERATION

LID

EYELID ANATOMY
- SKIN & SUBCUTANEOUS TISSUE
- PROTRACTORS
- RETRACTORS
- ORBITAL SEPTUM & FAT
- TAR SiS
- CONJUNCTIVA
- EYELASHES
- MEIBOMIAN GLANDS
- VASCULAR SUPPLY
- NERVE SUPPLY

CLASSIFICATION & MANAGEMENT OF EYELID DISORDERS
- CONGENITAL ANOMALIES
- EYELID INFLAMMATION
- EYELID TRAUMA & BURNS
- ECTROPION
- ENTROPION
- SYMBLEPHARON
- TRICHIASIS
- PTOSIS
- EYELID RETRACTION
- TUMOURS
- AGING LID CHANGES
- EYELID AND CANTHAL SURGERY
- BENIGN ESSENTIAL BLEPHAROSPASM

Lacrimal System

ANATOMY
- SECRETORY SYSTEM
- EXCRETORY SYSTEM

PHYSIOLOGY OF TEAR PRODUCTION & OUT FLOW

EVALUATION OF THE TEARING PATIENT
- STRUCTURAL TESTS
  - IRRIGATION
  - PROBING
  - DACRYOCYSTOGRAPHY
  - CT
- FUNCTIONAL TEST
- Dye disappearance
- Jones tests
- Scintigraphy
  - Tear film & lacrimal secretion

Management of outflow disorders
- Punctal disorders
- Canalicular disorders
- Lacrimal sac disorders
- Nasolacrimal duct disorders

Surgical techniques
- Punctoplasty
- Probing & irrigation
- Silicone intubation
- Dacryocystorhinostomy
- Canalico- Dacryocystorhinostomy
- Conjunctivo- Dacryocystorhinostomy

### Progression of Responsibility in Oculoplastic, Reconstructive, Orbital and Lacrimal Rotations

<table>
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<td>Orbital Fracture Repair</td>
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<td>A,P</td>
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<td>Enucleation</td>
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<td>Socket Reconstruction</td>
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<td>Exenteration</td>
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<td>Ectropion Repair</td>
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<tr>
<td>Entropion Repair</td>
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<td>Trichiasis Repair</td>
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<td>Evaluation of the tearing patient</td>
<td>O,A,P</td>
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<td>Punctoplasty</td>
<td>O,A,P</td>
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<tr>
<td>Probing &amp; Irrigation</td>
<td>O,A,P</td>
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</tr>
</tbody>
</table>
Silicone Intubation | O,A,P | P | T
Dacryocystorhinostomy | O,A | P | P

O=Observe
A=Assist
P=Perform major part (or whole) of the surgery/procedure under supervision
T=Teach to more Junior residents

The remainder of the CanMeds competencies share similar particulars as other subspecialty rotations.

6. Academic and Didactic Teaching for PGY2-5

During the PGY 2 through 5 years, each resident works twice through the Basic & Clinical Science Course in Ophthalmology by the American Academy of Ophthalmology. On the academic half day, a core didactic program of lectures and tutorials are given locally on a two-year cycle, based on the Basic & Clinical Science Course in Ophthalmology by the American Academy of Ophthalmology, further ensuring coherent acquisition of knowledge. Grand rounds are held bi-weekly, September to June, to discuss interesting cases, ethical issues, and research presentations. Visiting professors are invited at least four times yearly, with presentation and then often a clinical session with the residents presenting cases for discussion. Journal clubs are held regularly, during which time critical appraisal skills are honed.

7. External Courses Proposed for Residents

Although McMaster’s half day program is rigorous and complete. We firmly believe in sending residents to supplement their education with exposure to highly rated external courses. Each year of the residency will involve at least one main external course and the following have been proposed.

PGY1 – Toronto Ophthalmology Residency Introductory Course (TORIC) – This course provides a basis for incoming PGY2 residents. It is a comprehensive basic science course taught over two weeks by leading educators and clinicians from across Canada.

Toronto Ophthalmology Residency Introductory Course Acknowledgements and Introduction

The Toronto Ophthalmology Residency Introductory Course was first conceived over 15 years ago as a means to prepare residents who had just finished a year of general medical internship training for the rigors of specialty training in ophthalmology. During medical school, most medical students have very limited exposure to the diagnosis and management of eye diseases in their core training. Thus the Course was created as a means to provide residents at the very beginning of their specialty training with tools in both basic sciences and clinical ophthalmology to function as competent housestaff.
Countless hours of hard work were spent by my predecessors, Dr. Trevor Chin-Fook and Dr. Yvonne Buys, to create a comprehensive curriculum to meet all the educational goals outlined above. Strong support and guidance from the Department of Ophthalmology was also essential for success of this Course. To that end, the former Chair of this Department, Dr. Graham Trope, and the former Program Director, Dr. Allan Siomovic should be acknowledged for their important contributions during the critical formative years for the Course. The current Chair, Dr. Jeffrey Hurwitz, and the current Program Director, Dr. Wai-Ching Lam, are to be credited for their strong support of the course development.

Obviously, such an enormous undertaking in education can only be accomplished by the joint effort of a vast army of dedicated teachers. The Department and Course Director can only provide the organizational framework, but it through the self-sacrifice and altruism of our skilled educators that this Course is made possible. Ultimately, it is the quality of the teaching that has brought attention to the Course at a national level, as reflected by increasing participation in the past 3 years from other ophthalmology programs in Canada.

One of the key learning assets of the course is the comprehensive website (~.utovs.com), which was created to enhance the educational process by including visual materials such as diagrams, pathology slides, clinical photos and even surgical videos for study and review by the students. This project was supported by an unrestricted educational grant from Merck-Frosst Canada. Dr. Eric Tam, who is a staff ophthalmologist at Mount Sinai Hospital, is the information technology director for the Department of Ophthalmology at Toronto. He can be reached at eS.tam@utoronto.ca for you to gain access to this powerful resource.

