



# Flexible Pathways

## Supervisor Information

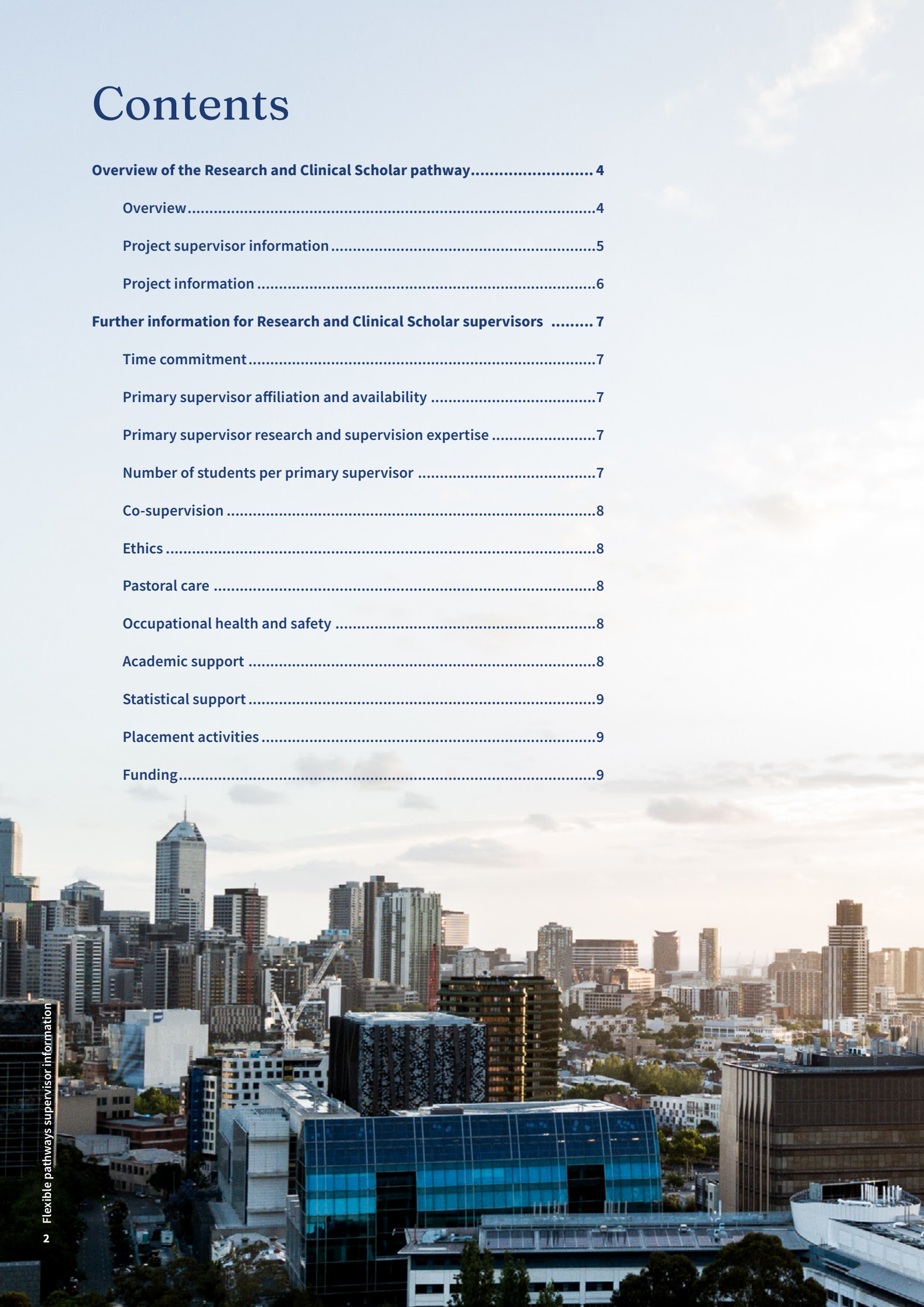
Faculty of  
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MELBOURNE

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# Overview of the Research and Clinical Scholar pathway

In the MD course, research is taught as part of the core curriculum in Years 1-3 and within Discovery subjects in Years 3 and 4. In the core curriculum, the research teaching is modularised, with students required to complete 2 modules each year. The research modules include study design, how to ask a research question, literature searching, quantitative research methods, qualitative research methods, ethics, critical analysis, and an introduction to statistics in medical research.

In Year 2, students have the option of selecting one of two flexible pathways for Years 3 and 4 of the course: the Research Scholar pathway or the Clinical Scholar pathway.

## Overview

	Research Scholar pathway	Clinical Scholar pathway
<b>Subjects</b>	Discovery 3 Research Scholar Discovery 4 Research Scholar	Discovery 4 Clinical Scholar
<b>Project work</b>	Yes	Yes (noting that projects are termed “Scholarly Projects” instead of research projects as not all options are traditional research projects)
<b>Supervisor affiliated either with UoM or with an institution affiliated with MMS</b>	Yes	Yes
<b>Project location</b>	Must be conducted in Victoria, Australia	Must be conducted in Victoria, Australia



## Project supervisor information

	Research Scholar pathway	Clinical Scholar pathway
<b>Supervision commitment</b>	<p>Research scholar (RS) projects will be completed over a 2-year period:</p> <ul style="list-style-type: none"> <li>• 4 weeks in MD3 (preparation phase)</li> <li>• 18 weeks in MD4 (data collection, analysis, and presentation of findings)</li> </ul> <p>If the need arises, supervisors should be available for occasional meetings with students in-between Discovery 3: RS and Discovery 4: RS. If this occurs, it should take place during student self-directed learning time in MD3.</p> <p>However, please note that students should not be expected to meaningfully progress their project outside of the 4-week intensive period in MD3, and the 18-week time period in MD4. <u>Under no circumstances</u> should a student be asked to help with an ethics application, or perform data collection, data analysis, or formal write-up outside of the 4-week Discovery 3 term in Year 3, and the 18-week Discovery 4 semester in MD4.</p>	<p>Over one semester—5 full-time weeks allocated, interspersed amongst the 1st semester (18 weeks) in MD4. Students can work on the project throughout the semester, but the size of the project should be appropriate for 5 full-time weeks.</p> <p>*Students are not expected to engage with the project outside of the 18-week period (1 semester) and there is no requirement for the supervisor to meet with the student before or after the 18-week period in MD4.</p>
<b>Co-supervisor requirement</b>	Yes. Note that a co-supervisor does not have to be directly affiliated with UoM.	Recommended but not essential.
<b>Supervisor / project allocation</b>	Student-initiated (student required to find supervisor and project).	Allocated by the university, informed by student preferences. Students may self-initiate if preferred.
<b>Number of students permitted</b>	Max 2 as primary supervisor for Research and Clinical Scholar students in a single year level.	
<b>Supervisor expression of interest</b>	Supervisor expression of interest (EOI) will open early in the year.	
<b>Allocation timeframe</b>	Supervisor expressions of interest (EOI) will open early in the year. From June onwards, students may either approach a supervisor directly, or select a suitable supervisor from the list of projects submitted through the EOI process. Students will meet with their home clinical RS site coordinator in July, and their host RS site coordinator in early August (if needed). Students must complete their RS project application form by mid-August.	Allocation to occur around Oct-Dec.

