DALHOUSIE UNIVERSITY | DEPARTMENT OF FAMILY MEDICINE

# DALHOUSIE FAMILY MEDICINE RESIDENT PROJECT GUIDE

## July 2025-2026

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# Table of Contents

# Resident Project Guide Department of Family Medicine

## Introduction

Family Medicine requires compassionate practice based on sound, reproducible evidence and critical thinking. Scholarly work in Family Medicine is promoted by the College of Family Physicians of Canada. The Dalhousie Family Medicine resident project program promotes the attainment of the four CanMeds roles: health advocate, medical expert, scholar and communicator.

The objectives for scholarly activity in Family Medicine are detailed by the College of Family Physicians of Canada. The project promotes the attainment of the four CanMeds roles: health advocate, medical expert, scholar and communicator.

All residents are required to complete a resident project as part of their residency program requirements. The resident project is an academic/scholarly one that must meet the standards described in this guide and must be completed successfully in order to fulfill the requirements of the residency training program.

The purpose of the resident project is to provide an opportunity for the resident to explore an area of personal interest in a scholarly manner. With guidance provided by their supervisor, the process involves finding answers to questions commonly encountered in primary care by critically reviewing the available literature. Where such answers are found lacking, the resident may choose to employ an appropriate methodology to design a study using proper scientific rigor to answer that question. By contributing to this scholarly activity there is an opportunity for residents to positively impact primary care and the wider community.
There is no requirement to conduct a research study; however, it is hoped that the resident project will provide the resident with the opportunity to develop or practice primary care research skills. For those with more in- depth research interests, primary care research electives are available and inquiries should go to the Site Director.

## Goal:

- To contribute to the understanding and/or effectiveness of family practice.

## Purpose:

- To develop skills that the resident can use to be a resource to a family practice;
- To provide an evaluation of these skills for the resident transcript.

## Objectives:

- To ask a question relevant to Family Medicine
- To develop a way of answering the question using appropriate resources and timelines;
- To write up the project and present it orally prior to completion of the residency.

## Project Goals:

- To develop skills in asking and answering questions that are important and relevant to the discipline of Family Medicine;
- To stimulate creative and original thought based on questions encountered in practice;
- To practice the fundamental of evidence-based care or other critical inquiry;
- To be able to communicate the results clearly to colleagues;
- To promote an interest in Family Medicine research.

## How to Use the Resident Project Guide

The Resident Project Guide has been developed as a resource for residents, project supervisors and project/research coordinators. The guide contains information regarding project and project form deadlines, format requirements, tips and tricks, assessments, etc. The Resident Project Guide is reviewed by the Resident Project Sub-Committee on an annual basis and updated accordingly.

Residents may choose to follow the version of the Resident Project Guide released in their PGY1 year, or they may opt to follow the version released in the year in which they submit their project.

In order to ensure fairness in marking, residents are required to indicate on their project title/cover page which year's version of the Resident Project Guide they followed at the time when they submitted their final project.

## Expectations

The resident project must be aimed at answering a question in the field of Family Medicine. It can be in the form of a research project, a practice quality improvement project, a position paper, clinical education tool, medical education tool, literature appraisal or a medical/health humanities project. The resident is expected to choose an area of interest to Family Medicine, propose a question, review the literature, and design a method of answering that question.

Family Medicine and Family Practice includes enhanced areas of expertise achieved and maintained by some family physicians, such as those recognized by the College of Family Physicians of Canada as Certificates of Added Competence (CACs). Approved CAC domains of care in Family Medicine include Care of the Elderly, Emergency Medicine, Family Practice Anesthesia, Palliative Care, Sport and Exercise Medicine, Addiction Medicine and Enhanced Surgical Skills.

PGY2 residents are expected to submit a written paper and give an oral presentation of their findings to their colleagues and faculty members at the Resident Project Presentation Day held at their Site Project Presentation event. The written documents will be graded and may be considered for various resident project awards.
PGY1 residents may be asked to give a 10-minute presentation discussing the progress of their projects. Residents are welcome to submit their completed resident project in their PGY1 year; however, they are not required to do so until their PGY2 year.

Completed resident projects will be stored and available to review for internal use by residents and faculty.

## Ethics Issues

All residents who engage in research involving human beings, their biological samples, or their data are required to ensure that their projects are operating under an approved Research Ethics Board (REB) application and follow Canada's national Tri-Council Policy Statement: Ethical Conduct of Research. This applies also to any project considered "minimal risk", for example the examination of patient charts, patient/resident/physician surveys, etc. The resident should discuss this with their Project/Research Coordinator. If possible, it is advised that residents should consult with the Chair of the local Research Ethics Board (REB) regarding requirements for REB applications. If REB approval is necessary, it must be ensured that all requirements of the local REB are met for the resident project. If applied for, and REB approval is not required, residents are required to provide the appropriate REB documentation around that decision. To determine if a project falls under QI or Program Evaluation (and therefore exempt from REB review), it is suggested to use local guidelines (or connect with their local REB) to help in that decision, such as 'Dalhousie University's Guidelines for Differentiating Among Research, Program Evaluation and Quality Improvement' (https://cdn.dal.ca/content/dam/dalhousie/pdf/research-services/REB/Guidelines%20Research%20PE%20QI%20(28%20Nov%202013).pdf).

## Projects with More than One Author

Residents are encouraged to collaborate when planning and completing Family Medicine projects. Collaboration with others must be acknowledged and explained in the manuscript. In most circumstances, residents will collaborate on a topic, but their project will ask a separate question; therefore, individual manuscripts and project forms will be submitted by the primary author.

In the event residents wish to co-author a project, we ask that this collaboration be approved by their site Project Coordinator(s) to ensure each author's contribution is substantial. Each author must outline, in a section entitled "Author Contribution", their individual contribution to the project. Each resident will be required to submit individual forms, project outline and final reports. There will be one assessment of the project. The project presentation may be collaborative if possible.

When collaborating as co-authors, it is important to recognize the four measures of authorship from the ICMJE:

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Further advice on authorship can be found at http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html

## Types of Projects

Because different marking rubrics are used for different project types, residents are asked to submit their project as a single project type. Projects may be submitted as one of the following with the project type clearly indicated on the cover page:

### *Research*

This involves the posing of a question, reviewing the literature, selecting the methods needed to answer the research question, collecting original data, conducting the data analysis, and reporting the findings Residents are encouraged to engage in original research. It is important for residents to be aware that research projects require more steps to complete than other types of projects and therefore may take longer to complete. Most research projects require approval by the local Research Ethics Board (REB). Residents are advised to speak with their Project Coordinator about the need for ethical approval for their project. If REB approval is not required, residents are required to provide the appropriate REB documentation around that decision.

### *Practice Quality Improvement Project*

This involves identifying a practice-based question (aim statement), constructing a method for measuring change, developing that change by finding evidence-based guidelines/recommendations to guide the approach to clinical care with respect to the question, reporting the results and recommendations to target population, along with reassessments after change has been initiated (PDSA cycle; Plan, Do, Study, Act). Ideally this will involve multiple PDSA cycles.

Please note, residents are not permitted to use the same question or data used in their QI curriculum exercise at their site.

### *Advocacy Project (*Formerly Position Paper Project)*

In this project type, the resident takes a position on an issue of importance to family medicine and appraises evidence for and against the position. The resident either ***describes*** or ***undertakes*** an advocacy action related to the position. In either case, the report is to include a self-reflection component as described in "Tips and Tricks".

### *Clinical Education Tool*

This involves developing a tool or resource useful for the education of physicians, other health care workers, patients or the public. The education tool needs to be accompanied by a description of how the topic was selected, a literature review and the reason for the need for the tool.

### *Medical Education Tool*
This involves developing a tool or resource useful for undergraduate or postgraduate medical education, with accompanied reason for tool and literature review to support the tool. Examples include Problem Based Learning Cases, OSCE development, online curriculum modules, Self-Learning Question Writing Project, etc.

### *Literature Appraisal*
This involves a detailed review of the literature on a specific topic pertinent to Family Medicine. Original research papers* should be reviewed and appraised using critical appraisal skills. (* primary sources, no systematic reviews)

### *Medical/Health Humanities*
This project type requires residents to ask an important question relevant to Family Medicine. The resident will conduct a review of the evidence on the topic and the final project may include an arts-based piece, or use of art in the scholarly project, both clinical and humanities. This may take the form of writing, visual art, performance (e.g. dance, theatre), production or a musical composition, or other. While the health humanities may be considered a category of its own, it could also be a component of any of the above categories. For example, the resident may choose to conduct a literature review on the effect of the use of writing as a tool to prevent burnout among medical students. The paper could also go further to encompass project types such as a formal literature review, education tool, position paper/essay, research project, or practice quality assessment related to the art form.

*Please refer to the Tips and Tricks section of this Guide for more information on the above project types

## Project Coordinator
Each site has a Project Coordinator, whose role is to discuss the project format and requirements with the resident on a regular basis and encourage the resident to adhere to the deadlines. In some cases, the Project Coordinator may also be the Project Supervisor.

## Project Supervisor
Each resident must choose a Project Supervisor (or Project Supervisors) to counsel them on the content of their project. The Project Supervisor(s) may be a clinical supervisor, another family physician, a consultant or another individual with qualifications appropriate for the selected resident's project topic.

Each project requires a Project Supervisor with a faculty appointment in the Dalhousie University Department of Family Medicine. If the primary project supervisor is not a DFM faculty member, the resident is responsible to find a co-supervisor who has a faculty appointment with the Dalhousie University Department of Family Medicine.
Once the Project Supervisor has been identified, the resident is responsible to provide them with the Project Supervisor Information Kit. This can be found on Brightspace.

## Budget
There are funds in each site's budget to cover some resident project expenses at that site. Each resident is allowed $50 for minor expenses, but it is also possible to apply for more funding. This issue should be discussed with the Project Coordinator at the appropriate site. For amounts over $50, a written budget must be submitted to the Project Coordinator at the appropriate site. All receipts must be submitted in order for expenses to be reimbursed. If funds are needed in advance, a written request can be submitted with receipts submitted at a later date.

## Minimum Time Commitment
Residents should expect to commit at least 40 hours of work to their project, although the actual amount of time spent on the project will depend on a number of factors. The program may allow the resident to use some independent learning time to work on their project, however; the amount of time permitted depends largely on the nature and scope of the project and therefore residents will need to discuss this with either their Project Coordinator or Project Supervisor. Time away from half-days back and academic half-days is not generally permitted.

## Academic Integrity, Plagiarism, and Artificial Intelligence

Academic integrity is the expectation that all members of the academic community act with honesty, trust, fairness, respect and responsibility. See http://www.dal.ca/dept/university_secretariat/academic-integrity/plagiarism-cheating.html

Dalhousie University defines plagiarism as the submission or presentation of the work of another as if it were one's own. Plagiarism is a serious academic offence and can lead to a failing grade or expulsion. See: https://www.dal.ca/about/leadership-governance/academic-integrity/plagiarism-and-cheating.html

Artificial intelligence (AI) potentially can assist authors by suggesting scholarly manuscript ideas and outlines. However, current AI technology creates the potential for breach of academic integrity or ethics in the production of scholarly projects. Current AI outputs can be erroneous, false, out of date, or lead to plagiarism. Residents must assume full responsibility for all content in their projects, including content generated by AI. They must ensure that the content is free from error, fabrication and plagiarism. Residents must use AI with caution and be transparent in their use of AI in developing their scholarly projects. Residents who use AI to assist them must disclose and detail such use in the methods section of their project reports. Artificial Intelligence sources cannot be used as references for projects, and cannot be listed as co-authors. Copying text into an artificial intelligence computer service risks exposing the content in ways that could breach privacy or ethics requirements.

To fulfill the competencies of resident projects, residents must conduct their own literature search (no third-party searches). However, residents are encouraged to seek assistance from hospital or university librarians.

For more information on AI in Scholarly Work at Dalhousie, please see 'Guidance for Use of Generative A.I. Tools in Research' (https://dalu.sharepoint.com/sites/research-innovation/SitePages/generative-ai-tools-research.aspx). Please keep in mind that this is an evolving practical tool.

## Project Format

The project paper should be a minimum of 2500 words and a maximum of 4000 words, excluding tables and references. The project must be submitted as a single PDF. It is to be double spaced, 12 font, and cannot exceed 10MB. **Project products such as infographics, tools, artwork, essays, handbooks, DVDs, websites, apps and others are to be submitted as appendices to the paper.** Alternatives for the word count and format will be considered for special circumstances and must be approved by the Project Coordinator.

The format of the written work should follow a scientific lay-out, including: Cover Page, Abstract, Introduction/Background, Methods, Results, Discussion, Strengths and Limitations, Conclusions and References and Appendices (where required).

Abstracts should be structured to include the following layout as described by the CMAJ (excluding Trial Registration) (https://www.cmaj.ca/submission-guidelines#resarch ): Introduction/Background, Methods, Results, Interpretation.

Below the Abstract, add 3-5 keywords reflecting the main topics of your project.

At least fifteen (15) references are recommended. Vancouver reference formatting preferred as is required by CMAJ. Use of a reference manager (such as Zotero) is recommended.

Please note that a full academic literature review is only required for the Literature Appraisal project type. Other project types are required to have a Background section with an abbreviated literature review relevant to project type.

