

RESIDENT RESEARCH PROJECTS

Requirements and Information

**Department of Obstetrics and Gynecology
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OVERVIEW OF RESIDENT RESEARCH REQUIREMENT

Each resident is required to complete research during their residency training. There are 2 streams that can be chosen: Original Research (stream 1) or Analysis Project (stream 2). Each resident will choose which stream they wish to pursue with the assistance of their preceptor and the residency program director. 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 approved by the research committee, and must be presented at Department Research Day in PGY2
- Presentations will occur in PGY3 and PGY4. For those who have chosen the Original Research Project stream: you will present an interim analysis and progress report in PGY3 and a presentation of final data in PGY4. For those who chose the Analysis Project stream: you will present your data for each project at that year's research day (PGY3 and 4)
- A final report of the results must be written up as a manuscript for the research committee. For those in Original Research Project stream one manuscript will be submitted in PGY4. For those in the Analysis Project stream one manuscript of either project will be submitted in PGY4
- The goal of all projects is to obtain a published manuscript in a peer-reviewed journal

CALENDAR: RESEARCH PROJECT MILESTONES AND DEADLINES

PGY1: preliminary work

Start thinking about possible projects/preceptors

Potential projects to be posted on Obstetrics and Gynecology website April-June (basic science and clinical). Other projects may also be available – speak to staff/clinical scientists to discuss.

May: attend Department Research Day

PGY2: research project proposal developed

Nov 15 Deadline for choosing a faculty preceptor for research project (resident and preceptor submit "Choice of resident research project preceptor" form)

End Nov-mid Dec Notice will be sent out to resident and preceptor re. approval of preceptor choice

Nov-Mar Research stream to be chosen and research proposal to be developed with preceptor

Mar 15	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 1	Deadline for final acceptance of proposal by research committee
Early May	Proposal presented and evaluated at Department Research Day

PGY3: research project carried out

Nov 15	if doing analysis project and have different preceptor for second year, submit this information to the research committee by this date
Jan/Feb	resident to meet with research committee to discuss progress and plan
Mar 15	if doing analysis project, submit 2 nd proposal to research committee by this date
Apr 1	deadline for submission of 1 page abstract describing progress and interim analysis for stream 1, or abstract for that year’s review for stream 2
Early May	presentation at Department Research Day

PGY4: research project carried out and manuscript completed

Apr 1	abstract due
Early May	presentation at Department Research Day
May 31	completed manuscript to be submitted to research committee with signed approval from preceptor (submit “Submission of research project manuscript” form)
End PGY4	research committee reviews manuscript and either” <ul style="list-style-type: none"> • accepts it • asks for revisions • requires additional work

Process continues until manuscript is accepted, thereby completing research requirements

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 in PGY1.

One of the most important steps in choosing your research project will be choosing your faculty preceptor. Possible project and subjects for any study will be largely determined by your preceptor's area of expertise and interest. 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 available to you to help you choose your preceptor.

1. The department website lists all GFT faculty with their research interests, publications, and areas of expertise. They are happy to chat to you about potential research projects.
2. Many generalist faculty have projects they are interested in doing, or have started and would like resident collaboration, so please chat to staff you are working with.
3. The more senior residents are an excellent resource to ask for advice and ideas.
4. The research coordinator, residency program director, and department chairman would be happy to make suggestions and discuss options.
5. Our basic scientists have many research options available to you. Please chat to them about opportunities available.

The specific research project you are going to undertake must be discussed and developed with your preceptor. First, you need to decide which research stream is best for you: stream 1 – original research project; stream 2 – analysis project. The proposed research must be extensive enough to fulfill the requirements for your training, but it must also be feasible within the timelines. You must spend enough time with your preceptor to develop a good solid proposal.

Once the faculty preceptor has been chosen, the resident should submit the "Choice of resident research project preceptor" form by the deadline (Nov 15 of PGY2). The research committee will send written notification of approval of choice of preceptor.

The next step is to work with your preceptor to develop a proposal. Both the choice of research stream and the proposal must be submitted to the research committee by Mar 15 of PGY2.

