

## **Division of General Surgery**

### **Western University**

#### **Resident Research Policy**

The General Surgery training program at Western University has a history of high quality research. The General Surgery Residency Training Program is committed to facilitate and support high quality resident driven scholarship. In order to meet the competencies outlined in CanMEDS 2015 (Scholar Role) all residents are required to engage in research as a component of their residency training. The Residency Training Committee (RTC) recognizes individual differences in training and career goals of residents. In order to meet the variable needs of residents the research program at Western University General Surgery allows flexibility in choosing the stream of research to be conducted by the resident. The following outlines resident research responsibilities.

#### **PGY-1 Year**

Each resident must undertake a data-driven project that can be completed within the PGY-1 year. Incoming residents will be supplied with a list of potential projects in July. Examples of data driven projects include retrospective chart reviews, retrospective cohort studies, quality assurance projects, systematic review or meta-analysis. Residents must choose to engage with one of these projects or choose a project other than those listed. If the resident selects a project not on the list of available projects a one-page project proposal must be completed. The resident research committee must approve the project proposal prior to commencement of the project.

Each resident will present the results of the data-driven project at the annual resident research day in the spring of their PGY-1 year.

Failure to engage in a project or present the project in PGY1 will result in lack of promotion to the PGY-2 year.

Exceptions may be granted at the discretion of the Resident Research Committee (RRC)

#### **PGY 2-5**

By June 15 of the PGY-1 year, residents must declare their research intent for the remainder of their residency. Residents may choose to focus on one of 4 potential streams:

1. A multi-year research program
2. Work using the data holdings of the Institute for Clinical and Evaluative Sciences (ICES)
3. Multiple individual projects

4. A research program chosen by the resident and a supervisor which does not fit one of the above streams, but is approved by both the supervisor and the resident research committee

Each resident will have their own set of deadlines and deliverables within the training program based on the stream of choice that must be met in order to gain promotion to the final year of training. The deadlines and deliverables will be defined at the outset when the resident research committee approves the stream chosen by the resident.

### **Stream 1: Multi-Year Research Program**

Residents can choose to engage in a more longitudinal program of research. Examples of multi-year projects include prospective cohort studies, RCT or longitudinal basic science research project.

Residents wishing to perform a longitudinal research program must complete a research proposal including the project, supervisor, annual deliverables/milestones and potential funding.

The research committee must approve all research programs.

Residents will be expected to present the results of their work to date yearly in one of the following forums:

1. Annual resident research day
2. Division of General Surgery Grand Rounds
3. Relevant city-wide rounds (i.e. Trauma rounds, Critical Care rounds, Surgical Interest Group at ICES Western Meeting)
4. Other forum determined to be appropriate by both the supervisor and the resident research committee

The forum chosen for presentation will differ based on the stage of the project and expected deliverables for that year. The forum to be presented at is decided by the supervisor and resident at the beginning of the academic year, and disclosed to the resident research committee no later than September 30 of that same academic year.

Residents who fail to meet the requirements will fail to progress.

(see Appendix A for examples of deliverables)

## **Stream 2: ICES project**

Residents wishing to complete projects using ICES data holdings are not guaranteed.

There is a limited amount of funding available for support. Project proposals will be adjudicated in a competitive manner to identify those projects that may be eligible for funding support from the Division of General Surgery. Support from the Division of General Surgery is not guaranteed and may not be available. The number of projects available is dependent on ICES funds within the Division of General Surgery and the strength of the proposal. Residents are strongly encouraged to approach an ICES affiliated faculty with project proposals prior to submission to the residency research committee.

If support is not made available through the Division of General Surgery, residents may still undertake projects through ICES, however a funding source must be identified and secured within 6 months or the resident may be required to switch to another stream.

Residents will be expected to present the results of their work to date yearly in one of the following forums:

1. Annual resident research day
2. Division of General Surgery Grand Rounds
3. Relevant city-wide rounds (i.e. Trauma rounds, Critical Care rounds, Surgical Interest Group at ICES Western Meeting)
4. Other forum determined to be appropriate by both the supervisor and the resident research committee

The forum chosen for presentation will differ based on the stage of the project and expected deliverables for that year. The forum to be presented at is decided by the supervisor and resident at the beginning of the academic year, and disclosed to the resident research committee no later than September 30 of that same academic year.

Residents who fail to meet the requirements will fail to progress.

