

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. Jenna Gale – Division of Gynecology and Reproductive Endocrinology and Infertility
- Dr Darine El-Chaar – Division of Maternal Fetal Medicine,
- Dr. Shannon Bainbridge – Basic Science Research
- Dr Shi Wu Wen – Senior Scientist, OHRI
- Dr. David Gynspan – Department of Pathology, CHEO
- Ruth Rennicks-White – Research manager, OHRI
- Dr. Jocelynn Cook – Scientific Director, SOGC

Residency Training Program Committee Representative (Resident Research Lead)

- Dr. Jenna Gale – jgale@toh.ca

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 residency. The Resident is responsible for ensuring that all deadlines are met requirements fulfilled.

There are several components to the research requirement:

- A **Faculty Preceptor** is chosen in the first 6-12 months of residency. A '**Rapid Research Event**' will be held each year (typically between November – February) to assist in exposing residents to potential preceptors
- A written **Proposal** for the Research Project is developed with the Faculty Preceptor, and is due ideally by the end of the first year of training, but certainly by in the spring of the second year of training. It must be accepted by the Research Training Committee. This proposal should be completed and **Ethics Submission and Receipt** obtained by the time the resident has a schedule research rotation so that the dedicated time during that block can be used to maximize efficiency.
- The Research Project is carried out during second and third year of training. A research rotation will take place during the second or third year of training (to secure protected time to work on research projects). A **progress update** must be completed mid-way through the research block to the Resident Research Lead. It is your responsibility to submit this progress update. The Resident Research Lead is also available to meet during your block if you find this helpful (or at any time).
- The project should be complete by 4th year of training. 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 in the 4th year of training (may be presented earlier if completed at an earlier stage of training).

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>

RESOURCES

Prior to starting your research project, you must complete and submit a Certificate Course Copy for your TCPS2 certificate (*Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*). This should be completed by the end of the first year of training.

<http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/>

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

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

Complete "Introduction to Research Course" (APOG) or other acceptable research methodology course

Complete REB Submission (IRIS on myTOH) - <https://mytoh.ottawahospital.on.ca/irisapp/>

CHOOSING A FACULTY PRECEPTOR

One of the most important steps in choosing your Research Project will be choosing your Faculty Preceptor. Possible topics 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. There will be a '**Rapid Research Event**' held each year between November and February where potential preceptors will come with suggested research project ideas, to provide opportunities for residents to discuss research projects with a diverse range of Preceptors. You will receive an email with details of this event (and are encouraged to attend not just during your first year of residency).

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 and 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 secured

What happens next?

The next step is to develop a Research Proposal.

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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 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-focussed 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 peer-reviewed 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 highly encouraged. At the very beginning of the project, we encourage you to discuss what journal(s) may be suitable for publication of the study, and the manuscript should be formatted in the manner accepted by the journal (to cut down on extra formatting steps at completion of manuscript writing).

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.

As the first part of the process, you complete an in-depth review of existing literature in order to develop the foundation for the hypothesis/research question. See the section below for all requirements of a research proposal. The study is then completed including data collection (whether retrospective or prospective), statistical analysis and final manuscript write-up.

Stream 2— Program Development, Innovation and Quality Assessment

Within the Department of OBGYN we have a number of faculty preceptors who have interests (and training) in program development, innovation and quality assessment. These projects may not utilize the core epidemiological concepts and statistical analyses that we hope you gain from your residency training, which is why this is not the

recommended stream for a resident research project. If you do choose to follow this stream, a 2-page proposal should be developed according to the aforementioned timeline, with the help of your preceptor. This proposal should be submitted to the Resident Research Lead and the appropriateness of each of these 'Stream 2' projects as a resident research project will be evaluated on a case-by-case basis.

DEVELOPING A PROPOSAL

The Proposal serves two purposes: First, it is the outlines 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.

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 should be in the form of a 'structured' abstract (with subheadings). 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. Maximum one page in length.

2. Introduction / Background

The Introduction should give a thorough description of the area of the proposed research including all relevant background information and citations 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 provided.