## Project information

	Research Scholar pathway	Clinical Scholar pathway
<b>Project types permitted</b>	<ol style="list-style-type: none"> <li>1. Prospective data analysis (quantitative, qualitative or mixed methods)</li> <li>2. Retrospective data analysis (quantitative, qualitative or mixed methods)</li> <li>3. Protocol development</li> <li>4. Systematic review</li> <li>5. Meta analysis</li> <li>6. Other (with Subject Coordinator approval)</li> </ol>	<ol style="list-style-type: none"> <li>1. Literature review</li> <li>2. Retrospective data analysis (quantitative, qualitative or mixed methods)</li> <li>3. Protocol development</li> <li>4. Quality assurance project</li> <li>5. Narrative medicine</li> </ol>
<b>Scholarly project assessment tasks</b>	<p>MD3:</p> <ul style="list-style-type: none"> <li>• Research project proposal: 1350 words</li> <li>• Literature review: 3000 words</li> </ul> <p>MD4:</p> <ul style="list-style-type: none"> <li>• Journal-style monograph: 4500 words</li> <li>• Conference-style poster</li> <li>• Oral presentations: 20 minutes</li> </ul>	<ul style="list-style-type: none"> <li>• Scholarly project: 3500 words</li> <li>• Oral presentation: 10-15 minutes</li> </ul>
<b>Project restrictions</b>	No data collection in MD3. All data for retrospective analysis must already have been collected and ready for analysis. Project scope must be such that the study can be completed within the 18-week period of Discovery 4.	Must be clinical (not lab based). Preferably online as students may be placed in broad variety of settings.
<b>Ethics approval (if required)</b>	Responsibility of the supervisor	Responsibility of the supervisor
<b>Ethics timeframe requirement</b>	Ethics approval by Jan prior to project in MD4 If ethics approval has not been obtained by January, the project must be changed to a study that does not require ethics (e.g., a systematic review).	Ethics approval by Jan prior to project in MD4.
<b>Clinical placement requirement in MD4</b>	No	Yes (3 x 4-week terms = 12 weeks) in a broad variety of settings across many sites (this will be organised by the university, not by the scholarly project supervisors)

# Further information for Research and Clinical Scholar supervisors

## Time commitment



**The Research Scholar pathway** spans across Years 3 and 4, with supervisors expected to commit to supervising their student from the start of Year 3 to the end of Semester 1 in Year 4. Supervisors are required to regularly meet with their student and actively involve them in research group and departmental activities. For D3 Research Scholar, this includes holding weekly 1-hour individual meetings and encouraging participation in research group discussions. In D4 Research Scholar, supervisors should continue to engage regularly with their student, including a minimum of 1-hour one-on-one meetings each week. Supervisors are also expected to initiate contact and establish expectations during the orientation week of D4 Research Scholar.”



**The Clinical Scholar pathway** spans the first semester of Year 4, supervisors will need to commit to supervising their student for 18 weeks. Students are expected to liaise with supervisors at orientation week. Subsequent supervisor meetings are recommended to occur, on average fortnightly for 1 hour; however, meetings may be more frequent during the 5 designated Scholarly Project weeks interspersed throughout the semester. Estimated supervisor total time commitment for the semester is 15 -20 hours.

## Primary research supervisor affiliation and availability

Primary supervisors must be affiliated with The University of Melbourne (this can include staff members with honorary appointments) or affiliated with one of the [Melbourne Medical School teaching hospitals or research institutes](#). Primary research supervisors must be acting in their University of Melbourne affiliated role when offering a project and student supervision (e.g., a research supervisor affiliated with the University may not be able to offer a research project that is entirely based at their private practice). It is expected that primary supervisors will be available for in-person meetings throughout the teaching periods. In instances where a supervisor is away (e.g., on overseas conference leave), a co-supervisor must be available in lieu to support the student.

## Primary supervisor research and supervision expertise

It is expected that primary supervisors will have expertise in both content-matter and research student supervision. This should be demonstrated by a track record of scholarly research outputs, and experience in supervising research students. Prospective supervisors who lack the required expertise or experience may be asked to complete supervisor training through the University. Please note that PhD candidates without substantial prior research experience are not eligible to act as a primary research supervisor in the Research Scholar stream.

## Number of students per primary supervisor

Each supervisor can directly supervise up to two students per year level. Additionally:

- They can co-supervise one more student.
- If supervising two D3: Research Scholar students, they can also supervise two D4: Clinical Scholar students.
- They cannot supervise two D4: Research Scholar students and two D4: Clinical Scholar students at the same time, to avoid exceeding their supervisory capacity.

## Co-supervision

A co-supervisor must be appointed for Research Scholar projects to ensure that there is continuity of supervision and support during primary supervisor leave periods. A co-supervisor is recommended, but not required, for Clinical Scholar projects.

## Ethics

Projects must have ethics approval by January the year students commence Discovery 4. Obtaining ethics approval, including associated costs, is the responsibility of the supervisor; however, Research Scholar students may assist in the process of ethics submission in Discovery 3 during the 4-week intensive. If ethics approval is not in place by January of Discovery 4, the project will need to be modified to a type that does not require ethics.

## Pastoral care

Providing appropriate pastoral care to students is a joint responsibility between the project supervisor and the Melbourne Medical School. Acute student difficulties should be managed at a local level. Where a student experiences prolonged difficulty, it is incumbent on the project supervisor and/or Research Site Coordinator to contact the Subject Coordinator to discuss the nature of the difficulties and possible management strategies.

## Occupational health and safety

It is the site's responsibility to ensure that students are made aware of all occupational health and safety requirements related to their project. This includes completion of any safety induction programs and/or training required.

## Academic support

The Melbourne Medical School will provide all students with core training modules in research design, methodology and analysis as part of the core research curriculum delivered in Years 1-3 of the MD course. In addition to direct research project supervision, research sites may provide additional support to students. This includes, but is not limited to, academic support such as further training in research design, methodology, analysis and presentation, librarian support, and access to IT facilities.



## Statistical support

All students complete statistics modules as part of the core research curriculum and have access to statistics resources offered by The University of Melbourne. Supervisors are responsible for providing statistical advice for the specific project or access to a statistician to aid with the completion of the project.

