JMIRS Academic Mentorship Program (JAM)

2025 Cohort Handbook

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Introduction

Equity in research and publication:
There is a well-established publication gap in healthcare journals, with a persistent underrepresentation of women authors. Studies consistently show that men are more likely to be first and last authors on research papers and their papers are cited more often. This disparity reflects broader systemic issues, including biases in peer review, unequal access to funding and mentorship, and the disproportionate burden of caregiving responsibilities on women. As a result, the contributions of women to healthcare research are often undervalued, perpetuating gender inequities in academia and science.

JMIRS gender gap:
The Journal of Medical Imaging and Radiation Sciences (JMIRS) recently published a five-year evaluation of our submissions (1) which showed that this gender publication gap also exists in our journal. Despite the high percentage of female MRTs in the profession, we found a persistent underrepresentation of female authors with some discipline-specific differences. The gender gap is also increasing. A significant recommendation from that paper was increased mentorship for female early career researchers. The JMIRS Academic Mentorship program (JAM) was developed with support from the Canadian Association of Medical Radiation Technologists (CAMRT) to nurture novice researchers and encourage dissemination of research.

Program aim:
The aim of this one-year pilot program is to give support, advice and encouragement to participants who have research projects in development, ideally approaching completion/the dissemination phase.

The aim of the program is not to teach the fundamentals of research (e.g. statistical analysis or coding qualitative data) - although there may be some overlap.

Program goals:
Goals will be set by each mentor/mentee pair and may or may not include full publication. Instead the mentee may aim for dissemination at a local educational event or a national conference, etc. Mentors can assist with such issues as:

- Selecting a conference to share initial results and gain feedback
- Preparing a poster, e-poster or oral presentation
- Working with co-authors
- Writing for publication
- Navigation of journal submission and revising a manuscript based on peer review.

Program evaluation:
To evaluate the program and share the results, mentors, mentees, and the JAM steering group will co-author a submission to JMIRS. This will enable the mentees to work with a supportive group to gain experience writing a paper for publication.

> ***A mentor is someone who allows you to see the hope inside yourself.***
>
> ***Oprah Winfrey***

CAMRT conference attendance:
Mentees will be subsidized to attend the CAMRT conference in Victoria, BC in May 2026. An hour-long session will be held to showcase the program, and mentees will deliver a short presentation about their project. Mentors are encouraged to attend to support and celebrate the work they have supported, as well as the mentee's progress.

All mentees living outside BC will receive free conference registration and a travel bursary of $2500 CDN. Mentees within BC will receive free conference registration and a travel bursary of $1500 CDN. Mentors will receive free conference registration.

Eligibility:
The JAM program is open to Canadian women who are CAMRT members (transwomen and gender-diverse people welcomed).

Mentees should have some prior research education (e.g. undergraduate research course, local clinical audits undertaken, etc.) and ideally have a project in progress that has not already been disseminated. Participant diversity in discipline, project type and geography will be sought where possible.

Mentors will have research and publication experience and a willingness to support novice researchers.

Process and timeline

Application:

1. Mentors and mentees apply to the Program by filling out an online expression of interest.

Selection and matching:

1. Successful participants will be notified by email.
2. The Steering Group will match the mentors and mentees according to interest, experience, topic and location (where possible). Mentors and mentees may be from different MRT disciplines.

Initial connections:

1. There will be an initial virtual launch meeting to introduce the program and participants, as well as to discuss mentorship tips.
2. The mentee will be asked to make the initial contact with their mentor, introduce themselves and arrange their first virtual meeting.
3. Templates are provided for the mentor-mentee agreement (to be returned to the Steering Group) and to track progress (for the mentor and mentee only).