Projects may only be submitted as a single project type. For example, a project may be submitted as a research project or a clinical education tool, not both.

## Project Cover Page

Make sure that you include a cover page (title page) with your project.

The title page must include each contributing resident's name and site. For non-Dalhousie Family Medicine resident co-authors, there must be some sort of identification of who they are (e.g. physician from (name of clinic, hospital, etc.); pharmacist from (name of pharmacy, hospital, etc.), nurse practitioner from (name of clinic, etc.); PGY# resident from (name of program and institution)).

The cover page must include the following:

- Name(s)
- Title of project
- Site(s)
- Name of project supervisor(s)
- Type of project (research, literature appraisal, etc.) (NOTE: use only the heading used under "Type of Projects")
- Date
- Which year's version of the Resident Project Guide the resident(s) followed during project development

## Project Assessment

It is the resident's responsibility to send the completed project for marking to the Department of Family Medicine Education Committee Assistant (fmcommittees@dal.ca) with copy to the Site Administrator and Project Coordinator, as a single PDF file by the 2nd Monday in February. The PDF document must be no larger than 10MB and formatted in such a way as can be easily emailed to, and opened by, project reviewers.

The Medical Education Committee Assistant will forward the completed resident projects to appropriate reviewers. Once accepted by the reviewer, the full project review process is to be completed within 4-6 weeks. It is recommended that project reviewers complete their evaluation within 2-3 weeks to allow time for revisions and administrative work if needed, in order to fulfil the 4-6 week timeline for full project review. A resident project must be deemed "Acceptable" or higher for the resident to successfully complete the residency program requirements.

If a project is assessed as "Requiring Revisions," the resident and the Project Supervisor and/or Project/Research Coordinator will be informed by the Education Committee Assistant. Once the resident has completed the required revisions, the revised project will be sent back to the Education Committee Assistant (ideally within 2 weeks) in a single PDF document that is no larger than 10MB and that has been formatted in such a way as can easily be emailed and opened by the project reviewer. The Education Committee Assistant will then forward the revised project to the original project reviewer, who will aim to have the review completed in 2-3 weeks to fulfil the 4-6 week timeline from the original project review acceptance date. If, after a second revision the project is still deemed as "Requiring Revisions" by the original reviewer, a second reviewer may be invited to review the project.

## Late Projects

Residents who miss the final project submission date may face a delay in receiving their letter of program completion. Residents are encouraged to submit their final project by the appropriate deadline.

## Non-Compliance

Non-compliance with the program requirements without approval and just cause may result in the inclusion of a professional misconduct note in the resident file.

## Awards/Presentations

Projects submitted by the February deadline (according to project guidelines) that receive marks in the "Outstanding" range will be considered for award nominations. Select projects receiving a score in the 'Highly Acceptable' range may also be considered. Additionally, Project Supervisors and site Project/Research Coordinators may nominate for consideration any resident projects they consider to be exceptional. Award nominations include the following:

1. Dalhousie University Family Medicine: The Dr. Doug Mulholland Award for the best scholarly non- research project. The projects are judged on originality, relevance to family medicine and critical thinking.
2. Dalhousie University Family Medicine: The Dr. R. Wayne Putnam Award for the best research project.
3. Award competitions:
    a. Faculty of Medicine Research Award Competition: Up to ten projects are nominated from the Department of Family Medicine.
    b. College of Family Physicians of Canada research awards for Family Medicine Residents: Up to one project is nominated from the Dalhousie University Department of Family Medicine
    c. The College of Family Physicians of Canada scholarly activity award. Up to one project is nominated from the Dalhousie University Department of Family Medicine. This award aims to recognize outstanding family medicine scholarship performed by a resident.
    d. Nominee(s) for the Residency PBLP Scholarship Award

## Resident Project Repository

A selection of completed and acceptable resident projects may be posted on Dalhousie University's Postgraduate Family Medicine Brightspace Page (under Resident Resources) for 2 years. This is to provide ideas and to serve as project examples for current Family Medicine Residents.

## Dalhousie Family Medicine Website

The chair of the Resident Project Committee will seek consent from Residents and their Supervisors of the top projects to be published on the Dalhousie Family Medicine Website to share. The top projects are identified by numerical grade as evaluated by the Resident Project Awards Committee.

## Questions

Questions regarding resident projects may be directed to:
Dr. Laura Sadler
Chair, Resident Project Sub-Committee Phone: 902-473-4700; Fax 902 417-1553
Email: LSadler@dal.ca

## Timelines

### *PGY1 year:*

- The resident must discuss the project topic with the Project Coordinator.
- The resident will select and discuss the content of the project with their Project Coordinator (and Project Supervisor if applicable) by the end of the three-month PGY1 Family Medicine clinical learning experience, but no later than the 1st Tuesday in November.
- The resident will complete Form 1 that they will submit to their Project Supervisor and their Project Coordinator. This proposal will state their research question/objective, a brief background literature review, the type of project and the methodology they will use to answer the research question.
- Residents must have their PGY1 Resident Project Proposal Form (Form I) initiated and submitted via One45 by the 1st Tuesday in November for their Project Coordinator to review/approve.
- Residents are required to distribute via One45 a Project Supervisor Agreement Form (Form II), which must be completed/signed by their Project Supervisor and submitted via One45 by the 1st Tuesday in December for their

Project Coordinator to review.

- Residents whose projects are research projects, must apply for approval through their local Research Ethics Board (REB). It should be noted that this can at times be a lengthy process, and residents must plan accordingly in order to allow sufficient time for punctual project completion.
- If necessary, the resident should write out a budget and submit it to their Project Coordinator. (see below for budget guidelines)
- At some sites, PGY1 residents are required to present their proposal in a 10-minute oral format during their site's Resident Project Presentation Day (usually held in May), or at another venue, as determined by their site. PGY1 residents are to confirm details with their Project Coordinator.

***PGY2 year:***

- The resident will review their project progress and distribute the Project Progress Report (Form III) via One45 to their Project Supervisor. This form is to be submitted by their supervisor via One45 no later than the 1st Tuesday in September. The progress report will be reviewed by the Project Coordinator.
- Once the project is complete, the resident will distribute the Resident Project Final Approval for Assessment Form (Form IV) to their supervisor via One45 no later than the 1st Tuesday in January. It will be approved by their Project Supervisor as being ready to be sent out for assessment. Project Coordinators will review these forms.
- The Final Project must be submitted to the resident's site designate (named by each site), and from there forwarded to the Education Committee Assistant (fmcommittees@dal.ca) as a single PDF document by the 2nd Monday in February. The PDF document must not exceed a file size of 10MB and must be formatted in such a way as can easily be emailed and opened by project reviewers. The Education Committee Assistant will send the project to a project reviewer for assessment.
- A PowerPoint slide presentation (or appropriate alternative medium of presentation) of the project must be completed and submitted to the residents' site designate by the 1st Monday in May of their PGY2 year.
- PGY2 residents will present their projects orally during their Site Project Presentation event.
- If a resident is concluding the program four months or more beyond the usual program end-date, submission of the written project can be deferred to 2 months before their concluding date, and an oral presentation will be arranged separately.

See the attached worksheet for timeline summaries. Please note that these deadlines may be modified if the nature of the project is such that data collection or analysis cannot be completed by the required dates. In such case, the resident must discuss the new timelines in advance with their Project/Research Coordinator and new timelines will be formally established.

Residents in the three-year integrated FM/EM program may, with permission from their Project/Research Coordinator and Project Supervisor, extend their project timeline into the third year of their residency program.

## Residents Completing Off-Cycle

Residents who will be completing off-cycle should contact their supervisor and project coordinator(s) to discuss timing of submission for forms and the final written project if they will not be following the above timelines.

Submission of the written project can be deferred if a resident is concluding the program four months or more beyond the usual program end-date. In this case, the project must be submitted a minimum of 2 months before their concluding date to allow for assessment and presentation. An oral presentation will be arranged separately based on availability of the resident, supervisor, and project coordinator(s). This should occur after submission of the final written project and prior to their concluding date but can occur before or after marking.

## Worksheet and Dates for Completion of Resident Project

| PGY1 | | | | |
|---|---|---|---|---|
| Form | Task | Timeline | Dates | Task Complete |
| | Meet with Project/Research Coordinator to begin formulating a type of project | July – September | Suggest by early September | |
| | Select Project Supervisor | July – October | Suggest complete by early October | |
| | Begin conducting literature review | September – December | | |
| Project Proposal (Form I) | Residents must initiate and complete Form I (Resident Project Proposal) for Project Coordinators to review.<br><br>Residents are responsible for ensuring the form is completed in a timely manner, in compliance with deadlines.<br><br>Once the Project Supervisor has been named, the resident is responsible to provide them with the Project Supervisor Kit | | 1st Tuesday in November of the resident's PGY1 year | |
| Project Supervisor Agreement Form (Form II) | Residents are responsible for initiating Form II (Project Supervisor Agreement Form), to be completed and submitted by their Project Supervisor.<br><br>Residents are responsible for ensuring the form is completed in a timely manner, in compliance with deadlines | | 1st Tuesday in December of the resident's PGY1 year | |
| | If the resident project is a research project, the resident must apply to their local Research Ethics Board (REB) for approval. (NOTE: This may be a lengthy process and residents must plan accordingly.) | September - February | | |
| | At some sites, Proposal Presentation Day (10-minute presentation) | | Usually in May (date to be determined by each site) | |

## Worksheet and Dates for Completion of Resident Project (Continued)

**PGY2**

| Form | Task | Timeline | Dates | Task Complete |
|---|---|---|---|---|
| Resident Project Progress Report (Form III) | Resident must initiate Form III (Resident Project Progress Report) for their project supervisor to complete (in collaboration with resident) and submit.<br><br>Residents are responsible for ensuring the form is completed in a timely manner, in compliance with deadlines. | | 1st Tuesday in September in PGY2 year | |
| Project Draft and Project Final Approval Form (Form IV) | Completed draft of project given to Project Supervisor for feedback.<br><br>Residents must initiate Form IV (Project Final Approval for Assessment) for their project supervisor to complete (in collaboration with resident) and submit.<br><br>Residents are responsible for ensuring the form is completed in a timely manner, in compliance with deadlines. | | 1st Tuesday in January of PGY2 year | |
| Final Project | Completed FINAL project to be submitted by the designated person(s) at each site to the Education Committee Assistant (fmcommittees@dal.ca) | | 2nd Monday in February of PGY2 year | |
| | Education Committee Assistant will distribute projects for assessment | As received | | |
| | Residents will present their projects orally during their Site Project Presentation event. | | Usually in May (date to be determined by each site) | |

## Dalhousie Family Medicine Resident Project Forms I-IV (one45 Tasks)

Beginning in the 2018/2019 academic year, resident Project Forms I-IV will now be completed via one45 Forms. The table below provides a description of how the Forms are to be completed and by whom. Please contact your site administrator if you have any further questions.

<table>
<tr><th>Form:</th><th>Due:</th><th>Resident's tasks:</th><th>Project Supervisor's tasks:</th><th>Project Coordinator's tasks:</th></tr>
<tr><td>Form I:<br>Resident Project Proposal.</td><td>PGY1 year:<br>1st Tuesday in Nov.</td><td>The resident initiates and completes Project Form I. The submitted Form is automatically sent directly to the Project Coordinator for review.<br>The Project Coordinator's comments and approval are automatically sent directly to the resident who is required to review and sign-off.</td><td>No responsibility for Form I</td><td rowspan="5">Blank Project Forms will be listed in the Project Coordinator's one45 ToDos.<br><br>As Project Forms are completed, a blue check marked box will appear next to the residents' Forms. Visual cues will appear under the Contributors' column to indicate that the Form is completed.<br><br>The Project Coordinator is to:<br>• Check one45 regularly for completed Project Forms;<br>• review completed Forms when indicated by a blue check marked box;<br>• provide comments directed to resident; and,<br>• approve/accept or decline the Form.</td></tr>
<tr><td>Form II:<br>Project Supervisor Agreement.</td><td>PGY1 year:<br>1st Tuesday in Dec.</td><td>Resident distributes (i.e. forwards) blank Project Form II, III, and IV to an approved Project Supervisor(s) who will complete it for the resident.</td><td rowspan="4">Project Supervisors receive blank Project Forms II, III, and IV from the resident.<br><br>Project Supervisor completes those Forms based on communication(s) from the resident and submits them before the Forms' due dates.<br><br>Completed Project Forms are automatically sent directly to the Project Coordinator for review.<br><br>Residents will also review and sign-off on Project Supervisor's and Project Coordinator's comments.</td></tr>
<tr><td>Form III:<br>Project Progress Report.</td><td>PGY2 year:<br>1st Tuesday in Sep.</td><td rowspan="2">The Project Supervisor's completed Forms are automatically sent directly to the Project Coordinator for approval/acceptance and response.</td></tr>
<tr><td>Form IV:<br>Project Final Approval for Assessment.</td><td>PGY2 year:<br>1st Tuesday in Jan.</td></tr>
<tr><td colspan="2"></td><td>The Project Coordinator's comments and approval are automatically sent directly to the resident who is required to review and sign-off.</td></tr>
</table>

**Reminders for Project Coordinators**

- Project Coordinators should check their one45 account regularly under the Summary Evaluations section for Project Forms that have been completed (indicated by a blue check marked box).
- Form IV is to be reviewed and only accepted after final edits have been completed. This confirms that the Project is ready to be sent out for marking.