If required, students and supervisors may approach the Statistical Consulting Centre for advice however any fees remain the responsibility of the supervisor.

➤ [Statistical Consulting Centre](#)

## Placement activities

Students may negotiate with their supervisors to undertake other activities within their site. This is especially relevant for Research Scholar students who are not allocated to placement during their Research Scholar subject. For example, as part of their project, a student in a surgical department may negotiate to attend a weekly theatre session, or if in general practice, attend a clinical session with a general practice supervisor. These negotiations are at the discretion of the student, project supervisor and Research Site Coordinators. The completion of the research project should be prioritised when considering additional activities. Clinical Scholar students will already have 12 weeks of clinical placement allocated during the semester. Whilst further clinical exposure may be negotiated with project supervisors, it is recommended that students prioritise project completion.

## Funding

Funding support for conference attendance is the responsibility of students and their supervisors other than for the MD student conference.

Funding will not be provided to support individual students or projects. Instead, any resourcing requirements should be managed within departments. This is consistent with the current approach to managing MD Research projects.

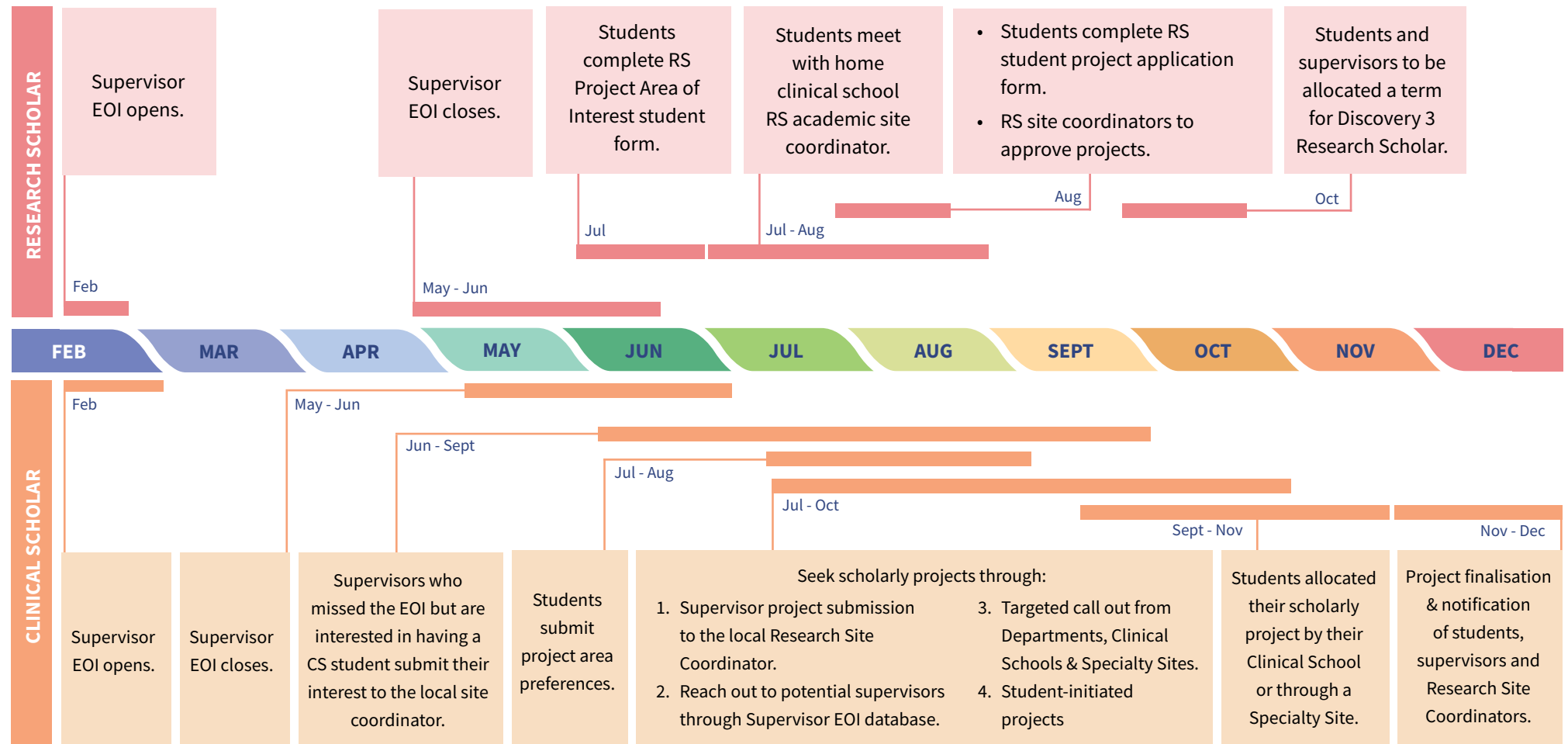


# Processes and timelines for supervisors

## Supervisor expression of interest (EOI)

Researchers will be invited to submit an EOI early in the year if they are interested in supervising a student for the Research Scholar and/or Clinical Scholar subjects. The information collected in the EOI will include contact details, hospital/department, clinical discipline/area of research and project type. The EOI will not be used to create a database of specific projects, but rather a database of potential supervisors in various clinical disciplines that students can approach to discuss potential projects, or Clinical Schools can allocate to students based on their interests.

## Timelines



# Supervisor responsibility guidelines

These guidelines outline the responsibilities of supervisors as they relate to the MD Discovery 3: Research Scholar subject and Discovery 4: Research Scholar and Clinical Scholar subjects. These align with The University of Melbourne's current policies in relation to the supervision of research higher degree candidates.

Supervisors are strongly encouraged to make themselves familiar with these policies via the Melbourne School of Graduate Research (MSGR) website.

[Learn more](#)

## Student-related responsibilities

In summary, the overriding responsibility of a supervisor is to ensure that the student completing a project under their supervision is provided with continued support and guidance, to produce scholarly work that is the best the student can achieve. However, the final form and content of that scholarly work is the responsibility of the student.

