OBJECTIVES FOR RESIDENT RESEARCH ROTATION

DEPARTMENT OF OBGYN
Residency Training Program

Research Portfolio

Chair of Research, Dept of ObGyn
  • Dr. Mark Walker

Sub-Specialty Committee – Research
  • Dr. Glenn Posner – Division of General ObGyn (Medical Education)
  • Dr. Sony Singh/Dr. Innie Chen – Division of General ObGyn (MIS)
  • Dr. Jessica Dy – Division of General ObGyn (Quality Improvement)
  • Dr. Tania Dumont – Division of General ObGyn (PAG)
  • Dr. Johanne Weberpals – Division of Gynecology Oncology
  • Dr. Hisham Khalil – Division of Urogynecology and Pelvic Reconstructive Surgery
  • Dr. Art Leader – Division of Gynecology and Reproductive Endocrinology and Infertility
  • Dr Darine El-Chaar – Research Program Director, Division of Maternal Fetal Medicine
  • Dr. Shannon Bainbridge – Basic Science Research
  • Dr Shi Wu Wen – Senior Scientist, OHRI
  • Dr. David Grynspan – Department of Pathology, CHEO
  • Ruth Rennicks-White – Research manager, OHRI
  • Dr. Jocelynn Cook – Scientific Director, SOGC

Residency Training Program Committee Representative
  • Dr. Darine El-Chaar

Mandate
Research training is an integral part of residency training. The Dept of ObGyn, Residency Training Program, fully supports all research endeavors for trainees to complete all research requirements. We are hoping to provide a Research Program that will promote networking, collaboration and training tools.
OVERVIEW of RESIDENT RESEARCH REQUIREMENT

Each Resident is required to complete a Research Project during his or her residency. The Resident is responsible for ensuring that all deadlines are met and all requirements fulfilled.

There are several components to the research requirement:

- A **Faculty Preceptor** is chosen by the Fall of PGY2

- A written **Proposal** for the Research Project is developed with the Faculty Preceptor, and is due in the Spring of PGY2. It must be accepted by the Research Training Committee, and must be presented at Postgraduate Research Day in PGY2.

- The Research Project is carried out during PGY3 and 4. A **Progress Report** and interim analysis is presented at Postgraduate Research Day in PGY3.

- A Research rotation for PGY3 and PGY4 residents to secure protected time to work on research projects.

- The project is completed in PGY4. A final report of the results of the Research Project is written up in the form of a **Manuscript**, which will be reviewed and must be accepted by the Research Training Committee. The results of the Research Project are presented at Postgraduate Research Day in PGY4.

In addition, two Research Streams are available: Stream 1—Original Research Project, or Stream 2—Program Development, Innovation and Quality Assessment. Each Resident will choose one of these Streams with the help of their Faculty Preceptor and the Director of the Residency Training Program.

**APOG Roadmap for Research in Residency Education**

http://jogc.ca/abstracts/full/201110_Commentary_1.pdf

http://obgyn.queensu.ca/assets/pdf/research.training.objectives.pdf

**CaRMs Residency Training Program Description**

https://phx.e-carms.ca/phoenix-web/pd/main?mitid=1281
CALENDAR: Research Project Milestones and Deadlines (July to June)

PGY1: Preliminary Work
November  Research Social Event
Dec/Jan   Mandatory Abstract Editing Circle
April     Research Presentation Workshop
May      Attend Postgraduate Research Day
May/June Complete TCPS Research Ethics Tutorial and provide documentation for resident file

