Introduction to the Resident Scholar Project

This is a just brief summary of the requirements for the Scholar Project. More detail is available on the UBC Postgrad internet site under "Resident Scholar Project".
This document was authored by Patricia Gabriel, site faculty for scholarship at the St. Paul's IMG site. This has been adapted for use at other sites.

Purpose

The purpose of this mandatory project is for you to demonstrate competence in a scholarly activity relevant to family medicine. Activities engaged in during your scholarly project will demonstrate various CANMEDS-FM competencies in the scholar, professional, health advocate, collaborator, communicator and expert role. It is hoped that this small endeavor will inspire you to continue similar academic pursuits during your career. There is a great need for good quality primary care research, reflection, and innovation.

Distributed Health Research Methods Course (DHRMC)

Some sites will do the DHRMC. This is an online course consisting of 10 modules of research topics. However, all residents will have access to this course so if you wish to learn more about specific research methods pertaining to your project, you are welcome to watch the videos and do the readings for the specific module in which you are interested. The site is currently hosted on Edx and at www.connect.ubc.ca. Talk to your site faculty to get access.

Types of scholarly projects

Research Study

Examples include:

- Quantitative Research Studies (retrospective review or small prospective observational pilot study, small control trial)
- Survey-based studies (cross sectional study)
- Qualitative Research Studies (focus groups, one-on-one interviews)
- Systematic Review
- Program Description (Pilot study of unique or new patient care program or physician education program)
- Case Reports
- Secondary analysis of data

Analytical Essay

An essay is a way of presenting your research and knowledge about a topic in a succinct and coherent way so that others may learn from your work. An essay usually presents your idea (or thesis) in an objective way with a critique of available evidence. Topics may include ethics, implications of basic science, health innovation, or health policy.

Therefore, an essay must include a review and critical analysis of the existing situation and relevant literature. It should have a traditional structure with introduction, body, conclusion, and annotated references. The introduction should include a brief orientation to the topic, your thesis, and a brief summary of the main points.

Advocacy-based initiatives or program creation/evaluations can also be undertaken as a scholarly project and can be written up as an analytical essay. Alternatively these types of projects may have an evaluation component and may be better written as a research study. Please consult with your site faculty and review the relevant area of the UBC website.

Scholarship of Teaching

A scholarly project in this domain can include creation and evaluation of a teaching tool (for physicians, students or the public) or conducting research on teaching methods. This is a new project domain in a pilot phase this year. Further information is available online and in consultation with your site faculty.

Medical Humanities/ Artistic Production

Art and literature are effective ways to communicate ideas, especially when exploring the cultural, emotional, and spiritual aspects of our human existence. Many residents have developed talents in creative writing, art, music, dance, photography, or drama and some in the past have been able to express ideas related to family medicine through their art.

A resident should provide a short written or oral interpretation of their artistic production to explain how it relates to Family Medicine. Artistic and literary productions will be judged with the help of post-secondary Fine Arts Faculty according to standards appropriate to the medium.

Some previous examples of artistic production:

- Visual art, video, or multi-media display: (E.g., Documentary, quilts expressing the doctor's experience as patient)
- Performing art: theatre, interpretive movement, musical performance (E.g., a one-person play about a resident's experience as a patient on a psychiatric ward)
- Creative writing: novella, short story, poetry (E.g., a short story about the immigrant experience in the Canadian health system)

Key Steps in Scholar Project

1. Pick topic area
2. Form research question
3. Write research proposal
4. Apply for ethics approval
5. Collect data / implement project
6. Write manuscript
7. Present project at research day

Timeline: Mandatory dates in R2 year:

- Draft abstract due: November 15.
- Final abstract due: December 15.
- Final manuscript due: February 28.
- Scholarship Day: June

See appendix 1 for a recommended timeline.

Research Proposal

This is a key document for your scholarly project (appendix 2). Every resident needs to fill out a research proposal for submission to their site faculty prior to commencing their project. For projects requiring ethics this will also be submitted as part of your ethics proposal.

Ethics

All Projects involving humans (even you or your fellow residents!) must have Ethics Board approval **before** starting. This includes interviews, photos, video and simple surveys. Projects using clinical data from patient charts also need Ethics Board approval. If you are not sure, ask your Site Scholar Faculty.

<u>Ethics Board Application Steps</u>

1. Complete a research proposal.
2. Submit the research proposal to your Site Scholar Faculty.
3. After you and your Site Scholar Faculty have finalized the proposal, and it has been determined that Ethics Approval is necessary, follow the directions below depending on which ethics board you are applying to.
4. UBC Ethics Board
    a. Ensure you have a UBC Campus-Wide Log-in username and password
    b. Go to www.rise.ubc.ca and follow the steps to create a new account.
    c. Start a new ethics application
    d. Your project title must start with "UBC Family Practice Resident Research Project:" then you put your title after the colon. This is to notify any REB (e.g., UBC, health authority) that this is a resident project.

e. Decide if your project is Behavioural or Clinical
f. You can then begin to create an ethics application within the Researcher Information Services (RISe) online system. You can access Guidance Notes within the application which explain every step of filling in the application form and a template consent form.