In detail, supervisor responsibilities include, but are not limited, to the following:

### Scope of research

- Assisting the student in selecting and defining the scope of a suitable research topic.
- Ensuring ethics approval for the project is in place before the start of the Discovery 4 semester.
- Assisting the student to develop a realistic timeline for the project to be conducted in Year 4 (semester 1).
- Discussing and reaching agreement with the student about the details of the supervisory arrangements, including a regular meeting schedule and ensuring maintenance of the meeting schedule.
- Ensuring intellectual property issues are discussed. If commercial potential exists, then the supervisor should ensure that the project is discussed with the Head of School/Centre/Institute and that agreements are signed by all interested parties if appropriate.
- Ensuring that the question of credit and authorship of contributions is addressed, and agreed for possible publications.
- Publications are not a requirement for the subject and where students choose to continue to work on their research to attain publication, students must prioritise their course requirements including placement at the time.
- Ensuring that for all publications, students are affiliated with the Department of Medical Education.
- Ensuring that appropriate notice and prior arrangements are made where the nominated supervisor expects to be absent and continuous supervision cannot be maintained.
- Suggesting appropriate background reading.
- Reviewing drafts and providing timely and appropriate quality feedback to students in relation to:
  - » the plan for research work
  - » structure and writing of their work
  - » oral presentations



## Student progress

- Monitoring the student's overall progress.
- Ensuring that any problems being experienced by the student which may affect their progress are addressed quickly and appropriately.

## Administrative responsibilities

In addition to supervision of students, supervisors also have a responsibility to ensure they complete administrative tasks as required by the Department of Medical Education, Melbourne Medical School, The University of Melbourne.

This includes, but is not limited to:

- Promptly notifying the Research Site Coordinator and/or Subject Coordinator of any problems being experienced by the student which may affect their progress.
- Advising the Research Site Coordinator and/or Subject Coordinator of any concerns regarding the professional behaviour of the student they are supervising.
- Informing the Research Site Coordinators of examiners nominated to assess their student's work in a timely manner and ensuring that assessors are aware of their responsibility.

Although it is not mandatory, project supervisors are strongly encouraged to undertake professional development in research supervision.



# Research site coordinators

Research Site Coordinators (RSCs) are responsible for the delivery of the Flexible Pathways program at their research site. This involves both administrative and academic oversight.

## Administrative



The central administrative function of the research site academic coordinator (RSC) is to maintain oversight of the delivery of the RS/CS program at their research site. This encompasses the delivery of Discovery 3: Research Scholar, Discovery 4: Research Scholar, and Discovery 4: Clinical Scholar (scholarly output component). Academic RSCs usually perform this role with the assistance of the administrative coordinator at their site. The administrative coordinator provides crucial support to the academic RSC and facilitates the delivery of the RS/CS program to students.

## Academic



Academic RSCs oversee and support students and supervisors who conduct research projects at their site. They are responsible for reviewing and approving project proposals, guiding MD2 students in their project decisions, and marking key assignments throughout the research process. Additionally, RSCs provide support to students by being the first point of contact for students facing significant concerns with their projects or supervision, and they ensure clear communication of expectations between students and supervisors. They also participate in Board of Examiner meetings to help assess student progress and outcomes.

## Research Site Coordinator Details

School	Name	Role	Email
Austin	A/Prof Chris Leung	Academic coordinator	<a href="mailto:christopher.leung@austin.org.au">christopher.leung@austin.org.au</a>
	Austin Discovery	Clinical School Coordinator (admin)	<a href="mailto:austin-discovery@unimelb.edu.au">austin-discovery@unimelb.edu.au</a>
Epworth	A/Prof Michael Ponsford	Academic coordinator	<a href="mailto:ponsford@unimelb.edu.au">ponsford@unimelb.edu.au</a>
	Teresa Xin	Administrative coordinator	<a href="mailto:teresa.xin@epworth.org.au">teresa.xin@epworth.org.au</a>
Northern	Ms Karen Barclay	Academic coordinator	<a href="mailto:kbarclay@unimelb.edu.au">kbarclay@unimelb.edu.au</a>
	Amanda Geddes	Clinical School Coordinator (admin)	<a href="mailto:ageddes@unimelb.edu.au">ageddes@unimelb.edu.au</a>
Royal Melbourne Hospital	A/Prof Louisa Ng	Academic coordinator (CS)	<a href="mailto:louisan@unimelb.edu.au">louisan@unimelb.edu.au</a>
	Tamara Geddes	Administrative coordinator	<a href="mailto:tamara.geddes@unimelb.edu.au">tamara.geddes@unimelb.edu.au</a>
	Dr Stephen Muhi	Academic coordinator (RS)	<a href="mailto:steve.muhi@unimelb.edu.au">steve.muhi@unimelb.edu.au</a>
St. Vincent's	Dr Jocelyn Lippey	Academic coordinator	<a href="mailto:jocelyn.lippey@unimelb.edu.au">jocelyn.lippey@unimelb.edu.au</a>
	Louise Pitcher	Clinical School Coordinator (admin)	<a href="mailto:louise.pitcher@unimelb.edu.au">louise.pitcher@unimelb.edu.au</a>
	Yvette Hovenden	Administrative coordinator	<a href="mailto:yvette.hovenden@unimelb.edu.au">yvette.hovenden@unimelb.edu.au</a>

School	Name	Role	Email
Western	Dr Yvonne Chow	Academic coordinator	<a href="mailto:yvonee.chow@unimelb.edu.au">yvonee.chow@unimelb.edu.au</a>
	Alicia Saward	Clinical School Coordinator (admin)	<a href="mailto:alicia.saward@unimelb.edu.au">alicia.saward@unimelb.edu.au</a>
	Tamara Haseljic	Administrative coordinator	<a href="mailto:tamara.haseljic@unimelb.edu.au">tamara.haseljic@unimelb.edu.au</a>
Rural Clinical School	Dr Lachlan Van Schaik	Academic coordinator	<a href="mailto:lachlan.vanschaik@unimelb.edu.au">lachlan.vanschaik@unimelb.edu.au</a>
	Kate Kent	Manager, RCS	<a href="mailto:kate.kent@unimelb.edu.au">kate.kent@unimelb.edu.au</a>
	Carly Borchers	Administrative coordinator (RS)	<a href="mailto:carly.borchers@unimelb.edu.au">carly.borchers@unimelb.edu.au</a>
	Sonya Irvine	Administrative coordinator (CS)	<a href="mailto:sonya.irvine@unimelb.edu.au">sonya.irvine@unimelb.edu.au</a>
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	A/Prof Louisa Ng	Academic coordinator (CS)	<a href="mailto:louisian@unimelb.edu.au">louisian@unimelb.edu.au</a>
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Royal Children's Hospital	Dr Lichin Lim	Academic coordinator	<a href="mailto:lichin.lim@unimelb.edu.au">lichin.lim@unimelb.edu.au</a>
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	Dr Christine Hallinan	Academic Coordinator (RS)	<a href="mailto:hallinan@unimelb.edu.au">hallinan@unimelb.edu.au</a>
	Sam Parkin	Administrative Coordinator (RS & CS)	<a href="mailto:sparkin@unimelb.edu.au">sparkin@unimelb.edu.au</a>
MSGPH	Dr Ken Winkel	Academic coordinator	<a href="mailto:kdw@unimelb.edu.au">kdw@unimelb.edu.au</a>
Department of O&G	Dr Naomi Holbeach	Academic coordinator	<a href="mailto:naomi.holbeach@unimelb.edu.au">naomi.holbeach@unimelb.edu.au</a>
	Meredith Poyner	Administrative coordinator (RWH)	<a href="mailto:mpoyner@unimelb.edu.au">mpoyner@unimelb.edu.au</a>
	Rebekah Saunders	Administrative coordinator (Mercy)	<a href="mailto:rebekahs@unimelb.edu.au">rebekahs@unimelb.edu.au</a>
Narrative Medicine	Dr Mariam Tokhi	Academic lead (Admin coord. through DME)	<a href="mailto:mariam.tokhi@unimelb.edu.au">mariam.tokhi@unimelb.edu.au</a>
	Dr Fiona Reilly	Academic lead (Admin coord. through DME)	<a href="mailto:fiona.reilly@unimelb.edu.au">fiona.reilly@unimelb.edu.au</a>