This 'knowledge gap' should lead naturally to the proposed project/study hypothesis. 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. A 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.'

Research Rotation

Before the start of the rotation:

- Each resident must meet (or communicate through e-mail) with their preceptor **prior to** the start of the rotation. The proposal should have been completed and REB submission achieved prior to the start of the research block for maximum efficiency during the block. Given that the majority of resident research projects are retrospective, this allows time for data extraction and analysis, followed by results tabulation and manuscript writing during the block. For other types of research, ie. surveys, it allows for time to distribute the surveys, collect and synthesis the data and proceed with analysis.
- Each resident must provide a description of **tangible objectives** for the rotation to their preceptor **prior to** the start of the rotation, together with time-line and time commitment

During the rotation:

- Each resident must complete the objectives and tasks developed in the proposal for the rotation
- Communicate with research preceptor on an as needed basis
- Provide the Resident Research Lead with a description of how their rotation is going half way through the block

Within 1 week of completion of the rotation:

- Each resident must provide the Resident Research Lead a summary of the rotation, i.e. what objectives were completed and time spent on each objective, what was not achieved and why; and what the next steps are to complete the project. They should also inform the Resident research Lead when they foresee themselves presenting at Research Day (what year)
- The research preceptor must complete an evaluation of resident (One45)

If there are any problems or difficulties, the Resident and Preceptor should work together to remedy them. The Resident may also approach the Resident Research Lead or a member of the Research Training Committee for assistance.

THE MANUSCRIPT

At the completion of the project, 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. The 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.

The manuscript is produced by the Resident with feedback from the Preceptor. The actual writing, however, must be done by the Resident. Submission of the manuscript for publication is HIGHLY encouraged.

Abstract

A one-page FINAL abstract of the manuscript is due by April 15th of leading up to research day (typically held mid-May). 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 in the 4th year of training, or earlier if the project is completed before that time. 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 at the end of the 4th year of training. It is to be submitted to the Resident Research Lead.

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.

POSTGRADUATE RESEARCH DAY

Each year, in early May, the Department of Ob/Gyn holds Postgraduate Research Day. All Residents are required to attend Research Day 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. Presentations, powerpoint format, are 10 minutes in length with a 5 minute question period.

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. General recommendations are ~1 slide per minute of presentation + introductory slide and references (total ~12 slides).

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.

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.

The following CanMEDs roles encompasses mainly the CanMEDSs Scholar domain as per the RCPSC Objectives of Training and the CANMEDS 2015 Physician Competency Framework

Scholar

To be able to identify a gap in knowledge or skills within the field of Obstetrics and Gynecology to generate a clinical question that will drive a research agenda. This includes:

- Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
- Describe the principles of research and scholarly inquiry
- Describe the principles of research ethics
- Pose questions amenable to scholarly inquiry
- Select appropriate methods to address a scholarly question
- Conduct a systematic search for evidence
- Select and apply appropriate methods to address the question
- Perform a research study and disseminate the findings.
- Identify ethical principles for research and incorporate them into obtaining informed consent considering potential harms and benefits , and considering vulnerable populations
- Summarize and communicate to professional and lay audiences including patients and their families the findings of relevant research and scholarly inquiry

Additional CANMEDS roles and objective (not taken from RCPSC) would include:

Medical Expert

Demonstrate knowledge of concepts of research design and methodology
Perform an appropriate literature search to address a scholarly question

Communicator

Demonstrate an understanding of the scientific background of research methodology in oral and written presentations of a research proposal/project
Prepare a written consent form that is geared to the level and understanding of the study participant

Demonstrate ability to communicate regularly and work collaboratively with research team members including research preceptor

Leader

Sets and maintains an appropriate schedule to implement and complete a research project during the training period

Professional

Demonstrates ethical behaviour in all research endeavours including submission to Research Ethics Board and conduct of research

Disseminates knowledge at local and/or national/international forums or journals

NOTE: CBD Curriculum Map and EPAs - <https://med.uottawa.ca/obs-gyne/postgraduate-education/residency-training-program/competency-based-medical-education>

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