

	HONG KONG COLLEGE OF EMERGENCY MEDICINE 香港急症科醫學院	Document No.	EC-TG-RR-001-V4
		Issue Date	4 Apr 2025
	<u>Subject</u> Research Requirement	Review Date	1 January 2027
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Hong Kong College of Emergency Medicine

Research Requirement Education Committee (EC), HKCEM

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Fulfillment of Research Requirement
Education Committee (EC), HKCEM

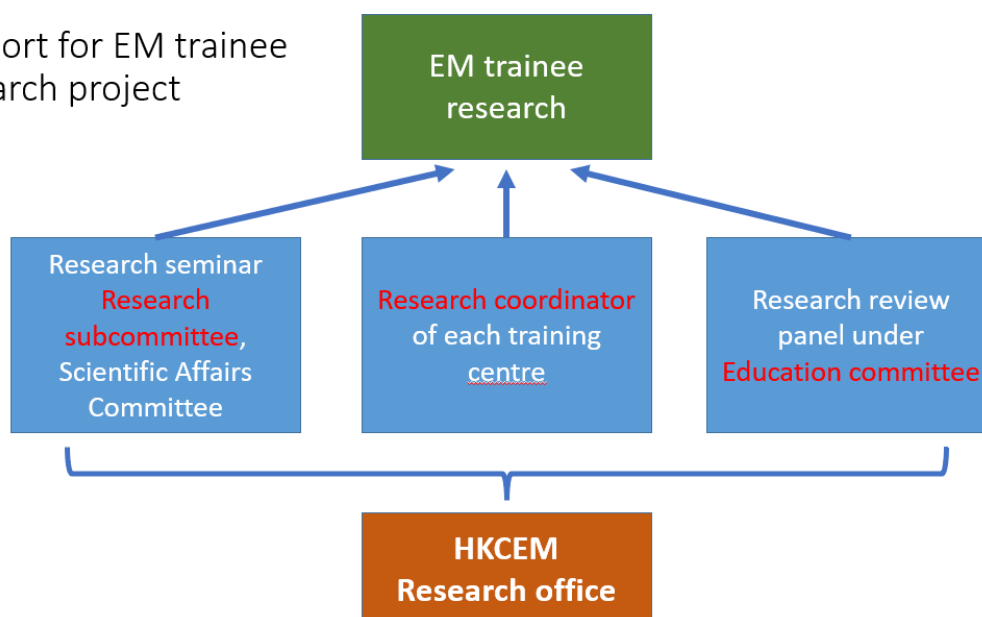
Objectives

- The primary objective of research requirement within training in **Emergency Medicine (EM)** under HKCEM (the college) is to equip the future EM fellows with background skills and competencies in clinical research. The secondary objective is to learn and expose to clinical research in context of emergency medicine, which would allow unearthing EM researchers in the professional development.
- Throughout the process of research project, trainees are expected to learn through the process of **conducting** a clinical research, from formulating research question, literature search, writing up a research protocol, undergoing review by institutional review board, to publications including presentation, journal submission and **peer-review process**.

Background

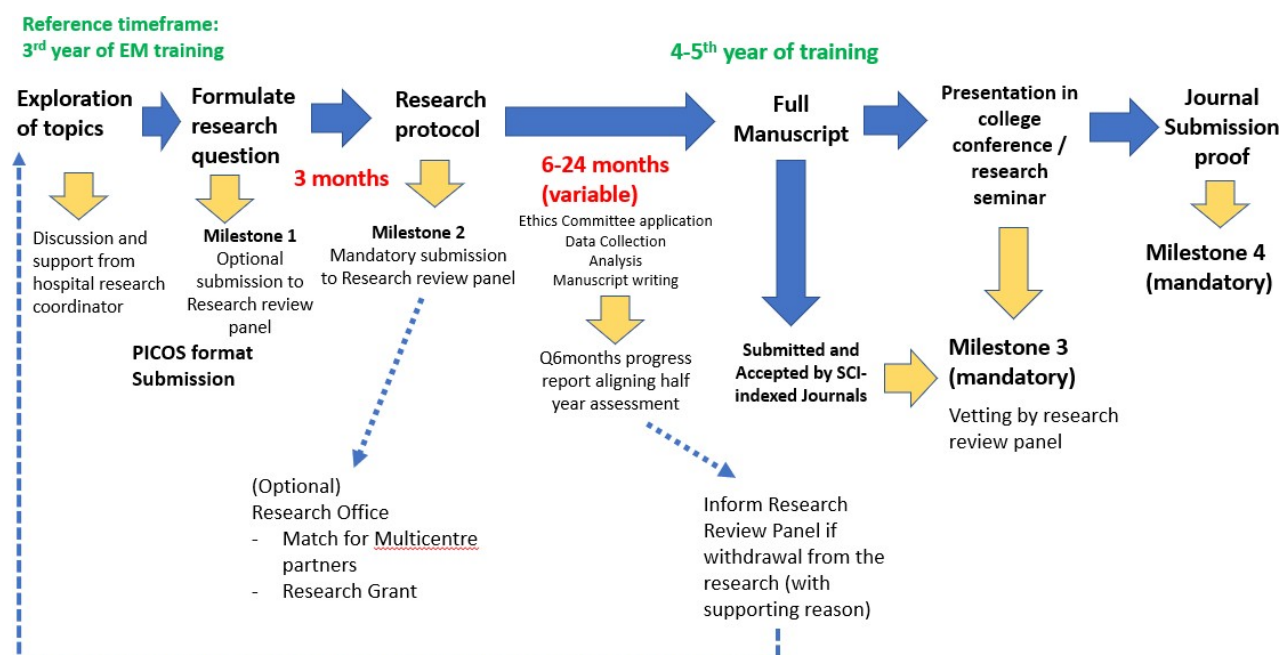
- The college had set up the **Research Office**, chaired by the vice-president of the college, to **centralize** the coordination and development of research in **EM**. For each training centre, on top of the overseeing Training Supervisor, there will be a designated **Research Coordinator** to support the research activities for both trainees and fellows. The updated framework for research requirement for EM training aligns the direction of the college and intends to **provide better support and guidance to EM trainees**.
- The college provides various support modalities and training provision to the EM trainees, including research seminar **which provides** basic training on research skills, **designated Research Coordinators** in each training centre, **and** a new pathway to support trainees' research project from initiation instead of sole assessment of final product.