Ongoing engagement:

- Subsequent meetings will be self-directed but occur at least once a month. At the end of each meeting a date should be arranged for the next one.
- If, at any point, the mentee/mentor feels they cannot continue meetings, they may notify the Steering Group which can dissolve the mentoring partnership early on their behalf.
- The Steering Group members are available for questions and support, and this mentoring guide, in addition to supporting educational events, will provide tips on roles and practical skills important to mentoring.
- Virtual educational events will be organised throughout the program to support the goals of the participants.
- The program will be evaluated throughout, and participants will be required to complete short online surveys at various points.

Dissemination:

- There will be a wrap-up meeting at the 2026 CAMRT national conference in Victoria, BC. This will be a celebration of the program's success (we hope!) but also to present results from the partnerships.
- A paper detailing the results of the program will be submitted to JMIRS. This will be co-authored by all participants and supported by the Steering Group.

Timeline:

Application process	April 1st - April 18th 2025
Matching of mentor-mentee pairs	April 18th - May 4th 2025
Applicants informed	May 5th 2025
Initial launch meeting for cohort (virtual)	May 12th 2025 (subject to availability)
Monthly meetings of mentor-mentee pairs by mutual agreement	May 2025 - April 2026
Education events (by group request, virtual)	June 2025 - April 2026
Final meeting/networking event at CAMRT conference	May 28th - 30th 2026 (TBD)
Summary of project and evaluation results written as a short communication for JMIRS	July - October 2026.
Steering Group submit paper for publication in JMIRS	October 2026.

Roles and responsibilities

Introduction

A mentoring relationship can be of great benefit to both the mentee and the mentor, if cultivated and managed responsibly. In a formal mentoring arrangement, such as the JAM Program, all parties should be clear on expectations at the outset of the relationship, and open channels of communication should be established early on.

This section provides an overview of the functions, benefits, and roles and responsibilities of a mentoring relationship, as well as the specifics of the requirements in the context of this Program.

Functions of a mentoring relationship

There are various functions of a mentor, which include serving as teacher, motivator, guide, counsellor, coach, and role model. No single function is fully synonymous with the concept of being a mentor. However, a mentoring relationship is rarely one-sided. In a strong mentoring relationship, whether formal or informal, there may be times where the mentee can assume the function of motivator or teacher, to the benefit of the mentor (2).

Components of a mentoring relationship that can foster success when realized jointly by the mentor and mentee include that the relationship is:

- Voluntary (unforced)
- Confidential
- Mutually respectful
- Built on trust
- Communicative (of expectations and experiences)
- Committed (diligence in maintaining relationship)

Benefits of a mentoring relationship

A mentoring relationship is only likely to be successful if both parties recognize, value, and cultivate the respective benefits for both the mentor and mentee.

For the mentee benefits include the following:

- Support in goal-setting and establishing milestones
- Building confidence in professional skills through feedback and encouragement
- Exercising skills in problem-solving and conflict resolution
- Support in building and accessing professional networks, contacts, and opportunities

For mentors, general benefits would include:

- Developing leadership and communication skills
- Establishing novel connections with emerging talent in the field
- Contributing to professional resume and continuing professional development portfolio (3)

More specifically to JAM, there are benefits to both the mentor and mentee relating to the advancement of academic projects. The mentee will benefit from the formalized support in bringing their research to a knowledge translation endpoint, ideally publication in a peer-reviewed journal. Building associated skills throughout the mentorship journey can lay the groundwork for future projects, and in turn build MRT capacity for research across the country. The mentor may have the opportunity to be included in the research output of the mentee, and exercise skills that will allow them to be recognized as a senior responsible collaborator/author as long as they meet the requirements as defined by the International Committee of Medical Journal Editors (4). Both the mentor and mentee will benefit from the association with the JAM initiative, through CAMRT communications and engagement in the CAMRT Conference program.

Roles and Responsibilities

Both individuals need to be committed to spending time with each other and setting SMART goals for the relationship (and the specific JAM-related outcomes). The mentor will challenge the mentee and provide guidance and encouragement, working to build self-confidence and self-awareness in the mentee. They will also provide guidance and support tailored to the mentee's goals, sharing knowledge, resources, and experience. It is the mentor's responsibility to foster an environment free of judgement, give positive feedback and to support the mentee in exploring new knowledge and skills.