One of the other strongest features of this course is the interaction between residents and distinguished teaching faculty from across Canada. Funding support for travel and accommodation expenses for visiting faculty and external residents has been provided by a generous donation from Alcon Canada. As Course Director, I would like to formally welcome all participants to the 2006 Toronto Ophthalmology Residency Introductory Course. I am confident that the next 6 weeks will provide a strong foundation for future successes in your chosen career paths in ophthalmology.

David B. Van, M.D., F.R.C.S.(C) Assistant Professor, Department of Ophthalmology, University of Toronto Course Director, Toronto Ophthalmology Residency Introductory Course

PGY2 – Surgical “Boot Camp” – This dynamic new course is a 3 day intensive one-on-one introduction to surgical procedures in Ophthalmology with Dr. Guillermo Rocha in Brandon, Manitoba.

Lancaster/Stanford – These two basic science courses are similar to the TORIC course. Therefore the resident will pick only 1 or 2 weeks of the courses to supplement material not covered in TORIC.
PGY3 – Armed Forces Institute of Pathology – This one week course is an intensive review of ocular pathology.

PGY4 – American Academy of Ophthalmology – The residents will attend the Annual conference at least once during residency.

PGY5 – San Antonio Review Course – This is a one week intensive review course in preparation for the Fellowship exam that is very popular with residents across North America

The residents will also attend the Canadian Ophthalmological Society (COS) Annual Conference (rotating locations)
Local Annual Conferences and Academic Days - Southern Ontario is home to 5 of Canada’s 11 Ophthalmology residency program and attendance at the local continuing education clinical conference days will be encouraged. These include Sally Letson (Ottawa), Walter Wright (Toronto), Jack Crawford (Toronto), Paul Stringer (Hamilton), University of Western Ontario Clinical Day in Ophthalmology
Local Research Days – Each University also hosts an annual research day for residents and faculty to present work in lecture and in poster format.

8. Research
Commensurate with the goals of the program, residents are expected to engage in research during their years in training. The experience of conceiving a research idea and seeing it through the multiple stages involved in arriving at publication is an invaluable learning experience. This is an active way of learning the skills of critical review, ethics in research, collaboration, statistics, and scientific writing. A minimum of one peer reviewed publication with presentation at COS or internationally is required during residency. Residents keen on pursuing more research will be encouraged to do so, and the department will always strive to accommodate their needs in these endeavour. There are many active clinical projects at McMaster in most subspecialty fields. Furthermore, our proximity to several other residency programs as well as the only Optometry school in Ontario provides for ample opportunity for muti-centered work and collaboration with colleagues.

9. Wet Lab
There are currently no wet lab facilities for Ophthalmology in Hamilton. Residents solve this problem by arranging teaching sessions with faculty using eye bank eyes and OR facilities during off hours. The Department of Surgery is currently in discussions to establish a clinical skills center that will include a microsurgical station for Ophthalmology residents. Virtual surgical stations will also be incorporated in to this facility.
10. Fellowships and Undergraduate Teaching

McMaster faculty are able to focus on the residents first as other medical learners are not currently a prominent part of the program.

There is currently an Oculoplastics fellowship shared between McMaster and the University of Toronto.

Undergraduate elective students from McMaster medical school and other Canadian medical school are encouraged to apply for brief electives. Contact Ann Mayers at mayers@mcmaster.ca

11. Resident Call Schedule

The senior resident is responsible for setting the call schedule. Currently call is a 1 in 3, city-wide, home call frequency. See the common wiki for scheduling details under the PARIO link.

12. Helpful Tips for PGY1 Resident

1. Contact the Postgrad office and stay on top of CPSO and CMPA membership paperwork BEFORE July 1st
2. Parking at SJH Stoney Creek site – contact Maria ext 4816 regarding tokens (site is not covered by the parking transponder)
3. Remember to register for AAO and COS, will get free subscription to journals and other perks
4. Funding for lenses and AAO BCSC series of books will be available so don’t order them without checking with Dr. Harvey
5. Get a T2200 tax form – talk to payroll about it

13. Faculty

http://www.fhs.mcmaster.ca/surgery/faculty/ophthal.htm

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13.1 Faculty by Specialty
John Harvey (program director) – Plastics
Yasser Khan (undergrad director), Nav Nijhauran – Plastics
Keith Mann (optics), Lawrence Kobetz, Anne Beattie, James Csordas, Dalia Eino, Wesley Nash, Nina Ahuja – General/Cataract
Khalid Hosani, Aaron Rifkind, Dalie Eino – Glaucoma
Jeff Sher – Cornea
Jim Martin, Vineet Arora, Dr. Armogan – Surgical retina
Patricia Harvey (residency research director) – Retina, Pediatrics
Dr. Isaza, Dr. Caroine Hirsch - Pediatrics

14. Current Resident Biographies

Robert Adam (PGY2)
Rob was born and raised in Toronto. He studied undergraduate Biology at the University of Western Ontario in London Ontario – and boy, does he miss those days! He graduated from University of Toronto Medical school in 2005. As the inaugural resident at McMaster he is firmly committed to helping to build a thriving residency program built on professional excellence and camaraderie amongst residents. Outside of Ophthalmology his interests include music composition, team sports and maintaining close contact with his family and friends. He is expected to graduate in 2010 and hopes to pursue a career that blends clinical practice, surgery and teaching. If you are interested in the McMaster program feel free to contact him via email through robertsauladam@yahoo.ca