Support for EM trainee
research project



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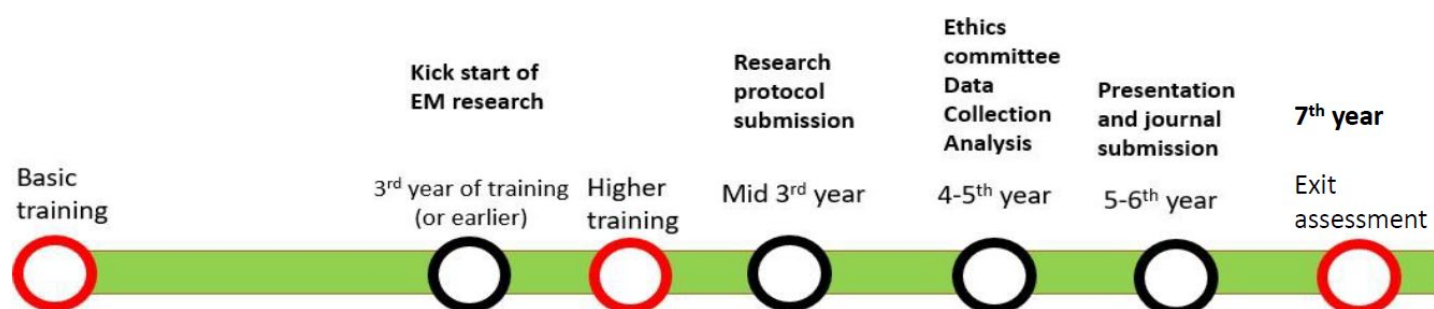
The EM trainee research pathway



- Throughout the research journey, trainees **are** coached by the Training Supervisor and Research Coordinator of the parent training centre. Trainees may opt to attend the research seminar series organized by the research subcommittee of college, or other clinical research training courses. The research seminar provides formal standardized training of core knowledge on clinical research, together with supervised coaching by experienced fellows and researchers on their research topic.
- The submission of **research question** to the **Research Review Panel** is optional. Trainees may consider submission to the panel if they had query on the topic could fulfill the research requirement.
- The submission of **research protocol** to research review panel is **Mandatory**. The research protocol may be submitted to ethics committee for approval at the same time or afterwards. In general, the affirmative reply from the research review panel **will be** within 30 days after submission. The trainee **shall** continue the process of ethics committee application, data collection and analysis after approval from the **Research Review Panel**.
- After completion of the data collection, analysis and writing up the manuscript. The trainee **shall present** the result and manuscript in occasions approved by the Education Committee. The presentation and full manuscript **are** vetted by the representatives nominated by the Education Committee. Alternatively, trainees may submit the manuscript to journals under Scientific Citation Index Expanded (SCI-E) [<https://www.scijournal.org>].
- Published papers in journal alone, without following the EM trainee research pathway, is **NOT** accepted as fulfillment of research requirement.
- The research progress should be reviewed by the Training Supervisor in the half-year assessment exercise for the progress review and timeline consolidation.
- Research protocol has to be submitted **at least 1 year prior to the Exit Assessment**.

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Steps and plans on timeline in research project of EM trainee



- Trainees are strongly advised to work out a timeline with the Training Supervisor and Research Coordinator for their research project planning. A reference timeline is to kick start by the 3rd year of training, no matter the trainee is in basic or higher training. Trainees are welcomed to kick off the research planning and protocol submission at any timeline during their basic or higher EM training.