If you still have questions regarding your UBC Ethics Application, please contact: Shirley Thompson, Manager, BREB, Shirley.Thompson@ors.ubc.ca

Please note that any project that involves a health authority facility (hospital, sexual health clinic, etc.) needs both UBC and health authority ethics approval. In this situation, you must first apply to the health authority ethics board. After you have received these approvals you must then inform the UBC Ethics Board of your Project and they will grant approval based on health authority approval. ***Details about the harmonized ethics process in some BC health authorities can be found here on the postgrad website***

Statistical and Data Analysis

If advanced statistical analysis is needed for quantitative projects and you are not experienced in doing this yourself, help is available. Contact your site faculty if you wish to enlist the help of a statistician. There is a $240 budget per resident to hire a statistician.

Budget

There is $200 available per resident for other project costs. Residents pay up front and are reimbursed by the local site administrative staff with provision of receipts. Draw prizes for completion of surveys, food or drink used to compensate someone to attend an interview, statistician consultation, transcription services and stationery and postage expenses, for example, are all legitimate project expenses that could be refunded. Ask if you are not sure.

Additional funding can be sought for scholar projects requiring additional funding. Funds are available through for example the BCCFP, the Lloyd Jones Collins Foundation, SACE, MERC and the Sue Harris Family Practice Grant for women's health research. Applying for grants does take additional time and effort and should start early in the R1 year if required.

Time

Residents are entitled to ten half days of protected time that can be taken during your family block. Residents may request their site directors for additional time to work on their scholar projects if warranted.

Written report

The final written report should conform with authorship guidelines for the Canadian Family Physician Journal. If your written report is going to be different then you should let

your site faculty know which journal or style you are writing and why it is more applicable to your project. Have a look at what previous residents have done over the last few years on the UBC Journal of Family Practice Research and Scholarship (username and password are both: journal user).

Local Scholar Day

This is a chance for you to rehearse your oral presentation in front of your fellow residents. It is usually held in May (specific to your site), one to two weeks before the UBC Scholar Day so you have a chance to polish your performance and adjust your visual presentation before the big day.

Scholarship Day

Each resident must present their scholarly project at the province wide research day held in June of the R2 year. Solo residents will have 10 minutes for their presentations and teams will have 15 minutes. Your written work will be reviewed and evaluated by a UBC faculty member prior to Scholarship day and your presentation will be evaluated on Scholarship day.

***completion of the scholar project is required to complete your residency. The site director is obligated to withhold the certificate of completion of CCFP training until completion. Please ask for help early if you are encountering difficulties.

Tips for Success!

Collaboration

You are encouraged to collaborate with others. Projects are much easier when individual strengths and passions are utilized in a team.

Other residents

Residents can work in groups of 2-4. If you would like to work in a group larger than 4, seek permission from your site scholar faculty first. Additional work is expected from these projects to justify the additional team members.

Research preceptor

You are also encouraged to seek out local family physicians, UBC faculty or allied health professionals who share your interests to support your project as a 'research preceptor'. Alternatively, you may approach someone who is already involved in research of their own. If, during your family practice residency, you make a substantial contribution to an existing faculty/staff research project, such that you would be listed by them as an author, then you may write this up and present it as your Scholar Project. Your research preceptor can serve as the "Principal Applicant (PI) on your ethics proposal, or if they do not meet requirements for this role your site faculty for research can be the official PI.

Site Faculty

In addition to a research preceptor, all residents will also have support from your site faculty for scholarship, for your project. He or she can provide guidance at any stage of the research project and will review all research proposals, ethics applications and final manuscripts.

Resources

1. `The Research Guide: A primer for residents, other health care trainees, and practitioners` (provided to all IMG-SPH residents, to be returned at end of R2 year)

Suggested reading for all residents:

- research questions (chapter 6)
- searching the literature (chapter 7)
- research methods and design (chapter 9)
- writing a research protocol (chapter 17)

Suggested reading based on methodology chosen:

- surveys (chapter 11)
- medical record review (chapter 12)
- systematic reviews (chapter 15)
- qualitative research (chapter 16).

2. Distributed Health Research Methods Course
http://elearning.ubc.ca/connect/

3. UBC PostGrad Internet site under "Resident Scholar Project".

Final tips

This project should not be too time consuming or onerous. Many residents' initial ideas are good but involve too much work for the time available. Try to narrow your subject down and focus on one small aspect so that you can give it the time it deserves and do a good job.