The mentee will take an active role in collaborative learning and progress towards defined goals. They will accept responsibility for personal growth in response to constructive feedback.

Requirements of the JAM program

Within the specific context of the JAM mentoring relationship, the following active requirements will also constitute responsibilities of the mentor and mentee.

1. **Psychological safety**: Mentor to initiate explicit discussion of a psychologically safe and confidential environment.
2. **Goals:** Collaborative definition of SMART goals for the mentee's defined project.
3. **Scientific writing**: specific goals will include a focus on improving clarity, style, and adherence to journal submission guidelines.
4. **Time commitment:** Schedule regular virtual check-ins (at least monthly) to discuss progress, challenges, and next steps. Mentee will respect the mentor's time and experience.
5. **Professional engagement:** Mentor to provide opportunities and encourage mentee engagement in existing professional projects and networks.

Tips for mentorship relationships

Introduction

This section of the handbook will provide some practical tools for establishing and maintaining a strong and effective mentorship relationship for JAM Program participants. The intent of these resources is to support participants with a deliberate foundation of good practices. These include feedback, goal setting, and how to navigate potential conflict and difficult conversations.

Feedback

Feedback is a building block for effective mentorship. The ability to provide feedback and receive it is a skill and process that can be honed with practice. It is important to note that both mentors and mentees will provide and receive feedback to each other throughout this project. These guidelines help to guide constructive feedback in the mentorship process.

Tools for providing feedback

Providing effective and honest feedback is as much a skill as it is an art. Fine-tuning this ability can be incredibly beneficial for both the mentor and mentee. Feedback should be honest (say what you mean), open and constructive, provide suggestions/strategies to challenge the mentee and foster growth, and be encouraging, and realistic. For an example using public speaking, **please click here.**

Supporting mentees in reflecting on their own goals and performance is an important factor in the mentor/mentee process. (5-7)

Tools for receiving feedback

Receiving, processing, and actioning feedback are core skills that can be developed. This applies to both the mentor and the mentee. (5-8)

For the JAM Program, feedback is intended to provide instances and opportunities for growth and learning, not as a criticism or insult. There are several tools and tricks to help manage the feelings and to start improving. One tool is the six Ps for processing feedback (8):

- **Poise**: Try to remain calm
- **Process**: Take some times to consider the feedback - it doesn't happen instantly
- **Positionality**: Consider the person's motive and intent - are they trying to help?
- **Percolate**: Work through your thinking and decide what's next
- **Proceed**: Tackle feedback in manageable pieces
- **Perspective**: Ask for follow-up feedback

Meetings and expectations

Setting a regular meeting schedule respects both the mentor and mentee time and regular check-ins, even virtually can be reassuring for both parties. Make sure that you outline expectations for turnaround time for communication/feedback. To maintain trust, the mentor and mentee should commit to a safe, honest, and confidential environment for interaction.

Accessibility

Considerations for different ways of learning/processing and abilities should be part of the discussion. Individuals are not required to share their personal information, however both mentors and mentees will have different needs and approaches that may impact the relationship. This is a complex area without a standard set of tools but accommodations are part of access, inclusivity, equity and justice for health professionals (9-11).

Goal setting

Goal setting is a critical piece of the mentorship process and the JAM project. While it is wonderful to have big goals and plans, it is essential that reasonably achievable goals are set to gauge/mark progress. Outline specific deliverables and outcomes that will accordingly inform timelines, work plans, and learning needs. Goals will be grounded in building and supporting academic and research capacity between mentors and mentees. Setting clear professional goals with reasonable timelines is a core tool for driving this work.