Requirement in the research topic and study design

- Original research with well-defined research question, research method and statistical analysis are expected.
- Case reports, case series and review articles are not accepted. Well-conducted meta-analysis is accepted.
- Whether the study design fulfills the research requirement, would be subjected to the final decision of the **Research Review Panel**.
- The research topic should be relevant to science and practice of emergency medicine.
- Research performed during undergraduate medical training generally not accepted.
- Research completed before EM training enrollment or outside EM training period were generally not accepted, unless special circumstance where the research is of outstanding quality and EM-related. Individual application would be required and up to the adjudication of the research review panel.
- In general, the EM trainee should be the single first author. The trainee must demonstrate proof of major role in the authorship if not listed a first author and the decision remained by adjudication in the research review panel under Education Committee. Co-first authorship or shared first authorship were not accepted unless prior approval by research review panel. In principle, each research project should be led by one trainee only.
- Whether the study design fulfills the research requirement, would be subjected to the final decision of the research review panel under HKCEM Education Committee.

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Formulation of a well-defined research question [Appendix A]

- Formulation of the research question should generally align **with** the standard framework of PICOS or PEOS format.
 - PICOS framework
 - ◆ Patient or population – including the inclusion and exclusion criteria
 - ◆ Interventions / Exposure – could be a particular treatment in therapeutic studies, or diagnostic test / prediction rules in diagnostic studies
 - ◆ Control or comparator – the control group of subjects for comparison
 - ◆ Outcome – objective outcome parameters with definitions
 - ◆ Study design – e.g. case control study, cross-sectional study, prospective cohort study, retrospective cohort study, randomized controlled trial, etc.
 - In some study designs lacking active interventions, PEOS framework, where E stands for exposure, may be more appropriate.
- Trainees may discuss with **Research Coordinators, Training Supervisor** and coaches in research seminar for a novel, impactful, practical and feasible research topic. It is advisory to read up local and international EM journals to understand on various topics and recent trends in emergency medicine research.

Research protocol

- It is highly advisable to follow the framework of reporting guidelines under the Equator Network (<https://www.equator-network.org>). Though the documents and guidelines are intended to standardize the reporting style in manuscript writing for various study designs, the structure and layout are highly relevant in research planning and protocol writing for clinical research.
- A series of reference template for common study designs were set up for trainees' reference [see Appendix B]
- Trainees should discuss with the research coordinator and training supervisor before submission to the research review panel.
- **Trainees should submit their research protocol through ePortfolio under “Research” Session.** There is no rigid timing for submission of research question / protocols and trainees could submit throughout the year. In general, the panel would get back the reply to trainee within 30 days.
- Trainee can change topic at any time of the pathway but the pathway needs to be started again.
- **During the writing of research protocol and the research manuscript, trainees should comply to the Policy on using Large Language Model (LLM) or similar technologies in written assignments of specialist trainees of the Hong Kong Academy of Medicine** ([https://www.hkam.org.hk/sites/default/files/PDFs/2023/\(2023\)%20Policy%20on%20using%20Large%20Language%20Model%20\(LLM\)%20or%20similar%20technologies%20in%20written%20assignments%20of%20specialist%20trainees%20\(as%20of%202020%20July%202023\).pdf?v=1738748813636](https://www.hkam.org.hk/sites/default/files/PDFs/2023/(2023)%20Policy%20on%20using%20Large%20Language%20Model%20(LLM)%20or%20similar%20technologies%20in%20written%20assignments%20of%20specialist%20trainees%20(as%20of%202020%20July%202023).pdf?v=1738748813636))

The Research Review Panel

- The governance of the **Research Review Panel** is under the Education Committee of the college
- The chairperson(s) of the research review panel is/are the Vice-chairperson(s) of the Training and Examination Subcommittee

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- There are two pools of reviewers
 - Pool of members from the Education Committee / **Evidence-based Medicine (EBM) and Research Training Subcommittee** / Academia
 - Pool of members from the Research Coordinators of training centres
- Each of the research protocol submitted by the trainee, **are** reviewed by two reviewers in the panel, one from each of the pools above. The chairperson of the panel would avoid review of trainees' submissions by reviewers in the same training centre, co-authorship involved or other situation of potential conflict of interest.
- The role and responsibility of the **Research Review Panel are:**
 - To assess on the appropriateness of methodology and research context **for fulfillment of the** requirement of the college research requirement, rather than **giving comments on the** feasibility and potential clinical impact of the study.
 - **To provide *constructive advice and support* to the trainees and guide them to conduct the researches smoothly.**
- The review framework is attached in **Appendix C** for reference
- In case of discrepant opinions from the vetting reviewers, adjudication would be carried out by the review chairperson and deliberated in the Education Committee.

Journal submission

- The manuscript should be submitted for publication by a peer-review journal indexed in Science Citation Index Expanded (SCI-E)
- Trainee are expected to go through and learn from the peer-review process.
- The journal submission proof should be submitted to the ePortfolio.

Run-in period of the new research pathway for EM trainees

- Trainees who started higher training **before 1 January 2024**
 - Can follow the old research requirement [appendix D], OR
 - Opt-in to follow new research pathway if not yet kick-started research planning, to get additional support from research review panel.
 - The protocol submission is not considered eligibility criteria to sit in the **Exit Assessment**.
- Trainees enrolled higher training **on or after 1 January 2024**
 - Mandatory to follow the new research support pathway and updated research requirement
 - Trainees are required to follow the rule to submit research protocol at least 1 year prior to sit in **the Exit Assessment**.