**Reminders for Residents**

- The one45 Forms I-IV are designed to keep you on task. Please ensure you have ongoing communication with your Project Supervisor and Project Coordinator regarding the details surrounding the Forms.
- Once Form IV is approved and accepted by the Project Coordinator, the resident is to send the final written Project to the site designate for marking.

| | | |
|---|---|---|
| Dalhousie University Fam Med Postgrad | Evaluated By: evaluator's name<br>Evaluating: person (role) or moment's name (if applicable)<br>Dates: start date to end date | |

* indicates a mandatory response

Form-1: Resident Project Proposal.

All family medicine residents are required to complete a resident project as part of their residency program requirements. The purpose of the resident project is to introduce the resident to the process of finding answers to questions commonly encountered in primary care. Residents are expected to submit a written paper and give an oral presentation at their site's project presentation event in their final year of residency.
Types of Projects:
Clinical Education Tool
Literature Appraisal
Medical / Health Humanities
Medical Education Tool
Advocacy Project
Research Project
Quality Improvement / Patient Safety

Please submit this one45 form no later than the first Tuesday in November of your PGY1 year.

*Proposed project supervisor's full name:

*Project supervisor's email address:

Proposed co-supervisor(s) full name:

Proposed co-supervisor(s) email address:

Once the project supervisor has been named, the resident is responsible to provide them with the Project Supervisor Information Kit.
*Working Title of Resident Project:
*Type of project:

- Clinical Education Tool
- Literature Appraisal
- Medical/Health Humanities
- Medical Education Tool
- Advocacy Project
- Research Project
- Quality Improvement/Patient Safety

Research Question/Objective

Brief background literature review Methodology
*Brief description:

*Brief timeline:
Resident's comments for project coordinator(s):

Research Ethics Board (REB) Application Status:

| | n/a | No | Yes |
|---|---|---|---|
| *Will this project require REB approval? | ○ | ○ | ○ |

If "No," please explain why:

| | | |
|---|---|---|
| Dalhousie University Fam Med Postgrad | Evaluated By: evaluator's name<br>Evaluating: person (role) or moment's name (if applicable)<br>Dates: start date to end date | |

* indicates a mandatory response

Form-2: Project Supervisor Agreement.

*Please submit this one45 form no later than the first Tuesday in December of the PGY1 year.

Project Supervisor:
All residents should have a Project Supervisor and a Project Coordinator.

The Project Supervisor will counsel the resident on the content of the project. The Project Supervisor may be a clinical supervisor in the home base Family Medicine Unit, another family physician, a consultant or another appropriate individual. If someone other than a family physician is selected, it is important to obtain advice on the relevance of the project to Family Medicine from the Project Coordinator.
The Project Coordinator will discuss the project format and requirements with the resident on a regular basis and encourage the resident to adhere to the deadlines. In some cases the Project Coordinator may also be the Project Supervisor.
Click here to access our Project Supervisor Information Kit

Please submit this one45 form no later than the first Tuesday in December of the PGY1 year. I have agreed to be the Project Supervisor for this resident's project:
- ○ No
- ○ Yes

*Project Supervisor's full name:
Proposed co-supervisor(s) full name, if applicable:

*Are you, or one of the committee members for this resident project, a faculty member of Dalhousie's Department of Family Medicine?

- ○ No
- ○ Yes

*Type of project:
- ○ Clinical Education Tool
- ○ Literature Appraisal
- ○ Medical/Health Humanities
- ○ Medical Education Tool
- ○ Advocacy Project
- ○ Quality Improvement / Patient Safety
- ○ Research

Research Ethics Board (REB) Application Status:

| | n/a | No | Yes |
|---|---|---|---|
| *Will this project require REB approval? | ○ | ○ | ○ |

If "No," please explain why:

| | | |
|---|---|---|
| Dalhousie University Fam Med Postgrad | Evaluated By: evaluator's name<br>Evaluating: person (role) or moment's name (if applicable)<br>Dates: start date to end date | |

* indicates a mandatory response

Form-3: Project Progress Report

Please submit this one45 form no later than the first Tuesday in September of the PGY2 year.

*Project title:

*Type of project:
- Clinical Education Tool
- Literature Appraisal
- Medical/Health Humanities
- Medical Education Tool
- Advocacy Project
- Quality Improvement / Patient Safety
- Research

Comments:

*As the Project Supervisor, I have reviewed the progress of the resident project.
- No
- Yes

As the Project Co-Supervisor (if applicable), I have reviewed the progress of the resident project.
- No
- Yes

Research Ethics Board (REB) Application Status:

| | n/a | No | Yes |
|---|---|---|---|
| *Will this project require REB approval? | ○ | ○ | ○ |

*Why, or why not?

| | n/a | No | Yes |
|---|---|---|---|
| *If "Yes", has REB been obtained? | ○ | ○ | ○ |

If "No", what is the status/plan?

* indicates a mandatory response

Form 4: Project Final Approval for Assessment.

Please submit this one45 form no later than the first Tuesday in January of the PGY2 year.
*Project Title:

*As the Project Supervisor, I have reviewed and approved the final draft copy of the resident project for assessment:
- No
- Yes

As the Project Co-supervisor (if applicable), I have reviewed and approved the final draft copy of the resident project for assessment:
- No
- Yes Comments:

Research Ethics Board (REB) Application Status:

| | n/a | No | Yes |
|---|---|---|---|
| *Did this project require REB approval? | | | |
| *If yes, was REB obtained? | | | |

## Dalhousie Family Medicine Resident Project Assessment Rubrics

## *Dalhousie Family Medicine Resident Project Assessment Rubric: Clinical Education Tool*

Resident: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Identification of the need for a Medical Education tool | Problem/topic clearly identified<br>Objectives for development of the project are richly stated<br>Complete description of the need for this project and/or a description of existing/similar projects | Problem/topic clearly stated, originally, creativity<br>Objectives less richly stated<br>Clear description of the need for the tool and/or the value of existing/similar projects | Problem/topic stated<br>Objectives not fully stated<br>Brief description of the need for the project and/or the value of existing/similar projects | Problem/topic not defined<br>Objectives not stated<br>Need for the tool and/or the value of existing similar not stated | /20 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC | YES:<br>Question appeals to or is of interest to the Family Medicine community across domains of care<br>Relevance to Family Medicine is discussed or identified<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Question/problem is of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions.<br>Do NOT grade until satisfactory |
| Information Gathering: Literature review of the identified problem | Complete description of the literature on the value of existing tools<br>Clear description of existing tools<br>Critical evaluation of strength of evidence and certainty of conclusions | Some review of the literature<br>Less clearly described existing tools<br>Limited assessment of strength of evidence and certainty of conclusions | Sparse/basic literature description<br>Minimal statement about strength of evidence and certainty of conclusions | Incomplete literature review to support the identified problem/topic<br>No mention of strength of evidence and certainty of conclusions | /15 |
| Methodology | Development of the tool clearly incorporates literature findings and formal tool design method<br>Includes a thorough consideration of the applicability of the tool to the defined medical education setting to be utilized | Development of the tool incorporates literature findings and tool design method<br>Includes consideration to the applicability of the tool to the defined medical education setting to be utilized | Partial incorporation of the literature findings and tool design method<br>Some consideration to the applicability of the tool to the medical education setting to be utilized | Inadequate incorporation of the literature findings and no mention of tool design method<br>Inadequate consideration to the applicability of the tool to the defined medical education setting to be utilized | /20 |
| Achievement of Goals/Objectives | The tool is exceptional in meeting the stated objectives<br>for the defined medical education setting | The tool highly achieves the stated objectives for the<br>defined medical education setting | The tool meets the stated objectives for the defined medical education setting | The tool does not meet the stated objectives for the defined medical education setting | /10 |

## *Dalhousie Family Medicine Resident Project Assessment Rubric: Clinical Education Tool*

Resident: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Results and Discussion: The Completed Tool | The tool is of outstanding quality<br>Practical application into practice and tool assessment is straightforward and well explained<br>Discusses realistic implications for practice<br>Suggests practical approach to evaluating the utility of the proposed tool | The tool is of high quality<br>Explanation of application into practice and assessment<br>Suggests some implications for practice and basic approach to evaluating the utility of the proposed tool | Tool is of average quality<br>Some explanation of application into practice and assessment<br>Mentions at least one implication for practice and mentions need to evaluate the utility of the proposed tool | Poor quality tool<br>Minimal discussion of the practical application and assessment of the tool<br>No or too little discussion of implications | /25 |
| Quality of Language | YES:<br>Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO:<br>Word choices invite misunderstanding or may give offence<br>Consistently poor grammar and spelling | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Organized thoughts<br>Excellent layout of tool<br>Appropriate education tool project components | Organized thoughts<br>Appropriate education tool project components | Fairly organized thoughts<br>Appropriate education tool project components | Missing key elements of education tool project components | /10 |
| Proper citation and quality of references | YES<br>Appropriate number of references (min. 15)<br>The quality of references meets the expected standards. | | | NO<br>Insufficient citations<br>Does not meet desired standard of quality | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | /100 |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

Resident: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Identification of the need for a Humanities Project | Problem/topic clearly identified<br>Objectives for development of the project are richly stated<br>Complete description of the need for this project and/or a description of existing/similar projects | Problem/topic clearly stated, originally, creativity<br>Objectives less richly stated<br>Clear description of the need for the tool and/or the value of existing/similar projects | Problem/topic stated<br>Objectives not fully stated<br>Brief description of the need for the project and/or the value of existing/similar projects | Problem/topic not defined<br>Objectives not stated<br>Need for the tool and/or the value of existing similar not stated | /20 |
| Relevance to Family Medicine (across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC) | YES:<br>Project/topic appeals to or is of interest to the Family Medicine community, student learned from experience, open to learning, independent worker, took initiative<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Problem/topic is of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Methods: | Thorough description of methods used to review the literature, develop the art piece and answer the research questions. | Some description of methods used to review the literature, develop the art piece and answer the research question. | Sparce description of methods used to review the literature, develop the art piece and answer the research question. | No mention of methods used to review the literature, develop the art piece or answer the research question. | /15 |
| Achievement of Goals/Objectives | The project is exceptional in meeting the stated objectives for the defined health setting | The project highly achieves the stated objectives for the defined health setting | The project meets the stated objectives for the defined health setting | The project does not meet the stated objectives for the defined health setting | /10 |

| | | | | | |
|---|---|---|---|---|---|
| Results and Discussion | RESULTS<br>The results were extremely well presented and of high quality<br>The presentation was meaningful and engaging | RESULTS<br>The results were well presented and of good quality | RESULTS<br>The results were adequately presented and of adequate quality<br>The presentation was less meaningful and engaging | RESULTS<br>The results were inadequately presented and not of quality<br>The presentation was not meaningful nor engaging | /25 |
| | DISCUSSION<br>Insightful, very detailed<br>Rich discussion of how the project connects to the literature<br>Identifies strengths and limitations<br>A rigorous discussion of implications for practice and further development | DISCUSSION<br>Insightful, less detailed<br>Some discussion of how the project connects to the literature<br>Identifies strengths and limitations<br>Some discussion of implications for practice and further development | DISCUSSION<br>Minimal insights and detail<br>Limited discussion of how the project connects to the literature<br>limited discussion of strengths and limitations<br>limited discussion of implications for practice and further development | DISCUSSION<br>Insufficient insights and detail<br>Insufficient discussion of how the project connects to the literature<br>Insufficient discussion of strengths and limitations<br>Insufficient discussion of implications for practice and further development | /20 |
| Quality of Language | YES:<br>Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately<br>Cultural and identity sensitivity as appropriate | | | NO:<br>Word choices invite misunderstanding or may give offence<br>Consistently poor grammar and spelling<br>Insensitive to culture and/or identity | YES / NO<br>If “NO”, return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Exceptionally well-organized thoughts, Appropriate sections in the paper. | Organized thoughts, Appropriate sections in the paper. | Fairly organized thoughts<br>Appropriate, appropriate sections in the paper. | Missing key elements of the paper. | /10 |
| Proper citation and quality of references | YES<br>Appropriate number of references (min. 15)<br>The quality of references meets the expected standards. | | | NO<br>Insufficient citations<br>Does not meet desired standard of quality | YES / NO<br>If “NO”, return project to resident for revisions. Do NOT grade until satisfactory |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | /100 |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. “Requires Revisions” must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