(see appendix A for examples of deliverables)

### **Stream 3: Multiple Individual Projects**

Residents can engage in multiple data driven projects. It is the expectation that residents will present at least two separate projects between PGY-2 and PGY-5. Thereby including the PGY-1 research commitment residents will present 3 projects in a 5-year time span. It is expected as a minimum that each project should be submitted to CAGS or a meeting of equivalent stature (ie. a National or International meeting).

Residents must define the research project and supervisor by July 30 each year. The resident research committee must approve all projects chosen.

It is expected that residents will present each of the completed projects at the annual research day.

It is expected for residents to meet all research requirements before the beginning PGY-5 year. Request to defer a project to the PGY-5 year will be considered on an individual basis by the resident research committee.

(see appendix A for examples of deliverables)

### **Stream 4: Individual Research Program**

Residents may engage in a research program other than that defined by the above three streams. This will be the exception in unique circumstances.

To engage in an Individual Research Program residents must submit a detailed research proposal including supervisor and potential funding sources.

Each proposal will be adjudicated individually and approved on a case-by-case basis by the resident research committee.

Residents will be expected to present the results of their work to date yearly in one of the following forums:

1. Annual resident research day
2. Division of General Surgery Grand Rounds
3. Relevant city-wide rounds (i.e. Trauma rounds, Critical Care rounds, Surgical Interest Group at ICES Western Meeting)

Other forum determined to be appropriate by both the supervisor and the resident research committee.

(see appendix A for examples of deliverables)

### **General Expectations**

All residents must complete a manuscript for submission to a peer-reviewed journal for all projects requiring REB approval. For any Quality Improvement projects undertaken, all residents must complete a report for the Division of General Surgery on the work completed.

To ensure competency is achieved with respect to the resident's Scholar Role, both the supervisor and the resident research committee must approve streams and projects.

With respect to presentation at local, national, and international meetings, residents must declare their intention to present prior to submitting an abstract. The resident research committee must approve the request in order for travel funding to be granted. Travel funding will continue to be withheld until a draft manuscript is submitted. There are limited funds available for travel assistance. Travel funds will be granted based on assessment of prior funding and scope of the work and meeting attended.

<b>Stream</b>	<b>Multi-Year Research Program</b>	<b>ICES</b>	<b>Individual Project Focus</b>
Examples	Randomized Controlled Trial Prospective Cohort Study Basic Science Project	Retrospective cohort study using data holdings from ICES	Retrospective cohort or case-control study Systematic review/meta-analysis Quality Improvement Initiative Basic Science Project
Sample Timeline	<p>Year 1</p> <ul style="list-style-type: none"> <li>Literature search</li> <li>Pilot study</li> <li>Identification of funding opportunities</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>Completion of systematic review</li> <li>Presentation of protocol to division</li> <li>Ethics</li> </ul> <p>Year 3</p> <ul style="list-style-type: none"> <li>Study completion</li> </ul>	<p>Year 1</p> <ul style="list-style-type: none"> <li>Literature search</li> <li>Identification of funding opportunities</li> <li>Validation study (if required)</li> <li>Presentation at ICES Surgical Investigators Group meeting</li> <li>Completion of Dataset Creation Plan</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>Analysis and manuscript completion</li> </ul>	<p>Retrospective and small basic science projects to be completed within a one-year time frame</p> <p>Systematic review/meta-analysis to be completed in 1 – 2 year time frame, depending on scope</p> <p>QI Project: Year 1</p> <ul style="list-style-type: none"> <li>Evaluation of current practice</li> <li>Development of QI initiative</li> <li>Presentation at grand rounds</li> </ul> <p>QI Project: Year 2</p> <ul style="list-style-type: none"> <li>Implementation of initiative</li> <li>Evaluation of impact</li> <li>Submission of Report</li> <li>Presentation at grand rounds</li> </ul>
Funding expectations	Submission for grant funding in conjunction with supervisor	Approval of grant funding or General Surgery ICES funding prior to project initiation	Possible submission for grant funding independently or in conjunction with supervisor
Expected output	<p>Multiple publications</p> <ul style="list-style-type: none"> <li>Pilot work (retrospective/prospective review; survey)</li> <li>Systematic review</li> <li>Main study</li> <li>Sub-studies</li> </ul>	<p>At least one major publication</p> <p>Possible validation studies and sub-studies</p>	<p>One publication per project for retrospective, basic science, and data synthesis projects</p> <p>Possible publication for QI project, but at minimum must produce a report for the Division of General Surgery</p>
Expected number in residency	1	1 – 2	2 - 3