S.M.A.R.T goal setting is a common framework used in this area where goals are:

- **Specific:** What do you want to achieve?
- **Measurable**: How will you measure success?
- **Attainable/Actionable:** Is your goal realistic given situational constraints?
- **Relevant:** How does this serve your long term goals
- **Time-based:** What is the time frame for this plan?

There are several SMART goal templates available online such as this one (12).

Goal ideas

Ideas for potential goals include:
1. Preparing research specific curriculum vitae
2. Creating a work timeline
3. Managing research personnel (including authorship conversations)
4. Determining and executing appropriate statistical analyses
4. Preparing a scientific paper and presentation
5. Identifying an appropriate journal or conference for submitting finished works
6. Revising a manuscript after submission (13)

Conflict

Conflict occurs when there is a disagreement that can result in avoidance, neglect, distrust etc. Instances of conflict and the need for difficult conversations may arise during this project. Even with the best intentions, statements or actions can be misinterpreted and misunderstood, leading to conflict if not addressed. (14)

Avoiding difficult conversations is a natural response but addressing the conflict early involves open and honest conversation, and when done properly, can build trust between the mentor and mentee. In fact, evidence suggests that learning how to have difficult conversations is one of the positive effects of a mentorship program for mid-career women in health research.(15)

Having difficult conversations

There are many resources that outline the formula of having a difficult conversation. The basics are:

1. Preparing for a difficult conversation is sometimes harder than the conversation itself. Preparation may include writing down what you'd like to discuss, practicing calming techniques, and not making assumptions.
2. During the conversation, start at the beginning, explain your perspective and experience, ask questions, seek understanding, and collaborate on potential solutions. (16-17)
3. Use "I" messages when describing your experience and reaction (i.e. I am having difficulty understanding vs you're not making sense).
4. Use "Yes, and…." This validates the other person's perspective, and provides an opportunity to clarify your own experience.
5. Not all conflicts can be resolved as there may be a fundamental factor that prevents a resolution. While this is rare, no mentor or mentee is expected to remain in a situation where there is no viable solution to the conflict.

Tools and resources

1. **International Committee of Medical Journal Editors (ICMJE)**

   A useful guide with four criteria for authorship that should be met by all authors. Many journals (including JMIRS) have adopted these guidelines.

2. **Writing your first paper (part 1 and part 2)**

   These friendly JMIRS articles will help you conceptualise, draft, finalise, submit and revise your first research paper.

3. **Steps to submit to JMIRS**

   A step-by-step guide to using the JMIRS online submission system Editorial Manager.

4. **How to make an academic poster**

   Academic posters are an excellent way to showcase your work. This resource discusses poster style, format, content, and how to manage a poster presentation at a conference.

5. **Creating effective poster presentations**

   Another useful poster guide - this time with visuals!

6. **Creating a 10-15 minute scientific presentation**

   A series of short videos to help you organize and deliver a 10-15 minute presentation about your work.

7. **Best practices for virtual presentations**

   Presenting online? Here are some tips to deliver a captivating talk!

8. **Research whisperer funding page**

   If you want to level up your research practice and apply for some grant funding this page has strategies and practical tips to get started.

Templates

These templates are provided for you to help you set some ground rules, to track your progress and to set some goals. They are downloadable documents (click the titles!)

1. Mentorship agreement

Please use this agreement as a starting point for discussion at the beginning of your relationship as mentor and mentee.

After your first meeting, both parties please **sign and return to the Steering Group.**

2. Smart goals

In order to be effective, your goals for this partnership should be SMART: specific, measurable, achievable, relevant, and time-based. The SMART framework is a systematic and simple guide to goal setting that ensures the goals are clear, focused, and practical. Please see page 12 for more details.

We recommend setting two or three goals to keep the process manageable. What you aim to do will depend on where you are at with your research project.

FAQs

Who can I reach out to for help?

Please email Carly McCuaig at editor@camrt.ca.

What education is provided?

An initial welcome session addressing the topic of mentorship will be delivered on May 12th (subject to participant availability). Additional sessions will be tailored based on the needs of the mentees. Virtual meeting links and calendar invites will be sent in advance of each session.