RESEARCH STREAMS

Two research streams or tracks are available to residents in Obstetrics and Gynecology. The resident should choose carefully which stream best suits his/her needs. The choice of which stream to take will be made in PGY2, and submitted with the research proposal. The research proposal must reflect the choice of stream.

Stream 1 – original research project

This is the more research-focused stream. For residents taking this path, it will be reflected on their records 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 might also be considered for this stream, but would have to be approved by the committee. In general, projects in stream 1 would be 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 to satisfy 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.

The proposal will be presented at PGY2 Department Research Day, the interim analysis at PGY3 Department Research Day, and the final data at PGY4 Department Research Day.

Stream 2 – analysis project

In this stream the resident will choose 2 smaller projects to complete. These may be questions that have already been addressed in the literature and you are looking at comparable data at our centre. The project may be a smaller retrospective review answering a pertinent clinical question. Alternatively, the project could be an audit of a practice or procedure locally.

In this stream the resident will choose 1 project for each of the PGY3 and 4 year. You may have the same preceptor for both years, or 2 different preceptors. If you have 2 different preceptors, you will be expected to notify the committee of your 2nd preceptor by Nov 15 of your PGY3 year. Submission of the second project proposal will be required (regardless of whether you have the same or different preceptor) by Mar 15 of your PGY3 year.

You will present the proposal for the first project at PGY2 Department Research Day, the PGY3 data or results at PGY3 Department Research Day, and the PGY4 data or results at PGY4 Department Research Day.

A manuscript of one of the projects must be completed and submitted by May 31 of your PGY4 year.

DEVELOPING A PROPOSAL

The resident develops the research proposal 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 committee to judge the appropriateness of the project and determine if it will be approved.

The resident should discuss and choose a research stream prior to writing the proposal, as the proposal should reflect your choice of research stream.

The first step is to gain a thorough understanding of the field of the proposed research. This is done by reading the relevant literature, after doing an appropriate literature search, with the guidance of the preceptor.

The proposal must be detailed enough that it is clear what the resident will be doing throughout the course of the project. It must be shown that the project is feasible and is appropriate for the time period. 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. Figures and references will be attached in addition to the above. Proposals for stream 1 are expected to be more detailed and, therefore, longer than two pages. A well-constructed proposal will also be very helpful for you for the ethics submission.

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 proposal at PGY2 research day. It must contain the title of the research project, 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. The section should lead naturally to the proposed research (i.e. by the end of this section it should be obvious why the research you are proposing is necessary).

3. Objectives/Hypothesis

In a few sentences, describe overall objectives of the proposed research. What is expected to be achieved? This must be specific. It is not enough to say, "the project will lead to a better understanding of...". Instead, precise goals for the project must be outlined. A clear hypothesis(es) that will be tested should be stated.

4. Methods

The methods that will be used must be described in detail. This includes description of data-gathering methodologies and experimental protocols. Justification for extent of the study should be given and methods for data analysis described thoroughly: How large a population will be required and why? How many experiments? How will papers for a meta-analysis be chosen? How will the data be treated once it is gathered? How will hypotheses be tested? How will significance be determined?

This section must be detailed enough to show that the methods to be used, for all aspects of the 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 supported by citation 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 committee by Mar 15 of PGY2. The "submission of research proposal" form must accompany the proposal. The proposal will be read and assessed by the research committee and/or other experts chosen by the committee. Written comments will be provided as feedback, and it will be clearly stated whether the proposal is accepted or needs to be revised. If revisions are required, it is the responsibility of the resident and preceptor to ensure revisions are made and submitted by the Apr 1 final acceptance deadline in PGY2. The accepted abstract will be used for Department Research Day in PGY2.

ETHICS SUBMISSION

All projects are required to go through the institutional review board. There are 2 committees: HREB panel A and HREB panel B.

Information on each of these, with their application forms and deadlines can be found on the website at www.hreb.ualberta.ca

MAKING PROGRESS (PGY3/4)

During PGY3 it is expected that reasonable progress will be made in 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 Department Research Day in PGY 3 for those in stream 1. A one-page abstract describing progress and any results must be submitted to the research training committee by April 1 of PGY3. For those in stream 2, an abstract for that year's project must be submitted to the research training committee by April 1 of PGY3. These abstracts will be used for Department Research Day.