PGY 2: Research Project Proposal Developed
November  Research Social Event
Dec/Jan   Mandatory Abstract Editing Circle
April     Research Presentation Workshop
Nov 1     Complete Certificate Course Copy for your TCPS2 certificate (Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans)


http://www.pre.ethics.gc.ca/eng/education/tutorial-didacticiel/

Course Link: https://tcps2core.ca/welcome

Nov. 15   Deadline for choosing Research Stream and Faculty Preceptor for Research Project
Nov. 15   Complete Ethics Requirements and the Training Requirements for Clinical Trials – (IRIS – myTOH) - https://mytoh.ottawahospital.on.ca/irisapp/
Feb      Deadline for submitting Proposal (minimum 2-page Proposal PLUS 1-page Abstract
Apr     Feedback on Research Proposal
April 30  Deadline for submission of Abstract for final program of PGME Research Day
May     Proposal presented and evaluated at Postgraduate Research Day
May/June Complete “Introduction to Research Course” (APOG) or other acceptable research methodology course

PGY 3: Research Project Carried Out
November  Research Social Event
Dec/Jan   Mandatory Abstract Editing Circle
February  Individual meetings between Research Program Director and with Research Preceptor
March    Complete REB Submission (IRIS on myTOH) -
         https://mytoh.ottawahospital.on.ca/irisapp/
April    Research Presentation Workshop
April 30  Deadline for submission of Abstract for final program of PGME Research Day
May  Progress Report and any interim analysis presented at Postgraduate Research Day
May  Manuscript Writing Workshop

**PGY 4: Research Project Carried Out and Completed**
November  Research Social Event
Dec/Jan  Mandatory Abstract Editing Circle
April  Research Presentation Workshop
April 30  Deadline for submission of Abstract for final program of PGME Research Day
May  Project results presented at Postgraduate Research Day
May  Manuscript Writing Workshop
June  Completed manuscript submission

**PGY 5: Completed Research Project**
September  Submit final research project manuscript (if delayed from PGY4)
November  Research Social Event
April  Research Presentation Workshop
May  Manuscript Writing Workshop
May/June  Exhibit an understanding of epidemiology and statistics (includes participating/presenting at Departmental Grand Rounds and Journal Clubs)
CHOOSING A FACULTY PRECEPTOR FOR YOUR RESEARCH PROJECT

Since you must choose your Faculty Preceptor and develop your Research Project in PGY2, you will need to gather the information required to make these decisions during PGY1.

One of the most important steps in choosing your Research Project will be choosing your Faculty Preceptor. Possible subjects for your research will be largely determined by the area of expertise and interests of your Preceptor. The resources available to you to do your research and the amount of help provided to you will depend on how well you have made this choice.

Several resources are provided to the Residents to help in the choice of a Preceptor. A booklet listing active areas of faculty research in the Department of Obstetrics and Gynecology is distributed to all Residents. This booklet not only describes each Faculty member's research interests, but also lists their recent publications and grant funding. As well, Faculty present talks on their research at Staff Research Day in mid October of each year. These will allow you to identify possible Preceptors and areas of research which interest you. You should then talk to each Faculty member whose research interests you, and decide if it would be a good fit. Another excellent resource is the more senior Residents. Talk to them about their experiences doing a Research Project. Finally, members of the Research Training Committee are available to help you decide, and to provide information.

The specific Research Project which you undertake should be developed with your Preceptor. First, you must decide which Research Stream is right for you: Stream 1—Original Research Project, or Stream 2—Program Development, Innovation and Quality Assessment (see Research Streams for descriptions). The proposed research must be extensive enough to be appropriate for a two-year project. On the other hand, it must be feasible to do what you propose within this period, given the time constraints facing a Resident. Above all, spend enough time with your Preceptor to develop a good, solid proposal (see Developing a Proposal). Faculty Preceptor is secured.

WHAT HAPPENS NEXT?

The first step is to gather information and choose a Preceptor as described above. After this, the Resident and Preceptor work together to decide which Research Stream is suitable, and to develop a Research Proposal as described below.
RESEARCH STREAMS

Two “Research Streams” or tracks are available to Residents in Obstetrics and Gynecology. The Resident should carefully consider which stream best suits his/her needs. The choice of which Research Stream to take will be made in PGY2 at the time the Research Proposal is submitted. However, the choice must be clear to the Resident and their Preceptor as they write the Research Proposal, since the Proposal must reflect the choice of Research Stream.