Resident: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Define question/thesis or presenting case | Original question/thesis position presented<br>Demonstrates the significance of the question with strong rationale<br>Uses rich detail and identifies perceptively what is at issue | Clear question/thesis position presented<br>Demonstrates judgement in the rationale for the importance of the question<br>Identifies some significant points | Less clear definition of the topic and question<br>Further discussion needed regarding the rationale for the importance of the topic | Vague topic presented<br>Poorly thought-out rationale<br>Does not match the project that was carried out | /20 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC) | YES:<br>Question/problem appeals to or is potentially of interest to the Family Medicine community across domains of care<br>Relevance to Family Medicine is discussed or identified<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Question/problem is of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions.<br>Do NOT grade until satisfactory |
| Researching/ Information Gathering | Conducted a comprehensive and recent review of the literature<br>Clear and structured approach; inclusion/exclusion criteria identified<br>Judiciously selected important sources to focus on; rejected or qualified less reliable sources | Variety of sources used<br>Inclusion/exclusion criteria identified<br>Well-chosen sources according to clear criteria as appropriate<br>Balanced in perspectives; took into account strengths and limitations of sources | Did not present the most relevant sources<br>Could be more balanced in the sources used<br>Takes account of pitfalls in some sources | Fails to make use of appropriate literature<br>Makes use of unreliable sources | /20 |
| Presenting and evaluating sources/other perspectives | Summarized diverse literature views accurately and fairly<br>Consistently focuses on the most central and significant ideas<br>Critical evaluation of strength of evidence and certainty of conclusions using an established procedure or grading system | Summarized views of others fairly, with few errors<br>Critical evaluation of strength of evidence and certainty of conclusions using less rigorous application of established procedures.<br>Balanced detail with focus in summary and/or critique | Needs to be more fair in criticisms and summarizing the views of others<br>Should be more judicious in honing in on what is important<br>Minimal evaluation of strength of evidence and certainty of conclusions | Presented views of others in inaccurate or unfair ways<br>No or too little discussion of strength of evidence and certainty of conclusions | /25 |

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Applying sources; reaching conclusions, resolving case, proving thesis | Successfully synthesized and weighed diverse kinds of evidence<br>Provided a compelling argument/evidence for conclusion, and/or a conclusion that is appropriately qualified given the argument/evidence | Drew plausible conclusion from the evidence and arguments<br>Demonstrated some ability to synthesize and/or evaluate diverse evidence | Should improve the argument(s) provided<br>Recommend getting more comfortable in evaluating and synthesizing information/ reaching clear conclusion | Project fails to support views with evidence and arguments<br>Poor synthesizing of information and reaching conclusions | /25 |
| Quality of Language | YES:<br>Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO:<br>Word choices invite misunderstanding or may give offence<br>Use consistently poor grammar and spelling | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Organized thoughts<br>Smooth transitions<br>Appropriate literature/ position paper project components | Organized thoughts<br>Appropriate literature/ position paper project components | Fairly organized thoughts<br>Appropriate literature review/ position paper project components | Missing key elements of literature review/position paper project components | /10 |
| Proper citation and quality of references | YES:<br>□ Proper citations<br>□ Adequate number of references | | | NO:<br>Improper citation | YES / NO |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | /100 |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

Resident Name: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Significance of the issue and advocacy objective | Demonstrates the significance of the issue with strong rationale<br>Advocacy objective clearly explained and aligned with the issue | Demonstrates judgement in the rationale for the importance of the issue<br>Advocacy objective identified | Further discussion needed regarding the rationale for the importance of the issue<br>Advocacy objective could be clarified | Importance of the issue not established.<br>Advocacy objective unclear | /20 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC. | YES:<br>Issue is relevant to the Family Medicine community across domains of care.<br><br>Relevance to Family Medicine is discussed or identified.<br>The project may be linked to the principles of Family Medicine. | | | NO:<br>Issue is of no interest to the Family Medicine community.<br><br>Relevance to Family Medicine is not identified or approved. | YES/NO<br>If "NO" return project to resident for revisions.<br>Do NOT grade until satisfactory. |
| Researching the issue/Identifying allies | Conducted a comprehensive review of evidence including all relevant perspectives.<br><br>Interest-holders (including affected communities and potential allies) comprehensively considered. | Includes a variety of sources, considering a range of relevant perspectives.<br><br>Relevant interest-holders (including affected communities and potential allies) identified. | Some clearly relevant sources of evidence not considered.<br><br>Highly relevant interest-holders (including affected communities and potential allies) not identified. | Incomplete or unreliable review of evidence.<br><br>No consideration of interest-holders (including affected communities and potential allies) | /20 |
| Presenting and evaluating perspectives/Advocacy strategy | Position clearly articulated and supported by relevant, high quality, evidence.<br><br>Strength of evidence critically evaluated with attention to all relevant perspectives.<br><br>Advocacy strategy described or undertaken with careful reflection on achievement of intended objective, strategies, and partnerships. | Position explained and supported with some relevant evidence.<br><br>Strength of evidence considered, with consideration of some different perspectives.<br><br>Advocacy strategy largely aligned with issues, objective and evidence. | Should improve the argument(s) provided.<br><br>Minimal evaluation of strength of evidence and important perspectives overlooked.<br><br>Objective unclear and strategy needing re-evaluation. | Project fails to support position with evidence and arguments.<br><br>No discussion of strength of evidence.<br>Presented some perspectives in inaccurate or unfair ways.<br>Advocacy objective and strategy misaligned with issue, objective, and evidence. | /25 |

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Applying sources to written argument/implementation and reflection. | Advocacy strategy described or undertaken with careful reflection on achievement of intended objective, strategies and partnerships. | Advocacy strategy described or undertaken with some reflection of achievement of intended objective, strategies and partnerships. | Advocacy strategy described or undertaken with some reflection on achievement of intended objective, strategies and partnerships. | Advocacy strategy described or undertaken with little attention to achievement of intended objective, strategies and partnerships. | /25 |
| Quality of Language | YES:<br>Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO:<br>Word choices invite misunderstanding or may give offence<br>Use consistently poor grammar and spelling. | YES / NO<br><br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Organized thoughts. Smooth transitions. Appropriate literature/position paper project components. | Organized thoughts. Appropriate literature/position paper project components. | Fairly organized thoughts. Appropriate literature review /position paper project components. | Missing key elements of literature/position paper project components. | /10 |
| Proper citation and quality of references | YES:<br><br>Proper Citations<br>Adequate number of references | | | NO:<br><br>Improper citation | YES/NO |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | /100 |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

| Resident: | Assessor: | Date: | | | |
|---|---|---|---|---|---|
| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
| Identification of the need for a Medical Education tool | Problem/topic clearly identified<br>Objectives for development of the project are richly stated<br>Complete description of the need for this project and/or a description of existing/similar projects | Problem/topic clearly stated, originally, creativity<br>Objectives less richly stated<br>Clear description of the need for the tool and/or the value of existing/similar projects | Problem/topic stated<br>Objectives not fully stated<br>Brief description of the need for the project and/or the value of existing/similar projects | Problem/topic not defined<br>Objectives not stated<br>Need for the tool and/or the value of existing similar not stated | /20 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC | YES:<br>Question appeals to or is of interest to the Family Medicine community across domains of care<br>Relevance to Family Medicine is discussed or identified<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Question/problem is of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Information Gathering: Literature review of the identified problem | Complete description of the literature on the value of existing tools<br>Clear description of existing tools<br>Critical evaluation of strength of evidence and certainty of conclusions | Some review of the literature<br>Less clearly described existing tools<br>Limited assessment of strength of evidence and certainty of conclusions | Sparse/basic literature description<br>Minimal statement about strength of evidence and certainty of conclusions | Incomplete literature review to support the identified problem/topic<br>No mention of strength of evidence and certainty of conclusions | /15 |
| Methodology | Development of the tool clearly incorporates literature findings and formal tool design method<br>Includes a thorough consideration of the applicability of the tool to the defined medical education setting to be utilized | Development of the tool incorporates literature findings and tool design method<br>Includes consideration to the applicability of the tool to the defined medical education setting to be utilized | Partial incorporation of the literature findings and tool design method<br>Some consideration to the applicability of the tool to the medical education setting to be utilized | Inadequate incorporation of the literature findings and tool design method<br>Inadequate consideration to the applicability of the tool to the defined medical education setting to be utilized | /20 |
| Achievement of Goals/Objectives | The tool is exceptional in meeting the stated objectives for the defined medical education setting | The tool highly achieves the stated objectives for the defined medical education setting | The tool meets the stated objectives for the defined medical education setting | The tool does not meet the stated objectives for the defined medical education setting | /10 |

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Results and Discussion: The Completed Tool | The tool is of outstanding quality<br>Practical application into practice and tool assessment is straightforward and well explained<br>Discusses realistic implications for practice<br>Suggests practical approach to evaluating the utility of the proposed tool | The tool is of high quality<br>Explanation of application into practice and assessment<br>Suggests some implications for practice and basic approach to evaluating the utility of the proposed tool | Tool is of average quality<br>Some explanation of application into practice and assessment<br>Mentions at least one implication for practice and mentions need to evaluate the utility of the proposed tool | Poor quality tool<br>Minimal discussion of the practical application and assessment of the tool<br>No or too little discussion of implications | /25 |
| Quality of Language | YES: Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO:Word choices invite misunderstanding or may give offence<br>Consistently poor grammar and spelling | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Organized thoughts<br>Excellent layout of tool<br>Appropriate education tool project components | Organized thoughts<br>Appropriate education tool project components | Fairly organized thoughts<br>Appropriate education tool project components | Missing key elements of education tool project components | /10 |
| Proper citation and quality of references | YES<br>Appropriate number of references (min. 15)<br>The quality of references meets the expected standards. | | | NO<br>Insufficient citations<br>Does not meet desired standard of quality | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | /100 |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required

| Resident: | Assessor: | | | Date: | |
|---|---|---|---|---|---|
| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
| Identification of the need for self-learning questions tool | -Theme for the questions clearly identified<br>- Complete description for the evidence gap in theme area selected<br>-Objectives for development of the questions are richly stated | -Theme clearly stated<br>-Clear description for the evidence gap in theme area selected<br>-Objectives less richly stated | -Theme stated<br>-Brief description for the evidence gap in theme area selected<br>-Objectives sufficiently stated | -Theme not defined<br>-Insufficient description for the evidence gap in theme area selected<br>-Objectives not stated | /20 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC | YES:<br>Theme and questions appeal to or are of interest to the Family Medicine community across domains of care<br>Relevance to Family Medicine is discussed or identified<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Theme or questions of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Information Gathering: Articles selection | -Complete description of each paper -Complete rationale for choosing each article<br>-Complete assessment of the strength of evidence and certainty of conclusions for each article. | -Good description of the articles on which each question is based<br>-Sound rationale for choosing each article<br>-Good assessment of the strength of evidence and certainty of conclusions for each article. | -Minimal description of the articles on which each question is based.<br>-Limited rationale for choosing each article<br>-Limited assessment of the strength of evidence and certainty of conclusions for each article. | -Inappropriate papers or incomplete description of the articles on which each question is based<br>-No rationale for choosing the articles<br>-No assessment of the strength of evidence and certainty of conclusions for each article. | /15 |
| Methodology | -Clear and thorough description of how the questions and educational points were written.<br>-Attention to all the self-learning question-writing guidelines.<br><br>***(*see Lespérance S. 2025 Self-Learning Question Writing Guide*)** | -Good description of how the questions and educational points were written.<br>-Good attention to the guidelines. | -Adequate description of how the questions and educational points were written.<br>-Sufficient attention to the guidelines. | -Insufficient description of how the questions and educational points were written.<br>-Insufficient attention to the guidelines. | /20 |
| Achievement of Goals/Objectives | Fully achieves objective of enabling users to remain current with knowledge | Achieves objective of enabling users to remain current with knowledge | Sufficiently achieves objective of enabling users to remain current with knowledge | Does not sufficiently achieve objective of enabling users to remain current with knowledge | /10 |

| | | | | | |
|---|---|---|---|---|---|
| Results and Discussion: The Completed Questions and Educational Points | -Six questions provided (including at least one Short-Answer Management Problem (SAMP)<br>-The questions and educational points are of outstanding quality<br>-For each question, practical application into practice is well explained and implications of the findings discussed | -Six questions provided<br>-The questions and educational points are of very good quality<br>-For each question, practical application into practice is explained and implications of the findings discussed | -Six questions provided<br>-The questions and educational points are of sufficient quality<br>-For each question, practical application into practice is somewhat explained and at least one implication of the findings discussed | -Less than six questions provided and or/ no SAMP<br>-The questions educational points are of insufficient quality<br>-Does not discuss practical applications and realistic implications for practice | /25 |
| Quality of Language | YES: Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO: Word choices invite misunderstanding or may give offence<br>Consistently poor grammar and spelling | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | -Very well-organized thoughts<br>-Excellent layout of questions and educational points<br>-Appropriate education tool project components | -Organized thoughts<br>-Good layout of questions and educational points<br>-Appropriate education tool project components | -Fairly organized thoughts<br>-Sufficient layout of questions and educational points<br>-Appropriate education tool project components | -Thoughts insufficiently organized<br>-Insufficient layout of questions and educational points<br>-Missing key elements of education tool project components | /10 |
| Proper citation and quality of references | YES<br>One appropriate article for each question, and overall appropriate number of references (min. 15)<br>The quality of references meets the expected standards. | | | NO<br>Insufficient citations<br>Does not meet desired standard of quality | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | /100 |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

***Dalhousie Family Medicine Resident Project Assessment Rubric (check one):***
***□ Research or □ Practice Quality Improvement***

Resident: Assessor: Date:

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Define research question | Clear rationale for study question<br>Clearly stated objectives<br>Innovative nature of project | Clear rationale for study question only<br>Clearly stated objective<br>Study was somewhat innovative (question previously asked but interesting aspects of author's approach to the question) | Research question defined but not innovative<br>Objectives stated | Research question not defined<br>Objectives not stated | /10 |
| Relevance to Family Medicine across domains of care (including domain specific competencies required for awarding Certificates of Added Competence (CAC) by the CFPC | YES:<br>Study question appeal to the Family Medicine community across domains of care<br>Relevance to Family Medicine is identified and/or discussed<br>The project may be linked to the Principles of Family Medicine | | | NO:<br>Study question is of no interest to the Family Medicine community<br>Relevance to Family Medicine is not identified or approved | YES/NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Background literature review | Comprehensive literature review<br>Recent evidence reviewed<br>Critical evaluation of strength of evidence and certainty of conclusions | Adequate literature review<br>Recent evidence reviewed<br>Limited assessment of strength of evidence and certainty of conclusions | Brief/short literature review<br>Limited but adequate sources used<br>Minimal statement about strength of evidence and certainty of conclusions | Incomplete literature review<br>Does not include recent evidence<br>No mention of strength of evidence and certainty of conclusions | /15 |
| Appropriateness of study design (to answer the research question) | Study design is scientifically sound and answers study question<br>Methods are clearly described with appropriate citation | Study design answers study question<br>Methods are clearly described | Study design answers the question, but more appropriate design exists<br>Methods would benefit from further explanation | Study design does not adequately answer the study research question | /15 |
| Appropriateness of data analysis | The analysis answers the study question appropriately<br>Well described statistical analysis and rational for the approach chosen | The analysis answers the study question<br>The rationale is explained | The analysis somewhat answers the study question but another statistical approach would be more appropriate | The analysis is not able to answer the study question<br>Inappropriate statistical tests chosen | /15 |

| | Outstanding | Highly Acceptable | Acceptable | Requires Revisions | |
|---|---|---|---|---|---|
| Results | Results included and clearly presented<br>Tables/graphs were of high standard and appropriate for the type of project | Results included and clearly presented<br>Tables/graphs appropriate for the type of project | Minimum level of results presented<br>Basic tables/graphs presented | Results inadequately presented | /15 |
| Discussion/ Conclusions | Proper discussion of key findings, including strengths and limitations<br>Comparison to similar studies in the literature<br>Conclusions drawn reflect the results<br>Discussion of next research steps | Discussion of key findings included<br>Some discussion of strengths/limitations<br>Comparison to similar studies in the literature<br>Conclusions drawn reflect the results | Brief discussion of key findings<br>Less thorough understanding of strengths/limitations<br>Less thorough comparison to similar studies in the literature<br>Conclusions generally reflect the results | Lack of summary of key findings, strengths/ limitations<br>Lack of comparison to similar studies in the literature<br>Conclusions go beyond the limitation of the research conducted | /20 |
| Quality of Language | YES:<br>Clear and accurate word choice<br>Selected appropriate academic vocabulary<br>Well-structured sentences<br>Minimal spelling mistakes and sentence structure concerns<br>Proofread adequately | | | NO:<br>Word choices invite misunderstanding or may give offence<br>Use consistently poor grammar and spelling | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| Organization | Organized thoughts<br>Smooth transitions<br>Appropriate research project components | Organized thoughts<br>Appropriate research project components | Fairly organized thoughts<br>Appropriate research project components | Missing key elements of research project components | /10 |
| Proper citation and quality of references | YES<br>Appropriate number of references (min. 15)<br>The quality of references meets the expected standards. | | | NO<br>Insufficient citations<br>Does not meet desired standard of quality | YES / NO<br>If "NO", return project to resident for revisions. Do NOT grade until satisfactory |
| RESULTS | Outstanding (90-100) | Highly Acceptable (75-89) | Acceptable (60-74) | Requires Revisions (<59) | /100 |
| INSTRUCTIONS: Judge level of achievement based on descriptors in the box and underline some descriptors for guidance or praise. "Requires Revisions" must include specific descriptors and comments to help the resident improve. Only provide a final grade for those in the Outstanding, Highly Acceptable and Acceptable range. Give grades to projects requiring revisions only after the revisions have been satisfactorily completed. | | | | | |

**FEEDBACK** (Required): Please provide an explanation for your evaluation of the project. Please add additional pages if required.

## Guide on How to Organize Resident Projects Based on Type of Project

| | Research | Practice Quality Improvement/Audit | Advocacy Project | Education Tool | Literature Appraisal | Medical/Heath Humanities |
|---|---|---|---|---|---|---|
| Cover Page: 1 page | Must include project title, author's name, name(s) of co-author(s) (if applicable), site, name(s) of Project Supervisor(s), type of project, and date. | | | | | |
| Abstract: ½ page | Introduction, methods, results, interpretation, and 3-5 keywords. | | | | | |
| Introduction/Background: ½ to 1 page | Summary of background literature and state research question.<br><br>State objective(s) or hypothesis(es) | Summary of background literature and state research question.<br><br>State objective(s). | Summary of background literature and the position that will be taken.<br><br>State objective(s). | Summary of background literature and provide evidence for relevance and indicate gaps.<br><br>State objective(s). | Summary of background to topic for literature appraisal and state research question.<br><br>State objective(s). | Summary of background literature and provide evidence for relevance and gaps.<br><br>State objective(s). |
| Study Design / Method: 1 to 2 pages | Describe study methods. | Describe study methods, inclusion and exclusion criteria. | Provide brief description of evidence development to support position (literature review). | Provide methodology for education tool development, audience focus, visuals, language level, tool choice (paper, video), etc. | Describe how review was conducted, data-bases searched, terms used for searches and inclusion/ exclusion criteria used.<br>Method applied for appraisal. | Provide methodology for project development, audience focus, visuals, language level, medium choice (paper, video) etc. Describing the art form that was chosen and why. |
| Results: 3 to 5 pages | Present findings from data. | Present findings from data and describe the strength of the findings. | Detail position in relation to literature/ evidence and, if appropriate, make recommendations or describe the meaning of the position and identify implications for practice. | Statements need to be grounded in the literature.<br><br>Describe the tool and how to implement it.<br><br>Provide the tool in appendix. Identify implications for research. | Summarize findings including evidence strength. | Inclusion of the humanities piece with a description. |
| Discussion: 2 to 3 pages | Synthesize/ interpret findings, link back to literature, identify implications for practice and research. | Synthesize the data and identify implications for practice and research. | | | Synthesize the literature, create meaning, and identify implications for practice and research. | Synthesize/reflect on the piece, link back to literature, identify implication for practice and research. |
| Strengths/ Limitations: ½ page | Share limitations and highlight advantages and disadvantages of the data/literature | | | | | |
| Conclusion: ½ page | Summarize the results | | | | | |
| References | References should be appropriate, relevant, and the style should be consistent. | | | | | |

## *Tips and Tricks When Doing a Family Medicine Resident Research Project*

Conducting research for your resident project can be rewarding and challenging. The following is intended to provide guidance and suggest resources to help with the research endeavor so you can competently complete your project with the time and resources you are prepared to expend. This guide is divided into 5 Steps:

**Step 1:** Select a topic, identify the research problem, and state a clear research question.
**Step 2**: Choose a research method.
**Step 3:** Find an appropriate supervisor.
**Step 4**: Write a research proposal.
**Step 5:** Ask the expert.

**Step 1**: Select a topic, identify the research problem, and state a clear research question.
Topic requirements are:

- It needs a strong relationship to Family Medicine;
- You need to be curious/passionate about it;
- It needs to address a gap in the literature research;
- It needs to be doable within the allotted time and your skill set.

Identifying your research problem/research question

Selecting your research question can be one of the most agonizing and critical steps in developing a solid research study. It defines your whole process, from what background literature you need to read, guiding what method you should use, analysis required, and the findings to report in order to answer the question. Your question should be clear, focused, concise, complex and arguable. This will take time. Step away from your computer; consider what drew you to your topic. What about it animates and matters to you? Listen to yourself and start formulating your question by following your own interests. Remember, you will spend a lot of time researching and writing about the proposed project. If it does not interest you in the beginning, it will certainly become very difficult to write about in the end.

Next, extensively research your topic. What have experts published in peer reviewed journals? How have they framed their research? What gaps, contradictions or concerns arise for you as you read, talk to people, and visit places? Would doing a local project using existing studies enhance knowledge? Consult the literature! If you aren't sure how to do this, consult a subject librarian:

Formulating your research question

Conduct a preliminary literature review of the topic area to help frame the research question.
The question needs to be specific answerable within your time frame.
Is your question adding something new to what is already known? Is it addressing local relevance?
Formulate two or three research objectives that will answer the question.
Think, consider, and estimate
Be sure of the feasibility of your study.

Edit your writing

- Choose your words carefully.
- Rewrite, rewrite, rewrite!
- Keep your sentences short.

**Too broad:** How are doctors addressing diabetes in Canada?

**Appropriately specific:** What are common traits of those suffering from diabetes in Canada, and how can these commonalities be used to aid the medical community in prevention of the disease?

The simple version of this question can be looked up online and answered in a few factual sentences, and leaves no room for analysis. The more complex version is written in two parts; it is thought provoking and requires both significant investigation and evaluation from the writer. As a general rule of thumb, if a quick Google search can answer a research question, it's not very likely effective.

**Step 2**: Choose a research method

There are several methods to choose from for conducting research. They broadly group into qualitative studies, quantitative studies and evidence review. Mixed methods studies draw on both qualitative and quantitative methodologies because they are complementary.

Qualitative Research

- Qualitative research focuses on the interpretation of a situation, a set of behaviors, or a setting.
- Collects large amount of data from a small number of individuals, usually through interviews, analyzed to identify themes.
- Used to understand people's experiences in much greater depth than is possible with quantitative research.
- Qualitative data is analyzed using thematic techniques.
- Methodology examples include: ethnography, narrative, phenomenological, grounded theory and case studies.
- Examples include: interviewing patients to understand how they experience a disorder or health system approach, or interviewing health care providers to understand how they view a clinical tool or their experience of medical education, or describing a series of cases with a similar type of health issue.

Quantitative Research

- Quantitative research measures characteristics of a population or phenomenon of interest.
- Collects data from larger number of individuals through surveys or existing or prospectively collected data sets.
- Quantitative data is analyzed using statistical analyses with tests of statistical significance.
- Methodology examples include: population surveys to measure prevalence of a disorder or implementation of a clinical tool, observational studies using clinical or administrative data sets, or randomized controlled trials of the efficacy and safety of treatments.
- Examples include: identifying correlates of suicide, evaluating measures to prevent suicide, or determining the benefit/risk of a medication to treat a disorder.

**Step 3**: Find an appropriate supervisor

A supervisor should be interested in your project and be available to guide you. If you are having trouble finding one, talk to your site's Project/Research Coordinator.

**Step 4**: Write a research proposal. This will also be required for REB approval.

A research proposal is a study plan that is to be followed in the course of a research study. It is important for you to understand how your objectives, method, analysis plan, and any budgetary requirements, as well as how prepared you are to do the work required and if you have the needed skills. From this, you can identify where you will need assistance.

Research proposal sections:

1. One paragraph introduction to your research question/problem, including why this is important to study, and relevance to Family Medicine. A good first line of a research proposal begins, "The research objective of this proposal is… "

2. Write a more in-depth introduction. After you have identified a pertinent problem and framed a purpose statement, then you need to craft an introduction. Among other things, the introduction to the proposal will include:
   (a) The problem statement
   (b) A brief summary of the literature
   (c) A brief description of any gaps in the literature
   (d) A Purpose statement as to why you are proposing the study and why others should care about the subject matter of your research proposal

3. Background/literature review. Frame your project around the work of others. Remember that research builds on the extant knowledge base, that is, upon the peer reviewed published work of others. Be sure to frame your project appropriately, acknowledging the current limits of knowledge and making clear your contribution to the extension of these limits. Be sure that you include references to the work of others. Also frame your study in terms of its broader impact to the field and to society. (e.g., "If successful, the benefits of this research will be… ")

4. Methods. Determine the Method of Investigation. The method section is the second of the two main parts of the research proposal. In good academic writing it is important to include a method section that outlines the procedures you will follow to complete your proposed study. Many scholars have written about the different types of research methods in articles and textbooks. It is a good idea to site the method and provide a reference. The method section generally includes sections on the following:
   (a) Research design
   (b) Sample size and characteristics of the proposed sample
   (c) Data collection and data analysis procedures

5. Determine the research design.
   a) The next step in good academic writing is to outline the research design of the research proposal. For each part of the design, it is highly advised that you describe two or three possible alternatives and then tell why you propose the particular design you chose. For instance, you might describe the differences between experimental, quasi-experimental, and non-experimental designs before you elaborate on why you propose a non-experimental design.

   b) Determine the Sample Size and the Characteristics of the Sample. There are several free online sample size calculators, though you will need a basic understanding of statistics to know how to use and interpret them. Some sites include:
   http://www.stat.ubc.ca/~rollin/stats/ssize/ http://www.raosoft.com/samplesize.html
   http://homepage.stat.uiowa.edu/~rlenth/Power/

   c) In this section of your research proposal, you will describe the sample size and the characteristics of the participants in the sample size. Describe how you determined how many people to include in the study and what attributed they have which make them uniquely suitable for the study.