CAUTION: A therapeutic trial of anything (medicine, exercise, counseling, natural products, etc.) is most likely going to take much longer than you expect, even if you work in a group. Residents who have done one in the past have invariably taken at least 2 years to complete it and had to hand it over to the next year's residents to present the results.

Appendix 1: Proposed Research Timeline

Research Project Timeline Residents

R1 year:

November

- ☐ Pre reading of DHRMC Module 0 and 1
- ☐ Research workshop part 1 with site faculty for research
- ☐ Research Question: formulate a question
- ☐ Literature Review: conduct literature review, modify research question

January

- ☐ Pre reading of one or more DHRMC modules of 4,6,7
  - Module 4 (Program Evaluation, Participatory Health Research, Interdisciplinary Arts Research, Mixed Methods)
  - Module 6 (Qualitative Methods)
  - Module 7 (Quantitative Methods, Surveys)
- ☐ Research workshop part 2 with site faculty for research

January to April

- ☐ Decide on research project type and research methods
- ☐ Find a physician or faculty research preceptor
- ☐ Work on draft of your research proposal
- ☐ Statistical consult: if you will need statistical support, fill out the statistician consult form and send it to your site faculty. They will help you to meet with a statistical expert to discuss data collection and analysis.
- ☐ Funding: create budget and seek funding if necessary
- ☐ Read DHRMC Module 8 (Qualitative projects) or Module 9 (Quantitative projects)

June

- ☐ Research Day: All R1 residents attend Research Day.
- ☐ Research Day Evaluator: (optional) participation in peer-review evaluation of R2 Resident Projects - email residency@familymed.ubc.ca for more information.

R2 year:

July

- ☐ Complete your research proposal and submit to your site faculty by the end of October for their review. If needed, your proposal may be forwarded to another relevant UBC faculty member for secondary review.

August

- ☐ Submit ethics (if necessary)

September –November

- Data collection: commence data collection after ethics approval is granted
- Data analysis
- Meet with statistician again if needed

November

- Draft abstract due November 15

December 2016

- Final abstract due December 15 - submit via email to residency@familymed.ubc.ca

January – February

- Write your Resident Project report
- Final manuscript due: February 28. Submit via email to residency@familymed.ubc.ca.
- If you would like your site faculty to review your manuscript first, submit it to them by February 1st. [mandatory at some sites, ask your site faculty]

March –May

- Remediation work if necessary
- FMF/NAPCRG: optional - submit an abstract to Family Medicine Forum and/or the North American Primary Care Research Group
- Residents can also submit their written reports for the Lloyd Jones Collins Research Award of up to $2,000. Submit a cover letter along with the written report to residency@familymed.ubc.ca

May

- Oral presentation – create your oral presentation, power point slides
- Site Resident Project presentations (practice presentation) [check with site faculty]

June

- Scholarship Day: mid-June, e.g., June 16, 2017
- PowerPoint presentations must be received online one week before Research Day - email to residency@familymed.ubc.ca
- Notify Central office residency@familiymed.ubc.ca of any required AV needs (i.e., audio, visual, etc.) one week prior to Research Day
- Return your Research Guide book to site coordinator
- Bring data for long term storage to site office as per ethics application
- Publication – consider submitting your research to a journal for publication
- Close ethics application (this is required; part of final evaluation by site faculty)

Appendix 2: Research Proposal Template

Research Proposal Template
Resident Research Project
University of British Columbia, Department of Family Practice

Project Title

Introduction
- Topic overview
- Previous research
- Research gap
- Research question
- Significance of research questions

Methodology
- Overview of approach
- Data collection
- Data analysis
- Ethical considerations
- Budget

Strengths and limitations

Expected results

Bibliography / References

Appendices

Word count: approximately 1200 words maximum

<u>Details for each section:</u>

Project Title

Introduction

Topic overview

The introduction should start by stating the importance of your research topic broadly. Capture your readers' interest. Then quickly get more focused and specific about the topic that your research will address.

Previous research

Then move into a literature review. The purpose of the literature review is to help the reader understand the context of your research question(s) by first explaining what is already known about the topic. It does not need to be an exhaustive review; rather, it should be a critical review of relevant literature on the subject. Your reader should feel confident that you have found, read and considered the relevant literature for your topic. When you write this section, start with general studies and then move to more focused studies specifically related to your research.

Research gap

This is where you state clearly what is <u>not</u> currently known about your topic. This 'knowledge gap' is what your research question should address.

Research question(s)

State your research question(s) clearly in the context of your literature review and the research gap. If appropriate, consider formatting your research question in the PICO format.

Significance of research question(s)

Make a few points about why is your research question is important. You could do this by stating the implications or your research such as how it could increase medical knowledge, improve clinical care, inform health policy, or improve health care delivery.