STREAM 1—ORIGINAL RESEARCH PROJECT

This is the more research-focused stream. For Residents taking this path, the official record of their residency will reflect the fact that they have chosen to do a more in-depth Research Project as part of their residency.

In Stream 1, an original research project is designed and carried out by the Resident. An original hypothesis(es) is formulated and addressed through extensive, well-controlled and well-designed retrospective studies, prospective studies, or laboratory (“bench”) work. An extensive, publishable meta-analysis would also be appropriate for this stream. In general, projects appropriate for Stream 1 would be those which are expected to generate novel and significant information that will be publishable in a good journal.

At the end of the project, a manuscript in the form of an original paper is required, and publication of this manuscript will be encouraged (although successful publication is not a precondition of satisfying the research requirement). Residents are strongly encouraged to choose this Stream, as it enhances the residency experience and affords the maximum flexibility for future career choices. Any Resident who intends to subspecialize, might wish to pursue a fellowship, or might consider an academic career should choose this Stream.

In this stream, a question is posed and answered through the existing literature. As the first part of the process, an in-depth review of existing literature would be carried out. An hypothesis is formulated and addressed through an extensive, critical review of this literature with clearly-supported conclusions. Alternatively, the tools of meta-analysis could be used to address an appropriate question.

To qualify, the chosen area must encompass a large body of relevant literature. The question(s) posed must be amenable to answering based on existing studies. Answering the questions must require critical analysis of the papers. The major part of the effort in this stream will be directed towards critically evaluating each paper, and determining if its conclusions are solid and how they fit the hypothesis. The project should, in fact, be a good example of the application of evidence-based medicine. At the end of the project, a manuscript in the form of a critical review article is required. It must pose a question(s) and reach a conclusion(s) based on the evidence.
accumulated from an exhaustive literature search, critical reading, and appropriate analysis. It cannot be merely descriptive, but must include an analysis which allows conclusions to be reached and defended.

**STREAM 2— PROGRAM DEVELOPMENT, INNOVATION AND QUALITY ASSESSMENT**

**DEVELOPING A PROPOSAL (PGY2)**

The Research Proposal is developed by the Resident with their Faculty Preceptor during PGY2. The Proposal serves two purposes: First, it is the outline which will guide the Research Project as it is carried out during PGY3-4. Second, it allows the Research Training Committee to judge the appropriateness of the project and determine if it will be approved.

Residents choose between two “Research Streams:” Stream 1—Original Research Project, or Stream 2—Program Development, Innovation and Quality Assessment. The Resident and Preceptor should develop a Proposal aimed at one of these two Research Streams (see description of Research Streams).

The first step is to gain a thorough understanding of the field of the proposed research. This is done by reading the relevant literature with the guidance of the Preceptor. Only then is the Proposal begun.

The Proposal should be detailed enough so that it is clear what the Resident will be doing throughout the course of the two-year Research Project. It must be shown that the project is feasible and can be completed within two years. On the other hand, it must be shown that the proposed research is of sufficient extent that it is appropriate for a two-year project. The reasons for doing the project and the methods to be used for accomplishing it must be described in detail.

The Proposal must be at least two single-spaced pages, PLUS a one-page Abstract, but excluding any figures and the References / Bibliography section. Proposals for Stream 1 are expected to be more detailed and hence longer than two pages.

The Proposal consists of:

1. **Abstract**
   The Abstract should clearly and concisely summarize each of the sections of the Proposal. It must be complete and understandable on its own, since it will serve as the Abstract for the presentation of the Proposal at Postgraduate Research Day. It must contain the title of the research (stated as “Proposal for Research Project: [title]”) and the name of the Resident and Preceptor. It must be one page in length.
2. Introduction / Background
The Introduction should give a thorough description of the area of the proposed research. All relevant background should be given in this section, including citation of all relevant published papers. The extent of current knowledge in the field should be clearly laid out. Most importantly, a clear description of what is still unknown should be given here. This section should lead naturally to the proposed research. In other words, by the end of this section it should be obvious that the research you propose to do is necessary.