6. Determine the data collection and the data analysis procedures.
   a) In this section you will describe how you propose to collect your data (e.g. through a questionnaire survey if you are performing a quantitative analysis or through one-on-one interviews if you are performing a qualitative or mixed methods study).

   b) After you collect the data, you also need to follow a scheme as to how to analyze the data and report the results. In a quantitative study you might run the data through Mintab, Excel, or better yet, SPSS, and if you are proposing a qualitative study you might use a certain computer program like ATLAS to perform your analysis using a specific qualitative approach such as the narrative study, grounded theory study, or framework analysis, that exposed the main themes from the proposed interviews (see Tips and Tricks on Statistics).

7. Software and analysis. There are several options for creating a database, cleaning your data and conducting your analysis.

   Free analysis software is available through Dalhousie. Minitab and SPSS for quantitative analyses and NVivo is used for qualitative analyses. They are found here: https://software.library.dal.ca/index.php. User guides and tutorials can be found here: http://www.minitab.com/en-CA/training/. Additionally, students familiar with conducting statistics in Excel can download the free add-on package to a windows suite. However, reviews demonstrate that Excel has many issues handling data correctly for analysis and is not as user-friendly as Minitab.
   Ethics. You will need to address any ethical considerations and how they will be dealt with, including confidentiality, data storage, etc. If Research Ethics Board (REB) approval is required for your study, you should check the website for relevant REB review. Each site has its own REB process.

**Step 5**: Ask the experts

Review your proposal with your Project Supervisor and site Project/Research Coordinator. Depending on your research needs, you may also consult with the Research Methods Unit (RU) at Dalhousie University. An initial consultation is free, although there may be a fee if further assistance is required. Early consultation can help you avoid costly mistakes.

Consider using the ARECCI tool when determining whether REB approval is required.
http://www.aihealthsolutions.ca/arecci/screening/454024/c70dc91203975709879104256 8d e7c6e

## *Tips and Tricks When Applying to a Research Ethics Board (REB) for a Family Medicine Resident Project*

When collecting data for a resident (research) project involving human beings, an ethics review from a recognized Research Ethics Board (REB) is required.

This application requires a proposal with a brief background, methods and data analysis section. In addition, the REB is particularly interested in the consent process regarding research participants. It is paramount that research participants are volunteers, who are fully aware to what they are consenting.

The Tri-Council - Canadian Institutes for Health Research (CIHR), Social Science and Humanities (SSHRC) and National Science and Engineering Research Council (NSERC) – has developed a joint research ethics policy. See this link for the entire policy:

http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_W_eb.pdf

The Tri-Council states:

> REBs shall consider whether information is identifiable or non- identifiable. Information is identifiable if it, alone or when combined with other available information, may reasonably be expected to identify an individual. The term "personal information" generally denotes identifiable information about an individual.

However, there are some exceptions. The Tri-Council states:

> Research that relies exclusively on publicly available information does not require an REB review when: (a) the information is legally accessible to the public and appropriately protected by law; or (b) the information is publicly accessible and there is no reasonable expectation of privacy.

Chart reviews, or chart audits, usually require REB approval when the resident is planning to discuss the results publicly (Resident Project Day).

Many resident projects are considered "minimally invasive" and they may qualify for an "expedited review". An expedited review usually takes between 3 to 4 weeks, while a full review may take up to 2 months.

After REB approval has been obtained, no changes to the research instruments or recruitment strategy can be made. If that is required, the REB needs to be informed.

Each family medicine resident who requires REB approval needs to obtain it in the province or hospital of their residency.

Please consult with your site Project/Research Coordinator regarding the need for an REB application and how to go about it.

Typically, residents and Project Supervisors will be required to provide a statement around data management and storage requirements

Here are some links for REB websites in various provinces that residents can access for a specific REB application information and forms (each institute has a different process).

**New Brunswick**
https://en.horizonnb.ca/home/research/research-ethics-board.aspx
http://www.mta.ca/reb/Vitalite%20Guide%20Feb%202011%20English.pdf

**Prince Edward Island**
http://www.healthpei.ca/reb

**Nova Scotia**
www.cdha.nshealth.ca/discovery-innovation-29 https://www.cdha.nshealth.ca/discovery-innovation/ethics
https://www.dal.ca/dept/research-services/responsible-conduct-/research-ethics-.

## *Tips and Tricks When Doing Statistics Family Medicine Resident Project*

If you want to do a resident project that involves collecting data and requires statistical analysis, here are some tips of how you can go about that. Keep in mind that you are responsible for doing the work, and should be prepared to know how to collect data, enter data, run your own analysis and interpret your findings, though some resources are available to assist you.

**Assistance Resources**
BEFORE you start collecting data, find somebody you can discuss your plan and statistical needs with. It could be your project supervisor, your resident project site coordinator and/or somebody else who can help you who is experienced with statistics. Resident project site coordinators can help you find someone to assist you. Also, the Dalhousie University Research Methods Unit (see below) can be consulted. There will likely be a cost associated with receiving assistance, and these should be appropriately budgeted. Each resident has access to $50 towards their resident project. Additional funds would require an application with proposal and budget to your resident project site coordinator. Funding is at the discretion of the Department.

**Dalhousie Research Methods Unit**
If you need more sophisticated help you can consult with the Dalhousie Research Methods Unit http://www.cdha.nshealth.ca/discovery-innovation/research-methods-unit. The initial consultation with them is free.

**Software resources**
Several software packages are available to assist with statistical analysis and they often have helpful tutorials. Here are some examples:

**MINITAB**
data in Minitab or import from excel. This program is free of charge from the Dalhousie website; http://its.dal.ca/helpdesk/licences.html (not for MAC users). Minitab is useful for basic statistics, regression, ANOVA, reliability and survival analysis.

Here is a YouTube getting started video: http://www.youtube.com/watch?v=Ql88ytNBNgw Or tutorials from Minitab: http://www.minitab.com/en-GB/training/tutorials/default.aspx

**SPSS**
Statistical Package for Social Sciences (SPSS) is a popular statistical analysis program that is fairly easy to learn with several resources available. All Dalhousie University faculty and learners can download SPSS programs. Resident project site coordinators can sometimes assist in finding access to a computer with SPSS.

**Microsoft Excel**
Microsoft Excel is included in most MS office suites and can be used to conduct some basic statistics and creates attractive charts and graphs. However, a quick Google search will provide concerns as the reliability of its statistical analysis accuracy, so use with caution. You can use Microsoft Excel sheets to enter data.

These Excel sheets can be easily imported to the statistical package Minitab. In theory you can also import the Excel data sheet in SPSS but it has caused some problems in the past.

There are several videos and other supports found online.

**Statistical Analysis Software (SAS)**
If you require more advanced statistical techniques than the above options provide, you may want to use SAS or STATA, and unless you have advanced training and experience, you will likely need to hire assistance. It is recommended you consult with your supervisor, resident project site coordinator and/or the Research Methods Unit.

**R**
R is free software for statistical computing and graphics. It compiles and runs on a wide variety of platforms such as Windows and MacOS. You can download it from http://www.r-project.org/

## *Tips and Tricks When Creating a Clinical or Medical Education Tool Family Medicine Resident Project*

**Clinical education tools** concisely summarize evidence-based information on a specific topic for health care providers, patients or both. While clinical education tools "educate", they are intended to be practical guides to help people in clinical settings.

**Medical education tools**, on the other hand, are a resource for undergraduate or postgraduate medical education, aimed at practicing family physicians, family medicine learners and educators. Examples include but are not limited to Problem Based Learning Cases, OSCE development, online curriculum modules, self-learning question writing.

Examples of education tool products include but are not limited to infographics (handouts), apps, articles, Self-Learning questions or webpages.

Once you have determined that you want to create your own clinical or medical education tool, do the following (see Thompson et al. 2024 for more guidance about these points):

- Identify a topic that interests you.
- Consult the literature to find out whether a tool already exists, whether you could revise an existing tool, or whether you could you adopt an existing tool to local conditions.
- Identify your audience and their needs. You might want to consult representatives of your intended audience early and throughout the process.
- Clarify the message you want to provide.
- Identify the medium you want to use for the education tool. A tool could be passive or interactive. A tool could be disseminated on paper, electronically or in person (presentation). A tool could use text, imagery or video. Do you have easy access to the medium?
- Consider how you could distribute the tool. Examples include but are not limited to paper handouts, email, websites, letters, presentations, and video.
- Identify evidence-based content. Remember, an education tool's information has to be grounded in the scientific literature. In describing how you developed the tool, you must cite relevant literature. The assessor needs to see that your tool's content is scientifically sound.
- Design the tool. Design principles for infographics (handouts) are described in the above reference, but some tools might require other design considerations. Think about the story you want to tell the audience, and how best to combine text and imagery.
- Consider consulting experts in content and design as well as the intended audience.
- Describe how to evaluate the final tool. Even a small pilot test may inform you about the readability and validity of the education tool.

In most cases, the tool will be attached to the required 2,500-to-4,000-word paper as an appendix. The paper describes why and how the tool was developed.

## Self-learning Question Writing

Self-learning question writing is a new medical education tool type in 2025/2026. The Self-Learning Program is a continuing education program under the umbrella of the College of Family Physicians of Canada's CPD offerings for its members. Questions are created by family physicians who select recent (within 6-12 months) articles relevant to the practice of family medicine, and using evidenced-based approaches to adult education, create questions that prompt learning and reflection. Residents choosing to make self-learning questions for their project are referred to the guide by Lespérance mentioned below (2025).

**References:**

Thompson JM, Macartney G, Welton S. Designing infographics – A manual for health care provider learners and practitioners. Charlottetown (PE): Robertson Library, University of Prince Edward Island. 2024. Available from: https://pressbooks.library.upei.ca/infographicsmanual. https://doi.org/10.32393/DesigningInfographics. A PDF version is also available for free at LINK (to Brightside or Dal FM website projects resources page). Although this manual is primarily about creation of infographics (handouts), the concepts can apply to other types of tools.

Lespérance S. 2025 Self-Learning Question Writing Guide (see next page)

## *Self-Learning Question Writing Guide (2025)*

*(Self-Learning Question Writing as a Resident Scholarly Project)*
*Sarah Lespérance, Chair CFPC Self-Learning Program, 2024*

The Self-Learning program is a continuing education program that falls under the umbrella of the College of Family Physicians of Canada's CPD offerings for its members. Questions are created by family physicians who select recent (within 6-12 months) articles relevant to the practice of family medicine, and using evidence-based approaches to adult education, create questions that prompt learning and reflection. These articles are then reviewed at a national level for publication in quarterly volumes. Question writers are expected to critically review articles for study quality, relevance to family medicine in Canada, and likelihood that the article offers findings that may either change practice, or answer a clinical question not yet answered. Authors must then create a question and educational point to summarize article findings and convey information effectively to the reader.

*Learner support and guidance*

Members of the Self-Learning program (several of whom are Dalhousie Family Medicine Faculty in Nova Scotia), are willing to act as Resident Project Supervisors for residents. They can provide feedback and guidance to residents on the question creation process. Dr. Sarah Lespérance can be a resource for interested residents (drsarahlesperance@gmail.com ).

*Publication Opportunity as Self-Learning Questions with the CFPC*

Questions written for articles within 6-12 months of the article's publication will be submitted to the CFPC National Self-Learning Committee for review and possible acceptance for publication in a future edition of CFPC Self-Learning™. There are over 10 000 subscribers to Self-Learning, so accepted questions will directly impact the practice of many primary care providers across the country.

*Requirements for a Self-Learning Question Writing Medical Education Tool project*
Residents choosing to create Self-Learning questions for their resident project should:

- Collaborate with a member of the Self-Learning Question Writing Team with the CFPC (see contact below)
- Prepare a minimum of 6 questions, including at least one Short-Answer Management Problem (SAMP)
- The remaining questions can be either Multiple Choice or True/False questions, or additional SAMPs
- The questions should all be related to one theme of relevance in family medicine
- The project must follow the Resident Project Guide format for a Medical Education Tool with the Results section discussing the questions. The questions are to be attached as an appendix to the project
- Sample questions and the Guidelines from Self-Learning for Question Writers are found below

**Self-Learning Question Writing Guidelines**

***Guidelines for Selecting Articles***

1. Relevant to family practice.
2. Offers new knowledge or meets a deficiency in the knowledge of the reader
3. Based on original research or a review article
4. If the article is based on original research, the methodology is sound
5. If the article is a review article the article is focused on the topic area of interest
6. Contains a good description of the literature search done to prepare the article
7. Taken a peer-reviewed journal, preferably in common circulation
8. Published within the last 12 months

***Guidelines for Writing Good Questions***

Certain articles will lend themselves better to a multiple choice or short-answer management problem, while others may have one key finding and be better suited as a true/false question. Review articles often will be useful to create short-answer management problems. A multiple-choice question should consist of the question followed by 4 possible responses. The 4 responses should include one answer, and 3 distractor statements.

In drafting a question, ask the following to ensure the question will be clear to readers.