# About the Research Scholar pathway

The Research Scholar pathway will extend students beyond the core research curriculum teaching by working with a supervisor and research team on a research project.

In Year 3 of the course, students who have selected this pathway will undertake the subject Discovery 3: Research Scholar; and in Year 4, will undertake the subject Discovery 4: Research Scholar. Students will commence work on planning their project in Discovery 3: Research Scholar (4 weeks during Year 3) and will continue work on the same project in Discovery 4: Research Scholar (semester 1 of the final year).

Ideally, research projects will be student-initiated; i.e., students (during MD2) will be asked to find their own project and supervisor. Students may refer to the list of supervisors that have completed the EOI, or they may directly approach a researcher they are interested in working with. Those students requiring assistance with finding potential supervisors and projects will be supported by research site coordinators.

The project may be in any clinical/public health/laboratory-based area in which a student is interested. Types of suitable projects include:



Prospective data studies  
(quantitative, qualitative or  
mixed methods)



Retrospective data studies  
(quantitative, qualitative or  
mixed methods)



Protocol development  
studies



Meta-analyses



Systematic reviews



Other (see next page)

The project must be feasible for a 5-month period (to be completed in semester 1 of the final year of the course) and should have clearly defined aims/objectives, deliverable outcomes or end-point measurements, and established methods/protocols.



## ‘Other’ project types

There may be instances where a proposed project does not fall within the five project types described above. In these instances, a supervisor must discuss this with the relevant research site coordinator prior to accepting a student. The research site coordinator will then meet with the supervisor to determine whether the proposed project type would be suitable for a research scholar project, or whether modifications are necessary. In this meeting with the supervisor, the research site coordinator will:

- discuss the supervisor’s rationale for the proposed project, and whether the project should be modified to one of the five approved project types;
- discuss the scope of the proposed project, and whether it is equivalent in magnitude to other research scholar project types. Note that a proposed study must be clearly more substantial than a clinical scholar project;
- discuss the methodological rigour of the proposed project, and whether it is equivalent in standard to other research scholar project types.

After the meeting, the research site coordinator will make a determination as to whether they believe the project is sufficient in scope, substantiveness, and rigour. If the site coordinator feels that the project should be permitted, then they must make a request via email to the research scholar subject coordinator. The subject coordinator will make the final decision as to whether a project will be permitted to proceed as planned.



## Research Scholar subject information

### Discovery 3: Research Scholar

- 12.5 credit point
- 4-week intensive, Year 3
- Dedicated to producing a research project proposal for the following year (1350 words) and a literature review (3000 words)
- Extended assessment period to complete literature review
- Similar to previous MD Research Project 1 (MDRP1) subject

Students will need to engage with their supervisor and research team prior to the 4-week intensive period to establish a research question, during their self-directed learning time in Principles of Clinical Practice 2 (PCP2), Principles of Clinical Practice 3 (PCP3) or both. Students will then work on their research proposal and literature review over the 4-week intensive period. The timing of the 4-week intensive is described below.

### Terms

Discovery 3: Research Scholar will be delivered in either:

- Term 3,
- Term 4 (Winter term), or
- Term 5 (August term).

It is essential that we ensure an even number of students each term in clinical placement at each clinical site undertaking their core curriculum subject, PCP3. For this reason, we will need to distribute students undertaking Discovery 3: Research Scholar across the three terms and across the clinical schools. Towards the end of the year, students will be allocated to one of the above terms to undertake Discovery 3: Research Scholar. As soon as practical, the student will inform their supervisor which term they have been allocated to.

Supervisors must note that whilst students will be able to engage with them and their research team prior to the 4-week intensive to establish their research question (during their self-directed learning time), the actual project preparation work (project proposal and literature review work) will need to be completed during the 4-week intensive. No data collection is permitted in Discovery 3.

### Discovery 4: Research Scholar

- 50 credit point
- Semester 1, Year 4
- In this subject, students will collect and analyse data, write up results and present findings in a journal-style monograph (4500 words), conference poster (equivalent to 2500 words), and an oral presentation (20 minutes)
- Detailed assessment instructions and rubrics will be provided to students and supervisors in a separate document
- Similar to previous MD Research Project 2 (MDRP2) subject

Students will work on their research project full-time for the whole semester (collecting data, analysis, writing up results and presenting findings).

# About the Clinical Scholar pathway

Clinical placements and scholarly project form the two major components of the D4: Clinical Scholar Subject. Scholarly projects are designed to extend research scholarship.

D4: Clinical Scholar is undertaken in the first semester of Year 4 only. Projects are allocated to students by the central or site-based Clinical Scholar team according to their preferred areas of interest where possible. Projects should be relevant to patient care and/or medical leadership and/or advocacy. Projects will be sourced broadly, including from supervisors who have expressed an interest in supervising Research Scholar students but may have interest and capacity to supervise a Clinical Scholar student instead or in addition to a Research Scholar student. There are five options for scholarly project:



The project must be feasible for a part-time 6-month period (equivalent to 1.5 days/week) and should have clearly defined aims/objectives, deliverable outcomes or end-point measurements and established methods/protocols.

The size/scope of the project should be clearly less than that of a Research Scholar project, and be manageable within the time allocated. To facilitate this, students should be provided with a clear plan in orientation week at the commencement of D4: Clinical Scholar and provided with supervision throughout the semester. Time allocated for the student to work on the project is not equally distributed throughout the semester. Rather, students may have a small amount of time during placement weeks and additionally, 5 intensive “protected” scholarly output weeks interspersed throughout the semester. Students and supervisors will primarily be supported by the Research Site Coordinators who may provide advice regarding any aspect of the scholarly project, including the size and scope of projects or to assist with concerns regarding progress.