3. Objectives and Hypothesis
In a few sentences, describe the overall objectives of the proposed research. What is expected to be achieved? This must be specific. It is not enough to say, for example, that the project will “lead to a better understanding of…” Instead, precise goals for this project should be described. An hypothesis or set of hypotheses should be stated which will be tested. Hypotheses must be testable; i.e., they must be clearly stated so that the proposed research or analysis will either support or eliminate a given hypothesis.

4. Methods
The methods which will be used must be described in detail. This includes, for example, descriptions of data-gathering methodologies and experimental protocols. Justification for the extent of the study should be given: How large a population will be required? How many experiments? How will papers for a meta-analysis be chosen? In addition, it is required that the methods used for data analysis be described thoroughly. How will the data be treated once gathered? How will hypotheses be tested? How will significance be decided? All methods must be justified. This section must be detailed enough to show that the methods to be used for all aspects of the proposed Research Project have been well-planned and carefully evaluated.

5. Expected results
This section should describe what is expected to be achieved. Specifically, what information will be obtained and how is it important? This section should correspond to the Objectives of the project, by showing how the information to be generated will fulfill those Objectives.

6. References / Bibliography
All information given in the previous sections must be backed up by citations of appropriate references. This shows that a thorough preliminary literature search has been done, and demonstrates an understanding of the field.

Research Proposal is submitted.
WHAT HAPPENS NEXT?

The Proposal will be read and assessed by the members of the Research Training Committee and/or other experts chosen by the Committee. The Proposal must be found acceptable by the Committee. Written comments will be provided by the Committee and any other designated reviewers. **It will be clearly stated whether the Proposal is acceptable or if it needs to be revised.**

In general, Proposals will require revision. It is the Resident’s and Preceptor’s responsibilities to ensure that the Proposal is revised until it is satisfactory to the Committee and any other designated reviewers. Revisions must be completed by the deadline for final acceptance of the Proposal.

Once the Proposal is accepted, the Abstract will be used for the presentation of the Proposal at Postgraduate Research Day in early May.

MAKING PROGRESS (PGY3-4)

During PGY3, it is expected that reasonable progress will be made on the Research Project. There are several opportunities for progress to be assessed and any problems identified and rectified.

Meeting of Resident, Preceptor, and Research Training Committee

During January or February of PGY3, a meeting of the Resident, Preceptor, and Research Training Committee will be arranged. The purpose of this meeting is to assess whether reasonable progress is being made. It is also an opportunity to identify ongoing or potential problems with the Project.

Progress report / interim analysis presented at Postgraduate Research Day

A progress report describing what has been accomplished on the Research Project is presented at Postgraduate Research Day in PGY3.

First, a one-page Abstract describing progress and any results obtained must be at the Postgraduate Research Day presentation.

At Postgraduate Research Day, in early May, each PGY3 Resident will give a talk outlining the results obtained to date, and an interim analysis of these results. Plans for completion of the project must also be presented.

The Resident will receive an evaluation from the Postgraduate Research Day Evaluation Committee.
Research Rotation

Before the start of the rotation:
- Each resident must meet (or communicate through e-mail) with mentor prior to the start of the rotation to develop proposal for rotation and prepare a short description of rotation with specific objectives (1 or 2 pages).
- Each resident must provide a description and objectives for the rotation to research program director prior to the start of the rotation, together with time-line and time commitment.

First week of rotation:
- Each resident must meet with the research program director
- Each resident must meet with their research preceptor

During the rotation:
- Each resident must complete the objectives and tasks developed in the proposal for the rotation
- Communicate with research preceptor and research program director on an as needed basis

Within 1 week of completion of the rotation:
- Each resident must provide the research program director a summary of the rotation, i.e. what objectives were completed and time spent on each objective, what was not achieved and why
- The research mentor must complete an evaluation of resident
- The research director will also provide an evaluation of the research rotation

What happens next?