What if I can't attend an educational session?

No worries! We will record all sessions and send links to all participants within the week of the session.

What if I don't hear from my mentor/mentee or if the partnership breaks down/can't continue?

If there is any gap in communication or any other issues, please contact Carly at editor@camrt.ca as soon as possible to start a resolution process.

How do I arrange travel/registration to the CAMRT conference in 2026?

Once conference registration for CAMRT2026 opens, both mentors and mentees will be contacted by Carly with a code for free registration. You must complete the online registration process using the code by the deadline provided to ensure your spot. Mentors and mentees will be responsible for booking rooms at the conference hotel and booking travel as needed (also by the deadline provided to ensure your spot!). Please refer to page 4 for bursary amounts and details for mentees within and outside BC.

What if I am unable to attend the conference?

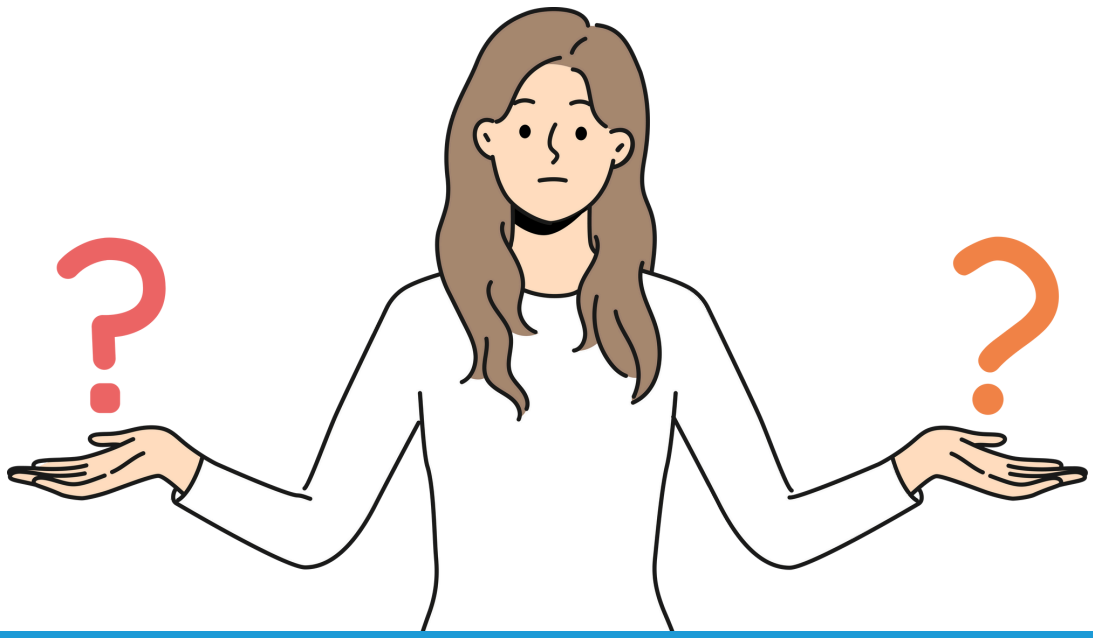
Attendance at the conference is part of the requirement to apply. However, if any issue arises that makes you unable to attend the conference, please contact Carly at editor@camrt.ca as soon as possible.

What if I do not manage to finish my project within the one-year timeline?

That's fine! You can continue to work on your goals after the program has finished. We can help with post-program support.

What if I need to drop out of the program unexpectedly?

While we hope that all potential participants will consider their ability to commit to the JAM Program in advance of applying, everyone is aware that 'life happens'. It is the responsibility of the mentee to reach out as soon as possible to work with the JAM Program to determine if any accommodations can be made to facilitate continued participation. Should it be determined that continued engagement is not feasible at the given time, a decision will be made on an individual basis about future opportunities for renewed engagement.



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