## Clinical Scholar subject information

### Discovery 4: Clinical Scholar

- 50 credit point
- Semester 1, Year 4
- 3 x 4-week placement terms
- 5 weeks of interspersed time to work on their scholarly project which will consist of one of the following types of projects:
  - » Literature review
  - » Retrospective data analysis (quantitative, qualitative or mixed methods)
  - » Protocol development
  - » Quality assurance project
  - » Narrative medicine
- At the end of the semester, students will write up their project and present their findings in a 3500-word written report and a 15-minute oral presentation.

## Literature review

### Background

For the purposes of this literature review, a systematic approach is required to identify, investigate and appraise existing scholarly literature relevant to a focused research question. Through this piece of academic writing, knowledge and understanding on the topic is presented and gaps are identified.

Writing a literature review requires demonstration of many essential academic skills. These include developing and performing a literature search, selecting relevant articles from a range of sources, constructive analysis of the methodologies and approaches of other researchers, analysis and synthesis of knowledge on the topic and presenting an academic written piece which is focused and organised and which provides an overview of the topic.

Although students are expected to use systematic approach for this literature review, unlike a scoping or systematic review, only one reviewer is necessary and a formal quality assessment of the literature is not required.

### Guide

The review should contain the following:

Section	Detail
<b>Title</b>	This should accurately reflect the core content of the review.
<b>Introduction</b>	This provides the context of your research question. For example, it highlights the impact of a condition, examines current practice and literature, and identifies gaps in literature. It should clearly describe and define the research question.
<b>Methods</b>	The section is essential in outlining how included studies were identified and selected and there should be sufficient detail for replication. A detailed search strategy includes: <ul style="list-style-type: none"><li>• Key words used as part of the search strategy</li><li>• Databases searched and the date of search</li><li>• Inclusion and exclusion criteria</li><li>• Boolean operators used</li></ul>
<b>Results</b>	The search results are described here, including the number of studies identified from each database, the number of full texts reviewed, and the number of studies excluded, and the final number of studies included. Information must be presented using a PRISMA diagram. Data extracted are presented in a concise manner and can incorporate information such as authors, year, sample size, study design, aims and objectives, findings/results and limitations. Tables may be utilised effectively to present detail at a more granular level.
<b>Discussion</b>	This section summarises and synthesises the literature, bringing the important information together in a summary. Findings are compared and contrasted with existing literature and evidence is provided which answers the focused research question. Strengths and limitations are highlighted and where relevant, implications for clinical practice and future research
<b>Conclusion</b>	This is brief and should summarise the current state of research as analysed in the main body. Highlight any significant gaps and identify the direction for future work.
<b>Appendix</b>	This section is optional, but the full search strategy should be presented here.



**Useful Reference:** Peters MD, Godfrey CM, Khalil H, McInerney P, Parker D, Soares CB. Guidance for conducting systematic scoping reviews. *Int J Evid Based Healthc.* 2015;13(3):141–6.

## Protocol development

### Background

The protocol development study design provides an opportunity to identify and develop/describe methodology which might answer a specific research question. As part of this process, justification of the study design, ethical considerations and anticipated challenges should be identified and addressed.

Writing a protocol development requires demonstration of many essential academic skills. These include performing a literature search, constructive analysis of the methodologies and approaches of other researchers, development of appropriate methodology, outlining ethical and logistical considerations in undertaking such a study and presenting an academic written piece which is focused and organised.

### Guide

The review should contain the following:

Section	Detail
<b>Title</b>	This should accurately reflect the core content of the study, including where relevant, the study design.
<b>Introduction</b>	This provides the context of your research question. For example, it highlights the impact of a condition, examines current practice and literature, and identifies gaps in literature. It should clearly describe and define the research question.
<b>Methods</b>	The section is essential in outlining the proposed methodology and there should be sufficient detail for replication. Details may include a description of: <ul style="list-style-type: none"><li>• The study design</li><li>• Recruitment, sampling</li><li>• Intervention</li><li>• Outcome measures</li><li>• Data collection</li><li>• Data analysis (such as the selection of statistical tests for quantitative studies or a description of the qualitative inquiry, sampling strategy, data generation and iterative process used.</li></ul>
<b>Ethical considerations</b>	This includes consent, recruitment, monitoring, confidentiality and data management such as storage and access, limitations, funding and any conflicts of interest
<b>Conclusion</b>	This section brings the important information together in a summary. The hypothesis is outlined, as are implications for clinical practice.
<b>Appendix</b>	This section is optional but information such as questionnaires should be presented here.

## Retrospective data analysis

### Background

The retrospective data analysis provides an opportunity to analyse research data previously collected and to discuss these findings in the context of broader scientific literature. As part of this process, data are used to answer a research question. Methods used may be quantitative, qualitative or mixed.

Writing a retrospective data analysis requires demonstration of many essential academic skills. These include performing a literature search, constructive analysis of the methodologies and approaches of other researchers, having a detailed understanding of the methodology used to generate the data collected, critically analysing the findings to answer a research question and presenting an academic written piece which is focused and organised.

### Guide

The review should contain the following:

Section	Detail
<b>Title</b>	This should accurately reflect the core content of the study, including where relevant, the study design.
<b>Introduction</b>	This provides the context of your research question. For example, it highlights the impact of a condition, examines current practice and literature, and identifies gaps in literature. It should clearly describe and define the research question.
<b>Methods</b>	The section is essential in outlining the methodology and there should be sufficient detail for replication. Details may include a description of: <ul style="list-style-type: none"><li>• Ethics approval number and review committee</li><li>• The study design</li><li>• Recruitment, sampling</li><li>• Intervention</li><li>• Outcome measures</li><li>• Data collection</li><li>• Data analysis (such as the selection of statistical tests for quantitative studies or a description of the qualitative inquiry, sampling strategy, data generation and iterative process used).</li></ul>
<b>Results</b>	All data collected and analysed are presented here. Tables and diagrams can be used effectively to present data.
<b>Discussion</b>	This section summarises the results and discusses the validity of the results. Results are compared and contrasted to current literature. Strengths and limitations are highlighted and where relevant, implications for clinical practice and future research.
<b>Conclusion</b>	This section highlights the main findings of the study and their significance.

## Quality assurance project

### Background

Quality assurance projects aim to determine if a particular treatment or procedure is meeting expected standards and are generally conducted within the health institution. This project provides an opportunity to use the quality improvement cycle as a basis for understanding of fundamental concepts in quality assurance associated with data collection, analysis, interpretation, reporting and how these relate to patient care. There are 5 phases in the quality improvement cycle:

1. Identification of the problem area and the relevance to patients
2. Analysis of existing processes and procedures to understand opportunities for improvement.
3. Intervention for processes that require improvement and how the improvement will be measured.
4. Evaluation of the impact of the intervention.
5. Sustainability of the intervention including monitoring and providing feedback to key stakeholders.