1. Is the key outcome/finding (objective) of the question clear?
2. Do the important elements of the problem appear early in the statement of the question?
3. Is there an unnecessary repetition of words?
4. Does the question contain any double negatives in either the stem or the response?
5. Are all responses grammatically consistent with the stem?
6. In multiple-choice question, do the answer and 3 distractors highlight independent outcomes or findings?
7. Are all responses parallel in form? (e.g., single words, phrases, complete sentences, etc.)
8. Are any inclusive or exclusive expressions such as "never", "always", etc. used in such a way as to not cue the person answering the question?
9. Is the punctuation correct?
10. Are all items written in clear and simple language with vocabulary kept as simple as possible?
11. Are all responses plausible and attractive to our subscribers who might lack the information or ability tested by the item?

***Guidelines for Writing Good Educational Points***

Educational Points are an important part of a well-structured question. Due to copyright legislation, the text of the Educational Point must be taken word for word from the article and not paraphrased.

When writing an Educational Point ask these questions:

1. Is there an introduction to the topic at the beginning of the Educational Point?
2. Is there enough material presented to give a good overview of the topic?
3. Are each of the distractors discussed adequately in the Educational Point, and have the supporting statements for each distractor been bolded (see sample questions)?
4. Does the Educational Point flow logically from beginning to end?
5. Are important points regarding the topic which couldn't be included in the question itself included in the Educational Point?
6. Is the Educational Point too wordy? Ideally, approximately 20% of the article content should be the aim.

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***Sample questions for 3 styles used in Self-Learning***

**1. True/False Question**

Plantar fasciitis
Categories: Sports Medicine, Physical Medicine & Rehab

Treatment of plantar fasciitis with botulinum toxin A therapy leads to clinically significant improvement in pain at 12 months.
1. True
2. False

Answer: 1

Reference: Acosta-Olivo C, Simental-Mendía LE, Vilchez-Cavazos F, Peña-Martínez VM, Elizondo-Rodíguez J, Simental-Mendía M. Clinical Efficacy of Botulinum Toxin in the Treatment of Plantar Fasciitis: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Arch Phys Med Rehabil. 2022 Feb;103(2):364-371.

PMID: 34688605

Educational point: Plantar fasciitis is a common injury that occurs in the plantar apo-neurosis as a result of constant microtrauma and excessive strain. This affection is the most frequent cause of plantar heel pain, which is estimated to occur in approximately 10% of the general population, where active working adults between the ages of 25 and 65 years account for 83% of these

patients. Obesity, prolonged standing, excessive foot pronation, running, and decreased ankle dorsiflexion are the main predisposing factors for plantar fasciitis. This condition is essentially a chronic degenerative process owing to the repetitive stress and weight-bearing−associated microtears.

Because plantar fasciitis is characterized by a multifactorial etiology, multiple therapeutic options have been tested. The different treatment modalities may be classified into noninvasive and invasive therapies, including plantar fascia stretching exercises, taping, shoe inserts, night splints, nonsteroidal anti-inflammatory drugs, extracorporeal shock wave therapy, corticosteroid injections, platelet-rich plasma injections, botulinum toxin injections, and surgical approaches. Noninvasive interventions have usually been the first treatment option (used in 85%-90% of cases) for treating plantar fasciitis, with an effectiveness of up to 90%. A recent meta-analysis reported inconclusive results for clinical practice of both conservative and nonpharmacologic treatments regarding pain relief in patients with plantar heel pain. Thus, injected therapies are frequently used in patients who did not respond to noninvasive treatments.

The authors' meta-analysis only included RCTs (parallel, crossover, or pre- post treatment) assessing the effect of BTX-A injections on either pain (visual analog scale [VAS]), functional improvement (Maryland Foot Score, Foot Health Status Questionnaire [FHSQ], Foot and Ankle Disability Index, Foot and Ankle Ability Measures, American Orthopedic Foot and Ankle Society score), or plantar fascia thickness in patients with plantar fasciitis. The multiple database searches identified 535 articles; an additional reference was identified by manual searching in previously published reviews. After duplicated records were removed, 413 studies were screened and 372 of them were excluded because they did not meet the inclusion criteria. Subsequently, 41 full-text articles were reviewed for possible eligibility and 31 were excluded for the following reasons: not being an RCT (4), not using BTX-A therapy (2), not having complete results (10), and duplicates (15). Finally, 10 studies fulfilled the eligibility criteria and were included in the systematic review and meta-analysis.

A total of 485 individuals were recruited from 10 RCTs, including 236 in the BTX-A group and 249 in the control group. Almost all studies had a parallel double-blind design, except 1 single-blind study and another with an open-label fashion. The follow-up period within the studies varied from 31 days to 12 months. The doses and volume of the injected BTX-A ranged from 50 U14 to 250 U30 and from 0.7 mL to 2.5 mL, respectively. The anatomic region where the BTX-A was applied was also different among studies; most of them reported the application was directly or near the plantar, while 2 indicated that the injection was administered in the calf muscles (gastrocnemius and soleus).

Meta-analysis of 10 treatment arms showed a significant improvement in pain after BTX-A therapy (MD, 2.07 [95% CI, 3.21 to 0.93]; P=.0004; I2 =97%), and this effect size was robust in the sensitivity analysis. Furthermore, the calculated change obtained for pain relief after BTX-A intervention (D=2.07) was higher than the established MCID on the VAS for average pain (0.8 and 0.9cm) and the MCID for pain of first step (1.9cm).

Six studies reported functional outcomes in a total of 273 patients (130 in the BTX-A intervention and 143 in the control group). A significant functional improvement was revealed after meta-analysis in favor of BTX-A injections (MD, 15.15 [95% CI, 3.11-27.19]; P=.01; I2=96%) (fig 4). The effect size was robust in the sensitivity analysis. Additionally, the calculated change for functional improvement (D=15.15) was higher than the MCID reported in the FHSQ function subscale (7 points). A subanalysis according to the treatment duration was performed. **A significant pain relief was detected at 0-6 months and 12 months after BTX-A treatment;** on the other hand, this subanalysis indicated a significant functional improvement at 0-6 months.

The current meta-analysis of RCTs indicated that BTX-A leads to a statistically and clinically significant improvement of pain and function in patients with plantar fasciitis.

### *2. Multiple Choice Question*

Local anesthetic systemic toxicity
Categories: Emergency medicine, Pharmacology

Which *one* of the following statements regarding local anesthetic systemic toxicity is false?

1. Bupivacaine is most commonly implicated in events
2. Symptoms of toxicity include a metallic taste
3. Severe manifestations may appear up to 6 hours after initial symptom onset
4. Pregnancy may increase the risk of an event

Answer: 1

Reference:
Antel R, Ingelmo P. Local anesthetic systemic toxicity. CMAJ. 2022 Sep 26;194(37):E1288. doi: 10.1503/cmaj.220835.

PMID: 36162843

**Educational point:**

Local anesthetic systemic toxicity (LAST) is estimated to occur in 1 of 1000 local anesthetic administrations. It results from supratherapeutic levels of local anesthetic in the bloodstream.

Most cases occur in hospitals (61%), while fewer occur in outpatient settings (14%), primarily following upper or lower extremity nerve blocks (19%), naso-oropharyngeal infiltration (17%) or spinal and epidural blocks (11%). **Lidocaine is most commonly implicated in LAST events (44%); however, bupivacaine has a lower safety margin and greater cardiac toxicity.** Ropivacaine has a decreased potential for toxicity.

**Signs and symptoms of LAST typically appear within 1–5 minutes of local anesthetic administration and include oral numbness, metallic taste, dizziness, drowsiness and disorientation. Severe manifestations may appear up to 6 hours after initial symptom onset, and include seizures, arrhythmias, cardiac arrest and death.**

**Extremes of age, pregnancy, renal disease, cardiac disease and hepatic dysfunction may increase risk of LAST.** The minimum effective dose of local anesthetic should be used in these populations (generally 10%–20% dose reduction) and patients should be warned to report any signs or symptoms of LAST immediately.

Accidental intravascular injection of large doses of local anesthetic is the most important trigger of LAST. A slow injection technique (< 1 mL/s) with frequent aspirations and ultrasonography guidance for peripheral nerve blocks can decrease the likelihood of this. The addition of epinephrine to local anesthetic infiltrations decreases systemic absorption. After securing the airway and suppressing seizures, a bolus of 1.5 mL/kg of 20% lipid emulsion followed by infusion at 0.25 mL/kg/min for 30–60 minutes is recommended for patients at first signs of severe LAST. Lipid emulsion absorbs local anesthetic from tissues to attenuate the progression of toxicity.

***Short Answer Management Problem (SAMP)***

Food allergy
Categories : Allergy & Immunology
You are seeing a 21yo patient with known peanut and shellfish allergy. Up until this age, they have strictly avoided food triggers, though unfortunately they have required the use of epinephrine via autoinjector a couple of times. They are seeing you today as they have heard there may be other treatment options available for their food allergies.

1. In addition to oral immunotherapy (OIT), several other treatments targeting the immune response to a food allergen have emerged in recent years. Name two.

Your patient is interested in oral immunotherapy, but is worried about the potential of an allergic reaction by being exposed to increasingly larger daily doses of the food allergen.

2. At what point in therapy do allergic reactions mostly occur?
3. What “safe dosing” rules exist for OIT? Name two recommendations.
4. In what other situations may dose adjustments be required? Name three.

Your patient returns after having tried OIT, but finds the daily regimen very difficult to adhere to. They have also unfortunately had an allergic reaction during OIT.

5. What treatment may be the preferred option at this time?
6. Immunotherapy demonstrates equal efficacy in younger and older individuals. True or False?

Answers

1. Sublingual immunotherapy
   Epicutaneous immunotherapy
   Biologics (such as omalizumab)
2. During the build-up phase
3. Taking doses on a full stomach
   Avoiding or altering doses when reaction-augmentation factors may be present (times of exercise or passive warming (eg, hot showers)).
4. Times of illness (eg, viral infection)
   Sleep deprivation
   Menstruation
   If the patient is also taking nonsteroidal anti-inflammatory medications
5. Omalizumab
6. False

**Educational Point:**

The traditional management approach for food allergy involves strict avoidance of the food trigger, education on how to recognize signs and symptoms of allergic reactions and how to treat them, and training on the use of epinephrine autoinjectors in case of anaphylaxis. **In addition to this approach, multiple treatments specifically targeting the immune response to a food allergen have emerged in recent years in both clinical and research settings, including various forms of food allergen immunotherapy (oral immunotherapy [OIT], sublingual immunotherapy [SLIT], and epicutaneous immunotherapy [EPIT]) and biologics, such as omalizumab.** Rates of accidental exposures vary across different studies, and strict allergen avoidance may be challenging for some patients.

OIT involves the oral administration of increasingly larger daily doses of the food allergen. The dose is increased usually every 2 to 4 weeks during the build up phase, with the aim to reach a target daily maintenance dose that will protect individuals with food allergy from accidental exposures and reduce severity of allergic reactions. The efficacy of OIT is high (roughly 60% to 80% may achieve desensitization, with some studies suggesting higher or lower rates in specific populations), but the therapy is associated with potentially burdensome adverse effects and limitations. **Allergic reactions mostly occur during the build up phase and are often mild or moderate in severity (often involving oral/pharyngeal or gastrointestinal symptoms) though anaphylaxis across all stages does occur.**

**To help limit dose-related adverse effects, "safe-dosing" rules have evolved. These include taking doses on a full stomach and avoiding or altering doses when reaction-augmentation factors may be present, such as avoiding dosing around the times of exercise or passive warming (eg, hot showers). In addition, dosing adjustments may need to be made at times of illness (eg, viral infection), sleep deprivation, menstruation or whether the patient is also taking nonsteroidal anti-inflammatory medications**. Across studies, a small percentage of individuals may be able to achieve remission; however, protection tends to wane with dose interruption or discontinuation, and long-term regular exposure is necessary to maintain dose tolerance for most individuals. Multiple studies generally reveal that OIT results in a level of challenge-proven desensitization that should offer protection from accidental exposures after 6 to 12 months of therapy.

SLIT refers to tablets or liquid drops, typically containing a few milligrams of the allergen which are placed under the tongue and held. The dose is 100 to 1000 times smaller compared with OIT and targets submucosal Langerhans cells. Common SLIT adverse effects may include oropharyngeal symptoms (mostly pruritus and lip swelling). Anaphylaxis is rarely reported in SLIT studies. A recent study suggests that remission may be possible with SLIT (at least in younger children), with rates similar to OIT, but more studies are needed to confirm this finding.

EPIT is a therapy in which the allergen is continuously applied to intact skin, which is currently in phase III development using a proprietary technology. The dose is administered in the form of a patch that is placed on the skin and changed every 24 hours.

**In general, research regarding "early life" immunotherapy (preschool OIT, SLIT, or EPIT) has revealed a better efficacy and safety profile for all forms compared with similar studies in older individuals,** suggesting that intervention during periods of increased immune plasticity may offer a valuable opportunity for potential disease modification, though comparative efficacy studies definitively supporting an optimal age for intervention are lacking.