At postgraduate research day in May stream 1 residents will give a talk outlining the progress of the study, and any results obtained to date (this may include an interim analysis of these results if appropriate). Plans for completion of the project must also be presented. Stream 2 residents will present the final results of their project.

The resident will receive an evaluation from the postgraduate research day evaluation committee.

What happens next?

After Department Research Day, stream 1 residents 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 to remedy them. The resident may also approach the research committee for assistance.

THE MANUSCRIPT (END OF PGY4)

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 and 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. This manuscript should be identical in format to journal papers you read.

Publication of the manuscript in a journal is not required, but is strongly encouraged especially for stream 1 residents. The resident produces the manuscript with the preceptor. The resident must do the actual writing of the manuscript.

Abstract

A one-page abstract of the manuscript is due by April 1st of PGY4. This abstract will be used as the abstract for Department Research Day.

Department Research Day

The results of the project are presented at Department Research Day. Any comments made at Department Research Day, especially those of the research 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 research committee.

The preceptor must approve submission of the manuscript. A "Submission of research manuscript" form must be signed by the preceptor and accompany the manuscript.

The research committee will review the manuscript. Depending upon the expertise required, the committee may enlist the help of other faculty members or outside experts in the review process. Based on this review, the committee will: accept the manuscript; send the manuscript back for revision; or require additional work be done on the project and the manuscript be resubmitted.

This decision can be appealed to the residency training committee. This process will continue until a satisfactory manuscript is produced. A manuscript that is deemed satisfactory by the research committee is required to fulfill the research requirements for the Obstetrics and Gynecology residency program.

PRESENTING AT DEPARTMENT RESEARCH DAY

In May, the Department of Obstetrics and Gynecology holds its Department Research Day. PGY2, 3 and 4 residents are required to present, along with basic science postgraduate and post-doctoral students. All residents are required to attend research day in its entirety unless excused by the program director. Preceptors are also expected to attend. Abstracts are submitted to the Department Administrator prior to Research Day, for publication in the Department Research Day abstract booklet (*see abstract format below*).

Department Research Day General Format

Research Day is currently a half-day session of oral presentations, ending with a Obstetrics & Gynecology specialty-specific talk by a Visiting Professor. PGY2 presentations are 5 minutes with 2 minutes for discussion. PGY3 and 4 presentations are 10 minutes with a 5-minute question period. Presentations should be created using PowerPoint.

PGY2

The research proposal is presented at Research Day in PGY2 and should follow the format of the written proposal.

PGY3

For those in stream 1 this will be a progress report and interim analysis. It should describe what progress has been made to date, and an analysis of the results obtained. In addition, a clear outline for completion of the project should be presented. Any changes from the original proposal should be outlined and explained. For those in stream 2 this is the final presentation of your first project.

PGY4

For those in stream 1, 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. For those in stream 2, this is the final presentation of your second project.

Directions for Abstract Preparation and Submission

Please create your abstract using the format illustrated in the following example. Type single-spaced in 11-point Arial font. Titles should be capitalized in bold. Authors name(s) should be underlined and appear under the title, followed by Departmental and Institutional affiliations. The presenting author's name should be indicated with an asterisk*. There should be a line separating the main text from the Institution.

One paragraph of text should follow and include:

- a brief **introduction** to the problem being investigated
- question or **hypothesis**
- a short **methods** section
- **results** incorporating data
- a brief **conclusion**

FETAL ARTERIAL PRESSURE AND HEART RATE RESPONSES TO NON-LABOR UTERINE CONTRACTIONS: COMPARISON BETWEEN SINGLE AND TWIN PREGNANCIES.

L Corson*, E Kwan and DW Rurak. Department of Obstetrics and Gynaecology, Children's Variety Research Centre, UBC, Vancouver, BC.

In pregnant sheep carrying a single fetus, there is a rise in fetal arterial (FAR) and venous pressures

Abstracts previously presented or that will be submitted elsewhere are acceptable as this is a local event with no official publication of proceedings.

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)

Resident's Name	
Preceptor's Name	
Resident's Email	
Resident's Phone #	

Resident's Signature	
Date	

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.

Preceptor's Signature	
Date	

**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 15 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 31 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):