Note: This 'introduction' can be used again when you write up your final manuscript. At that time, for the purposes of the resident project, a literature review will not be considered adequate if it does not include the latest (as of March 31st of your R2 year) relevant published studies from PubMed or does not include at least one systematic review or meta-analysis (if published)

Methodology

Overview of approach

State the study design (e.g. case-control, experimental, survey, qualitative, systematic review, program evaluation, interdisciplinary arts project, etc.) and the reason for selecting this methodological approach for answering your question. For example, explain why you have chosen to do a survey verses doing qualitative interviews. Or why you have chosen a systematic review verses a quantitative study. Explain the benefits of your chosen methodology and why it is an appropriate methodology to help answer your research question(s).

In addition, clarify your study population, the method of recruitment, inclusion and exclusion criteria, methods of randomization (if applicable), sample size, and the proposed intervention (if applicable).

For any variables that you are studying (e.g. demographic variables, exposure variables, outcome variables) include an operational definition of the variables. That is, give a clear description of what exactly you mean by each term and how it will be collected, recorded and analyzed.

Data collection

This section will explain how you will collect your data. Describe your collection methods (e.g. interview(s), focus group(s), online or paper based survey, chart review, self-administered questionnaire, systematic literature search, etc.), who will be collecting the data (e.g. resident, research assistant, medical office assistant, etc.), and data collection instruments (e.g. questionnaire, interview guide, medical record extraction form, audio-tape or video of interviews, standardized forms for systematically reviewing and extracting data from articles, etc.). If these instruments have been used before by other researchers, make reference to the relevant literature. If you are designing these instruments, state if and how pilot testing will be done.

The more detail in this section the better. Keep in mind, part of the benefit of articulating your data collection strategies at this stage is so that you can detect potential problems before they occur.

Data analysis

This section should explain how you will interpret the data you have collected. For quantitative data, you should explain what descriptive statistics you will use (median, mean, range, standard deviation, percentages etc.) and which statistical techniques you will use for hypothesis testing (e.g. t-tests, ANOVA, correlation methods, regression, chi-squared tests). In the first draft of your proposal, if you are not sure which statistical methods you are using, leave this section blank and consult with your site faculty. They may further suggest that you meet with a statistician at this stage. For qualitative studies, describe which qualitative techniques you will use (e.g. qualitative description, narrative analysis, constant comparison technique, immersion and crystallization, topic and open coding, thematic analysis, etc.).

Ethical considerations

If there are any potential ethical concerns with your research, state them here along with a plan to address them. Please state if you are planning to apply to the UBC research ethics board, and if so, to the Clinical Research Ethics Boards or the Behavioural Research Ethics Board. If you need to apply for ethics though any other organizations (ie. a Health Authority) also state that here. If you will not be applying for ethical approval please clearly state why this will be unnecessary.

Budget

Briefly indicate the anticipated expenses for your research study. Consider things like gift cards for study subjects, food for focus groups, travel expenses, any lab tests, paying statistical consultants or other consultants, etc. State if you are applying for additional research funds, and if so, from where.

Strengths and limitations

This section is optional. However, you may find it useful to think through these issues a priori.

Highlight the aspects of your study that are unique and strong. Consider what limitations (e.g., biases, low response rates, or a small sample size) may emerge and assess their potential impact. State how you might address these limitations to ameliorate their consequences.

Anticipated results and implications

This section should state your hypothesized results. Here, try to link together your research question, your methods, your data analysis and possible outcomes. Sometimes developing a chart or flow diagram is helpful to clarify your thinking and to display this information for the reader. Finish by reminding the reader of the importance of your work and the potential implications of your findings.

Bibliography

References should be current and complete. Check references for accuracy, completeness and proper format (according to the Uniform Requirements for Manuscripts Submitted to Biomedical Journals; http://www.icmje.org/). References should be numbered in the order they appear in the text and should be limited to works cited in the proposal. List all authors if there are 6 or fewer; when there are 7 or more, list the first 6, the et al.

Appendices

If you have a copy of your survey, interview guide, recruitment poster, consent forms or other documents relevant to your research, include them here. If you have more than one document, include a numbered list of what is included.

Additional resources for completing your research proposal

Consult `The Research Guide: A primer for residents, other health care trainees, and practitioners` for additional help. In particular, read the chapters on research questions (chapter 6), searching the literature (chapter 7), research methods and design (chapter 9), and writing a research protocol (chapter 17) for help in writing your research proposal. Also, read the chapter on your specific research design such as surveys (chapter 11),

medical record review (chapter 12), systematic reviews (chapter 15) or qualitative research (chapter 16).

This book can be purchased online or accessed through the library:
http://ubc.eblib.com.ezproxy.library.ubc.ca/patron/FullRecord.aspx?p=1069397