After Postgraduate Research Day, the Resident will have a good idea of whether the Research Project is on track or if it needs to be reworked. If it is proceeding smoothly, the next step is to complete the project during PGY4, culminating in a manuscript being written. If there are problems, the Resident and Preceptor should work together to remedy them. The Resident may also approach the Research Training Committee for assistance.
THE MANUSCRIPT (end of PGY4)

At the completion of the Research Project in PGY4, a final report of the results and analysis is required. This is to be in the form of a manuscript, in an appropriate journal format.

The manuscript will be in the form of an original paper for projects carried out in Stream 1.

1. For Stream 2 projects, the manuscript will be in the form of an extensive review and critical analysis of the literature. In both cases, hypotheses must be addressed and conclusions reached. In short, this manuscript should be essentially identical in form to papers found in the journals you read.

Publication of the manuscript in a journal is not required. However, support will be given by the Preceptor and Research Training Committee to Residents who wish to publish their manuscripts. Publication will be strongly encouraged for Stream 1 projects.

The manuscript is produced by the Resident with the Preceptor. The actual writing, however, must be done by the Resident.

Abstract
A one-page FINAL abstract of the manuscript is due by April 30th of PGY4. This Abstract will be included in the Program for Postgraduate Research Day.

Postgraduate Research Day
The results of the Research project are presented at Postgraduate Research Day of PGY4. Any substantive comments made at Research Day, especially by the Evaluation Committee, should be taken into account when the final version of the manuscript is prepared.

Evaluation of the manuscript
The manuscript is due in June of PGY4. It is to be submitted to the Chair of the Research Training Committee.

The Preceptor must approve submission of the manuscript.

The Research Training Committee will “peer review” the manuscript. Depending upon the expertise required, the Committee may enlist the help of other Faculty or outside experts. Based on this review, the Committee will either:
1. accept the manuscript
2. send the manuscript back for revision
3. require additional work be done on the project and the manuscript be re-submitted.

This decision can be appealed to the Residency Training Committee.

This process will continue until a satisfactory manuscript is produced.

A manuscript which is deemed satisfactory by the Research Training Committee is required to fulfill the research requirement of a Residency in Ob/Gyn.
WHAT HAPPENS NEXT?

The Resident must produce a satisfactory manuscript. This may require several rounds of comments and improvements before the manuscript is accepted. Publication of the manuscript is not mandatory, but will be supported and is especially encouraged for Stream 1 projects.

POSTGRADUATE RESEARCH DAY

Each year, in early May, the Department of Ob/Gyn holds Postgraduate Research Day. PGY2, 3, and 4 Residents are required to present. PGY5 will present if they haven’t already presented their findings previously. All Residents are required to attend Research Day in its entirety unless excused. Preceptors are expected to attend. *Call schedules will be arranged to allow participation by all Residents.*

**General format:**
Postgraduate Research Day is held off-site, to allow uninterrupted presentation and discussion.

Talks are 10 minutes in length with a 5 minute question period. Power Point presentations are acceptable.

**PGY2:**
The Research Proposal is presented at Postgraduate Research Day in PGY2. It should follow the format prescribed for the written Proposal.

**PGY3:**
The Postgraduate Research Day presentation in PGY3 takes the form of a progress report and interim analysis. It should describe what progress has been made so far, and an analysis of the results obtained. In addition, a clear outline of future plans for completion of the Project should be presented. Any changes from the original Proposal should be described and explained.

**PGY4:**
The final results of the Project should be presented. This presentation should be a summary of the entire Research Project, from its beginning to completion.

**Evaluation:**
An *ad hoc* Evaluation Committee is formed for each Postgraduate Research Day. Its members consist of Faculty members of Ob/Gyn, and may also include any visiting Faculty from other institutions invited to participate in Research Day. Each presentation will be evaluated by this Committee, and they will give a numerical grade to each presentation. This grade will become part of the Resident’s record.

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