RESIDENT RESEARCH PROJECTS

REQUIREMENTS and INFORMATION

DEPARTMENT of OBSTETRICS and GYNECOLOGY

UNIVERSITY of OTTAWA
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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.

- 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—Analysis Project. Each Resident will choose one of these Streams with the help of their Faculty Preceptor and the Director of the Residency Training Program.
CALENDAR: Research Project Milestones and Deadlines

PGY 1: Preliminary work
mid Oct.       attend Ob/Gyn Staff Research Day
mid May       attend Postgraduate Research Day

PGY 2: Research Project Proposal developed
mid Oct.       attend Ob/Gyn Staff Research Day
Nov. 15       Deadline for choosing Faculty Preceptor for Research Project (Resident and Preceptor submit “Choice of Resident Research Project Preceptor” form)
end Nov.       Research Training Committee approves Preceptor choice, sends written notice to Resident
Nov.-Mar.     Research Stream chosen and Research Project Proposal developed with Preceptor
Mar. 31       Deadline for submitting Proposal (minimum 2-page Proposal PLUS 1-page Abstract; submit with “Submission of Research Project Proposal and Choice of Research Stream” form)
Apr. 15       Deadline for final acceptance of Proposal by Research Training Committee
mid-May       Proposal presented and evaluated at Postgraduate Research Day

PGY 3: Research project carried out
Jan.-Feb.     Resident and Preceptor meet with Research Training Committee to discuss progress, plans
Apr. 15       Deadline for submission of 1-page Abstract describing progress and any interim analysis
mid-May       Progress Report and any interim analysis presented at Postgraduate Research Day

PGY 4: Research Project carried out and completed
Apr. 15       Abstract of manuscript due
mid-May       Project results presented at Postgraduate Research Day
May 31        Completed manuscript submitted to Research Training Committee with signed approval from Preceptor (submit “Submission of Research Project Manuscript” form).
End PGY4      Research Training Committee “peer-reviews” manuscript and either
              i) accepts it;   ii) asks for revisions;  iii) requires additional work

Process continues until manuscript is accepted, completing research requirement.
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—Analysis Project (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).

When the Faculty Preceptor is chosen, the Resident should submit the “Choice of Resident Research Project Preceptor” form by the deadline, which is November 15th of PGY2. The Research Training Committee will send written notice when the choice of Preceptor has been approved.

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. Both the choice of Research Stream and the Proposal are submitted to the Research Committee by the deadline of March 31st of PGY2.
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-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 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.

Stream 2—Analysis Project

   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.
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—Analysis Project. **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.

The Proposal must be submitted to the Research Training Committee by the deadline of March 31st of PGY2. The “Submission of Research Project Proposal” form must accompany the submitted Proposal.

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, which is April 15th of PGY2.

Once the Proposal is accepted, the Abstract will be used for the presentation of the Proposal at Postgraduate Research Day in mid-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 produced and submitted to the Research Training Committee by April 15th of PGY3. This Abstract will be used as the Abstract for the Postgraduate Research Day presentation.

At Postgraduate Research Day, in 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.

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. 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 abstract of the manuscript is due by April 15th of PGY4. This Abstract will be used as the Abstract 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 by May 31st of PGY4. It is to be submitted to the Chair of the Research Training Committee.

The Preceptor must approve submission of the manuscript. A “Submission of Research Project Manuscript” form signed by the Preceptor must accompany 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. **When the manuscript is accepted, the Research Training Committee will notify the Resident in writing that the research requirement has been fulfilled.**

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 May, the Department of Ob/Gyn holds Postgraduate Research Day. PGY2, 3, and 4 Residents are required to present. 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. Slides or computer 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.
FORMS

1. Choice of Resident Research Project Preceptor
2. Submission of Research Project Proposal and Choice of Research Stream
3. Submission of Research Project Manuscript

(the forms follow and may be photocopied)
CHOICE OF RESIDENT RESEARCH PROJECT PRECEPTOR

*Deadline for submission: November 15th of PGY2*

**Instructions:**
You must choose a Faculty Preceptor for your Research Project, and forward the required information to the Ob/Gyn Research Training Committee using this form. Please fill out this form and forward to the Research Training Committee by the deadline. Both the Resident’s and Preceptor’s signatures are required. The Research Training Committee must accept the choice of Preceptor (you will hear back shortly). Preceptors must be Faculty and must be actively engaged in research or scholarship.

**Section 1 (to be completed by Resident)**

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<td>Preceptor’s name</td>
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**Section 2 (to be completed by Preceptor)**

I agree to serve as Preceptor for a Research Project to be undertaken by this Resident. I have read the guidelines for resident Research Projects in Ob/Gyn and understand what is expected of Preceptors.

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SUBMISSION OF RESEARCH PROJECT PROPOSAL
and CHOICE OF RESEARCH STREAM

Deadline for submission of the Proposal and this form to the Research Training Committee: March 31st of PGY2.

PROPOSAL

Resident’s name: 

Preceptor’s name: 

Title of Project: 

CHOICE OF RESEARCH STREAM

Two Research Streams are available. After reading about each of them and discussing the choice with your Preceptor and Director of the Residency Training Program, indicate your choice here:

☑ Research Stream 1: Original Research Project

☑ Research Stream 2: Analysis Project

I have read the information provided and understand the requirements for Resident Research Projects, and am submitting a Research Project Proposal with this form which conforms to the requirements. I also have chosen a Research Stream as indicated above.

Signature of Resident: 

date: 

ACCEPTANCE BY PRECEPTOR (to be signed by Preceptor)

This Proposal is acceptable for submission to the Research Training Committee and conforms to the requirements. I agree to act as Preceptor for this Resident for the Research Project described in this Proposal.

Signature of Preceptor: 

date: 

SUBMISSION OF RESEARCH PROJECT MANUSCRIPT

Deadline for submission of Manuscript and this form: May 31st of PGY4

Resident’s name: _____________________________________________

Title of Manuscript:

_________________________________________________________________

_________________________________________________________________

I find that this manuscript is satisfactory for submission and conforms to the requirements.

Preceptor’s name: _____________________________________________

Signature: ____________________________        date: ________________

Comments (optional):