Completing a quality assurance project requires demonstration of many essential academic skills. These include performing a literature search, constructive analysis of the methodologies and approaches of other researchers, developing methodology which can be used to generate the data collected, collection of data, critically analysing the findings to answer a research question and presenting an academic written piece which is focused and organised.

### Guide

The review should contain the following:

Section	Detail
<b>Title</b>	This should accurately reflect the core content of the review.
<b>Introduction</b>	This provides the context of your project question. For example, it highlights the impact of a condition, examines current practice and literature, and identifies gaps in literature. It should clearly describe and define the quality assurance question, i.e. the specific issue related to the delivery of patient care which is being investigated.
<b>Methods</b>	The section is essential in outlining the methodology and there should be sufficient detail for replication. Details may include a description of: <ul style="list-style-type: none"><li>• Ethics approval number and review committee (where there is involvement of data)</li><li>• Participants</li><li>• (Data collection and analysis)</li></ul>
<b>Results</b>	All data collected and analysed are presented here. Consider use of tables and diagrams. It is also possible to present a proposed project with no results.
<b>Discussion</b>	This section summarises the results and determines if the treatment or procedure is meeting expected standards. Typically, identification of where quality improvements can be made and how they will be measured is discussed. Implications for improvement of clinical practice in terms of quality and safety are discussed, and future evaluation and sustainability. For example, recommendations which facilitate long-term, sustainable changes through changes to patient management protocols, “refresher” education programs for staff, improved patient information protocols etc.
<b>Conclusion</b>	This section highlights the main findings of the study and their significance.

# Narrative medicine

## Background

Narrative medicine is a fresh discipline of healthcare that helps patients and health professionals to tell and listen to the complex stories of illness. In a narrative medicine approach, students learn skills of attentive listening, reflection and written expression, and connect these skills to their work in clinical care, health leadership and advocacy.

Clinical scholars will have an opportunity to reflect on aspects of their clinical encounters, through creative means: this may include creative nonfiction, poetry, personal essay, fiction or other creative means of their choosing.

## Guide

### Aims / methodology

Students will produce a creative work, an associated contextual reflection, and an accompanying presentation. Working with their supervisor, they will develop a creative idea in one of the four genres detailed in the next page. Students will solve creative problems inherent in the work by engaging in practice-led research, that is, through an iterative process. As part of this process, students will also explore two or three existing works of craft that relate to their chosen theme, and an appraisal of these will form part of the required contextual reflection accompanying the creative work. Completing a narrative medicine project requires demonstration of many essential academic and clinical skills: clinical scholars will demonstrate the ability to be curious, acknowledge, absorb, think critically, interpret and act on the stories they encounter in healthcare spaces.

For a more detailed description of methodology, students should have a discussion with their supervisor around the most appropriate methodology. However, the chapter on practice-led research by Smith and Dean from the book *Practice-led research, research-led practice in the creative arts* (2009) serves as an introduction.



**Useful Reference:** Smith, H., & Dean, R. T. (2009). Introduction: Practice-led Research, Research-led Practice – Towards the Iterative Cyclic Web. In *Practice-led Research, Research-led Practice in the Creative Arts* (pp. 1–38). Edinburgh University Press. <http://www.jstor.org/stable/10.3366/j.ctt1g0b594.4>



## Genres

Students may choose one of the four following genres:

Genre	Requirement	Detail
<b>Poetry and reflection of the experience of poetry</b>	Up to ten poems/ pages and 500-word written reflection	Students will produce a unified collection of poems inspired by and relating to their experiences of health, illness, and healthcare. The poems may relate to a patient, a conversation, a moment, an illness, a journey. Reflection on the collection of poems may explore the creative process, and the experience of how poetry helps us in healthcare.
<b>Personal essay</b>	2500 words plus 500-word written reflection	Choosing an experience of healthcare and illness that has had a significant impact on the student, students would be expected to explore both their personal experience and a critical interpretation and understanding of health systems and ethics, and demonstrate an understanding of how literature and art can be used for advocacy and inclusivity in healthcare.
<b>Creative non-fiction</b>	2500 words plus 500-word written reflection	Students will write a creative non-fiction essay, that is, a story of true events using the techniques of narrative usually employed in fiction writing (dialogues, scenes, narrative arcs or development). The inspiring event or events will be related to the student's own observations on caregiving or receiving.
<b>Fiction</b>	2500 words plus 500-word written reflection	Students will produce a short story or series of micro-narratives inspired by their experiences as medical students. The fiction will explore themes of, for example, health, illness and recovery, death, justice, care, compassion, and suffering.

Further detailed instructions will be provided by the supervisors, and specific reading material assigned according to the genre chosen.

Please note: Category descriptions are intended as a guide only, for students to fully explore their own creative interpretations within a chosen genre.

For students who have a strong interest in another creative field (for example music, visual art, photography), it may be possible to complete a project in their chosen field with prior approval from the Narrative Medicine faculty. Input from a University of Melbourne expert faculty member (likely outside of the Department of Medical Education) will be sought for that project. Students would be required to confirm a secondary supervisor from within that creative field.



## Formatting requirements

The title page should include a descriptive title, your name, your student number, your supervisor's name and your host department and institution.

Other than for narrative medicine, scholarly output should be presented using the following structure:

- Abstract
- Keywords
- Introduction
- Methods
- Results (if applicable)
- Discussion
- Conclusions
- List of abbreviations used (if any)
- Acknowledgements
- References
- Figures and illustrations (if any)
- Tables (if any)
- List of figures/illustrations and List of tables (if applicable)

Presentation for narrative medicine will be specific and appropriate to the type of output. Given the broad range of narrative medicine projects, further instructions regarding this will be provided by the narrative medicine supervisors.



Each page of the body of your report should have a footer containing the page number (except the title page).

Times New Roman or Arial font (12 point), double line spacing.



Reference using either Vancouver or APA referencing style. For narrative medicine, APA is preferred.



The length of the report should be 3500 words  $\pm$  10%.

References, abstract, list of abbreviations, acknowledgements, figures and tables are not included in the word count.

There is no limit to the number of references, tables or figures included.