Omalizumab is FDA approved for "IgE-mediated food allergy in adult and pediatric patients aged 1 year and older for the reduction of allergic reactions (type I), including anaphylaxis, that may occur with accidental exposure to 1 or more foods. To be used in conjunction with food allergen avoidance." **Patients for whom omalizumab may be the preferred option include those who desire any or all of the following: a non-daily or non-oral treatment, did not tolerate previous immunotherapy, have multiple food allergies and/or multiple allergic disorders (eg, allergic asthma, chronic rhinosinusitis with nasal polyps, and chronic spontaneous urticaria).**

Omalizumab treatment is intended to be of long term, as treatment effects are expected to wane if omalizumab is discontinued, although longer-term treatment outcomes are lacking, but being studied. Importantly, the FDA approval for omalizumab in food allergy indicates that it is to be used in conjunction with food allergen avoidance. Omalizumab is intended to increase allergen threshold of a moderate-to-severe reaction, but it does not eliminate risk of an allergic reaction. Data have revealed omalizumab can be used to reduce OIT-related dosing adverse events and speed the build up phase (both single and multiple foods), can increase thresholds of tolerance for single or multiple different foods and enable reintroduction of varying doses of these foods into the diet regularly (while remaining on continuous omalizumab therapy), and is associated with improvements in QoL.

## *Tips and Tricks When Doing a Medical/Health Humanities Family Medicine Resident Project*

This stream involves two main components:

1. A paper: including a Cover Page, Abstract, Introduction, Methods, Results and Discussion, Strength and Limitations, and Conclusion.
2. The artistic piece: included as an Appendix and summarized in the results section.

The medical/health humanities are a burgeoning stream of scholarship that involves areas connected to, but not limited to, the field of medicine. Your project may explore themes such as compassion, ethics, or lived experience. It will involve the creation of an original piece of work, which may take the form of writing, audio, film, visual art, or music, for example. In the Introduction, you may choose to describe your inspiration for the project. This is optional

Examples:

- Exploring the social determinants of health using photography
- Podcast about understanding patient values in diagnosis and recommending therapy
- The use of the visual arts to affect public health policy
- A multimedia project (e.g. video or blog) about women's health
- Create a musical composition based on prior published evidence for using therapy in the treatment of children with autism spectrum disorder
- The use of visual art in understanding the patient experience with mental illness, then creating a visual art piece reflecting their understanding

These are just a few examples to launch your creativity.

**For the methodology section, be sure to include the steps taken in creation of your final piece.** If, for example, you are making a podcast, describe the steps involved in the production process (e.g. arranging interviews, construction of interview questions, recording technique, use of editing software). For music, the process of song writing and what influenced your choice of musical style and lyrics could be explained. For a piece of visual art, you could explain the art-making process, your choice of media and colour, and what they hope to portray by making these choices.

Sharing humanities projects publicly would be encouraged, whether as an art installation, publication in the Humanities section of a medical journal, or live reading of a short story.

Your Methodology section also needs to explain the rationale for your choice of medium of expression.

**Ethics and Confidentiality**. Humanities projects are not exempt from ethics review. If your scholarship involves human subjects, you must propose your project to the appropriate Research Ethics Board for your site.

As within clinical practice, protecting confidentiality is paramount. It is key when considering a humanities- related project. If writing a story based on an actual patient experience, for example, you would change the name, gender and clinical scenario so that the patient cannot be identified. If pursuing a photography-based project, capturing identifying images without an individual's consent is not permitted.

The following websites may help you learn more about the medical/health humanities:
Art for the Sake of Medicine (an article by Dr. Sarah Fraser about why the health humanities are important)
https://www.cfp.ca/content/64/10/760

Canadian Association of Health Humanities: https://www.cahh.ca/

### *Tips and Tricks When Doing a Literature Review Family Medicine Resident Project*

Literature reviews are used to systematically and critically evaluate available evidence as a basis for practice or further research. Examples include reviewing evidence for the effectiveness of a drug, the causes of a physical or mental health problem, or barriers and facilitators that patients experience in accessing health care. When doing a literature review project, you need to adhere to some conventions. Before you start you may find it helpful to consult with a university/hospital librarian or a subject matter expert on how best to access resources for the literature review.

1) Research question must be relevant to family medicine.
2) Search for original primary papers (not reviews) published in peer-reviewed journals. If you include other types of evidence, provide a rationale. Obtain and review whole papers, not just abstracts.
3) Assess the strength of evidence of the studies you are reviewing, using an approach appropriate to the type of research question (see Basic Evidence Levels for Treatments).
4) Create a table to summarize your findings with respect to the research question and objectives (see Sample Table).
5) Do not repeat word for word in the text what you have in the tables: they should be complementary
6) Use the same outline as a regular scientific study.
    a) Introduction/Background): why did you want to do this project?
    b) Set up the research question by reviewing what has been published on the topic and explain the rationale for your review.
        i) Finish the section with a clear research question and 1-3 objectives designed to answer the question.
    c) Methods need to include the following:
        i) Search terms
        ii) Inclusion and exclusion criteria.
        iii) Citation databases searched - e.g. PubMed. List other sources if used.
        iv) Number of articles pulled and ultimately reviewed.
        v) Method of analyzing the literature collected. Examples include narrative review pointing out findings, level of evidence and basic strengths and limitations for each study; or systematic review using formal procedures to categorize strength of evidence and certainty of conclusions (e.g. GRADE); or statistical meta-analyses of data obtained from published studies combined with formal assessment of strength of evidence and certainty of conclusions.
    d) In the discussion, describe the strengths and limitations of each article and synthesize the data in the context of published literature. Use subtitles to help the reader. Answer the objectives to answer the research question.
    e) In the conclusion pull it all together. No new information should be added. Draw conclusions and point out implications for practice and further research. Make an overall statement regarding strength of evidence and certainty of conclusions.
    f) Acknowledgments: supervisor and others that may have helped you.
    g) Use a standard bibliography format and do not mix bibliography styles.

## Levels Of Evidence

| Level of Evidence | Study Design | Definition | How does sleeping with a bottle of juice versus a bottle of water affect children's dental hygiene? |
|---|---|---|---|
| 1 | Randomized Control Trials (RCTs) | RCTs are considered the most reliable form of scientific evidence. They involve the random assignment of participants to interventions and controls. | A group of children are randomly selected from the general population (each child has the same likelihood of being selected as all the others). This group is then randomly divided into two groups (A and B). Again, each child has an equal chance of being placed in either group. Group A is given a bottle of juice to sleep with at night. Group B is given a bottle of water to sleep with at night. The effect on the children's teeth is monitored for a set amount of time. |
| 2 | Cohort Studies | A Cohort Study is a study in which participants who presently have a certain condition and/or receive a particular treatment are followed over time. They are then compared with another group who are not affected by the condition. | A group of children who have poor dental health are followed across time. The habit of sleeping with a bottle of juice or water of the poor dental health group is compared to the sleep habits of a control group. |
| | Ecological/ Epidemiological Studies | Ecological studies look for associations between the occurrence of disease and exposure to known or suspected causes. The unit of observation is the population or community and may be defined in various ways. | Children with poor dental health are identified. Then correlations are made between (a) sleeping with a bottle of juice and dental health and (b) sleeping with a bottle of water and dental health. |
| 3 | Case-Controlled Studies | Case-control studies are frequently used in epidemiological studies. Case-control studies compare participants who have a specific condition with participants who do not have the condition. Otherwise, similar in order to identify factors that may contribute to the condition of interest. | Comparing children with poor dental health, with those who have good dental health who are the same age, ethnicity, socio-economic background, number of dental check-ups, etc. |
| | Non-Randomized Control Trials | The participants and interventions are not randomly assigned. | The first 50 to volunteer are instructed to have their child sleep with a bottle of juice, with the last 50 volunteers are instructed to have their child sleep with a bottle of water. |
| 4 | Case-Series | A number of individual cases of a particular condition are identified and followed individually over time. | Ten cases of poor dental hygiene in children are identified and intensely followed for a set amount of time. |
| 5 | Expert Opinion | The opinion of a professional who is considered an expert in their field. | The advice/opinion of a dentist who specializes in children's oral health and who has worked in the field for a long period of time. |

## Sample Table for a Literature Review

| Author | Design | n | Variables | Results | Limitations |
|---|---|---|---|---|---|
| Bjelland et al. | RCT | 1465 | Sugared beverage intake, sedentary behaviour | Preventive initiatives more effective in girls, need to study gender subgroups | Crude estimates of sedentary behaviours, sampling bias, social desirability in data |
| Brown T, Summerbell C. | Literature Review | 38 | Weight outcome | School based interventions may have benefit but inconsistent, may be short-term, girls/younger children have more benefit, physical activity must be combined with diet interventions | Heterogeneity of studies evaluated, therefore difficult to generalize any findings. |
| Bryn Austin S et al. | Qualitative | 9 | Effectiveness of *School Health Index*, Role of external facilitator | Presence of external facilitator influenced effectiveness of *SHI* and ability of schools to implement health promotion initiatives | Most schools in one geographical location (New England), reliance on self-reported data, did not include an objective data source |
| Card A, Doyle E. | Qualitative | 40 | Effectiveness of School Health Coordinator in implementing health promotion strategies in Nfld. | School health coordinator can change the approach of health promotion in schools to involve social, environmental as well as physiological health determinants | Vague descriptors regarding effectiveness of school health coordinators, results very preliminary in nature |
| Crawford PB et al. | Position paper | n/a | n/a | Using a bioethics framework further justifies the promotion of nutritional health through schools | n/a |

### *Tips and Tricks When Doing an Advocacy Family Medicine Resident Project*

In this project type, the resident takes a position on an issue of importance to family medicine and appraises evidence for and against the position. The resident either ***describes*** or ***undertakes*** an advocacy action related to the position. In either case, the report is to include a self-reflection component as described below.

Actions could include but aren't limited to sharing the position paper or another written product (e.g. a letter, editorial, or government submission) or various forms of direct actions (e.g. public rally, protest, or petition drive). The report should include a description of the action, the goal of action, the real or potential outcomes and impact of the action, and the real or potential consequences/complications resulting from the action along with a self-reflection component.

Advocacy for access to culturally safe, affordable, high-quality, and comprehensive health care, along with the social conditions that promote health is one of four primary responsibilities articulated by the College of Family Physicians of Canada (https://www.cfpc.ca/CFPC/media/Resources/Education/FM-Professional-Profile.pdf). This requires outreach and engagement, such as working with community partners and including patients experiencing hardship and/or barriers to care. Respecting patients and community partners as holders of expertise is paramount to effective advocacy. Advocacy projects can include a range of strategies, including but not limited to letters and editorials, press releases and media advisories, government submissions, and direct action (e.g. public rally or march, creative actions, or public petitions drives). Examples of these strategies are described in this Tool Kit (https://fmf.cfpc.ca/wp-content/uploads/2017/10/F175_Introduction-to-System-Level-Advocacy-for-Family-Physicians.pdf ).

**Responsibility and accountability:**
Physician advocacy requires respect for professionalism, evidence, and appreciation of the risk/liability beyond what might be expected of the general public. Some resources that might help to navigate these concepts include:

- https://www.cmpa-acpm.ca/en/advice-publications/browse-articles/2014/advocacy-for-change-an-important-role-to-undertake-with-care
- https://www.cmpa-acpm.ca/en/membership/protection-for-members/principles-of-assistance/participating-in-health-advocacy
- https://cpsns.ns.ca/resource/advocacy-and-public-communications-by-physicians/
- https://www.cma.ca/get-involved/cma-ambassador-program

**Mentorship:**
Mentorship in advocacy can be particularly beneficial given the sometimes messy or controversial aspects of advocacy. Mentorship can help to provide guidance around strategy and can also help to centre ourselves when we are feeling discouraged or are questioning our position. Along with your supervisor for this project, there are options for mentorship in advocacy within the Department of Family Medicine. Examples include:
Dr. Tiffany O'Donnell – tiffany.odonnell@dal.ca , Dr. Tim Holland - timothy.holland@dal.ca

**Self-Reflection:**
Self-reflection is paramount to effective advocacy as it helps us to remain centred on our "why", to understand our own role/position in the advocacy effort, to know when it's time to change course, and to maintain perspective when our efforts fail to achieve our desired outcome. The following are some prompts to consider as you engage in self-reflection throughout the course of this project. Some of your reflections should be shared in the discussion section of your report.

1. What is the story of my journey to this piece of advocacy? Why does this matter to me? Who is most affected by this issue, and if not me, why am I motivated to be involved?

2. What are my personal values, and how do my personal values align with this cause? https://personalvalu.es/personal-values-test

3. Who are the experts in this area? What is my relationship to those with lived experience, and what have I learned/am I learning from these experts?

4. What are my blind spots? What sources of power and privilege do I carry, and how might this bias my thinking in this work? https://implicit.harvard.edu/implicit/takeatest.html

5. What sources of bias might exist in the literature that is available to me? If I was reading this literature from the position of someone with lived experience, how might it land differently?

6. Do I hold privilege that allows me to decide whether to take action on this issue or is this an issue that I don't have the luxury to ignore? How might my involvement in this advocacy work impact my professional identity? How might it impact my professional relationships? What personal risks might I be taking by engaging with this issue?

7. What feedback have I received from stakeholders along the way, how did I receive it, and what do I intend to do about it?

8. If this effort does not generate my intended outcome, how will I feel, and how will I handle it? Will I continue to pursue this issue and change my approach? What can I do differently? What have I learned here?