## Scholarly output written report assessment rubric

	Well above the expected standard	Above the expected standard	Meeting the expected standard	Approaching the expected standard	Below the expected standard
<p><b>Application of ethical practice principles in the conduct of the scholarly work</b> (Theme: Clinician Researcher)</p>	Ethical practice principles applied appropriately to the design of the project at a high level.		Ethical practice principles applied to the design of the project but lacks completeness		No ethical practice principles applied to the design of the project.
<p><b>Justification of choice of scholarly output design and methodology to address a research question, creative question or clinical need</b> (Theme: Clinician Researcher)</p>	Scholarly output design and methodology clear and described at a high level. The design is appropriate and feasible.		Scholarly output design described, lacking some clarity. Methodology generally clear but lacks completeness. Project appears to be feasible.		Scholarly output design lacks clarity. Proposed methodology inappropriate. Overall design is not feasible.
<p><b>Demonstration of curiosity, exploration and critical thinking</b> (Theme: Clinician Researcher)</p>	Sophisticated demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected which includes a comparison and contrast to other relevant work. All major themes included.		Generally good demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected which includes some comparison and contrast to other relevant work but with some major omissions. Some major themes included.		No demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected. No clear themes included and no comparison to other relevant work.
<p><b>Linkage of scholarly output to patient care at an individual level and/or a systems level.</b> (Themes: Determinants of Health, Health Care System)</p>	Sophisticated description of implications for patient care at an individual level and/or a systems level.		Generally good description of implications for patient care at an individual level and/or a systems level.		No description of implications for patient care at an individual level and/or a systems level.

	Well above the expected standard	Above the expected standard	Meeting the expected standard	Approaching the expected standard	Below the expected standard
<p><b>Demonstration of presentation skills which effectively (and where appropriate, creatively) express the scholarly output and engage the reader/ audience. This includes language, style, flow, relevance of information and formatting.</b></p> <p>(Theme: Clinician Researcher)</p>	<p>Engaging presentation at a deep and sophisticated level where appropriate language and vocabulary and writing style is used and where the audience is not distracted by typographical, punctuation and grammatical errors. Font, layout and/or illustrations used effectively to emphasise ideas. References cited correctly with no formatting errors in the reference list. Information arranged in a logical order and with no irrelevant information.</p>		<p>Engaging presentation at a generally good level. Infrequent misuse of language. Appropriate writing style. Typographical, punctuation and grammatical errors do not affect overall understanding. Generally appropriate layout but with occasional misuse of subheadings, font and/or illustrations. References cited with errors in formatting; some inappropriate use of references. Inconsistent formatting and/or errors in reference list. Information arranged generally in a somewhat logical order and with some irrelevant information.</p>		<p>Presentation is difficult to engage with and read. Frequent misuse of language. Poor layout and writing style. Frequent spelling and/or grammatical errors which affect understanding. Reason for selection of included illustrations unclear. References missing and inappropriately used in text. Significant errors in formatting of reference list. Information presented in an illogical order with mostly irrelevant information.</p>
<p><b>Global judgement</b></p>	<p>Assessors will be requested to provide a judgement about your overall performance in this task (Well above the expected standard, Above the expected standard, Meeting the expected standard, Approaching the expected standard or Below the expected standard). If it is determined that you have performed competently and professionally across all areas being assessed, the global judgement rating selected should be ‘Meeting the expected standard’ or above.</p>				

## Oral presentation

### Description

Section	Detail
<b>Due date</b>	End of semester
<b>Requirement</b>	Completion of oral presentation to a satisfactory standard
<b>Word count</b>	The equivalent of “1500 words”. A 10 minute-presentation with an additional 5 minutes of questions is expected. Audio-visual or other forms of presentation are also accepted if this has been approved by the supervisor and equivalence is met.
<b>Assessors</b>	The Research Site Coordinator or nominee.

### Further details

This is an opportunity for students to present their scholarly output to others, which may include peers, researchers, clinicians, and patients. Although named “oral” presentation, audio-visual or other forms of presentation are also accepted.

The presentation is 10 minutes in length, followed by up to 5 minutes of interaction with the audience, which may include questions. If using slides, there is no minimum or maximum number of slides.

For literature review, retrospective data analysis and quality assurance project, the presentation should include an introduction, methods, results, discussion, and conclusion. For protocol development, the presentation should include an introduction, methods, ethical considerations, and conclusions. For narrative medicine, the type of presentation should be discussed with supervisors.

The presentation should take place in the last fortnight of Semester 1.



## Oral presentation assessment rubric

	Well above the expected standard	Above the expected standard	Meeting the expected standard	Approaching the expected standard	Below the expected standard
<p><b>Application of ethical practice principles in the conduct of the scholarly work</b> (Theme: Clinician Researcher)</p>	Ethical practice principles applied appropriately to the design of the project at a high level.		Ethical practice principles applied to the design of the project but lacks completeness.		No ethical practice principles applied to the design of the project.
<p><b>Justification of choice of scholarly output design and methodology to address a research question, creative question or clinical need</b> (Theme: Clinician Researcher)</p>	Scholarly output design and methodology clear and described at a high level. The design is appropriate and feasible.		Scholarly output design described, lacking some clarity. Methodology generally clear but lacks completeness. Project appears to be feasible.		Scholarly output design lacks clarity. Proposed methodology inappropriate. Overall design is not feasible.
<p><b>Demonstration of curiosity, exploration and critical thinking</b> (Theme: Clinician Researcher)</p>	Sophisticated demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected which includes a comparison and contrast to other relevant work. All major themes included.		Generally good demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected which includes some comparison and contrast to other relevant work but with some major omissions. Some major themes included.		No demonstration of curiosity, exploration, critical interpretation and synthesis of the evidence collected. No clear themes included and no comparison to other relevant work.

	Well above the expected standard	Above the expected standard	Meeting the expected standard	Approaching the expected standard	Below the expected standard
<p><b>Linkage of scholarly output to patient care at an individual level and/or a systems level.</b> (Themes: Determinants of Health, Health Care System)</p>	Sophisticated description of implications for patient care at an individual level and/or a systems level.		Generally good description of implications for patient care at an individual level and/or a systems level.		No description of implications for patient care at an individual level and/or a systems level.
<p><b>Demonstration of presentation skills which effectively (and where appropriate, creatively) express the scholarly output and engage the reader/ audience. This includes language, style, flow, relevance of information and formatting.</b> (Theme: Clinician Researcher)</p>	<p>Engaging presentation at a deep and sophisticated level where appropriate language and vocabulary and presentation style is used.</p> <p>Sophisticated use of additional material such as audio-visuals to effectively emphasise ideas.</p>		<p>Engaging presentation at a generally good level. Infrequent misuse of language. Appropriate presentation style. Generally good use of additional material such as audio-visuals to effectively emphasise ideas.</p>		<p>Presentation is difficult to engage with. Frequent misuse of language. Poor layout and presentation style. Poor use of additional material such as audio-visuals to effectively emphasise ideas.</p>
<p><b>Global judgement</b></p>	<p>Assessors will be requested to provide a judgement about your overall performance in this task (Well above the expected standard, Above the expected standard, Meeting the expected standard, Approaching the expected standard or Below the expected standard). If it is determined that you have performed competently and professionally across all areas being assessed, the global judgement rating selected should be 'Meeting the expected standard' or above.</p>				