



MicroResearch Kenya Medical Training College, Mombasa 2025 Workshop Report

September 22 to October 3, 2025



IWK Health



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MicroResearch

Resource limited countries bear 25% of the globe's disease burden yet the healthcare professional workforce is less than 1%. Furthermore, these low-income countries obtain only 2% of global research funds. In 2015, the *Sustainable Development Goals* (SDGs) were initiated as a program to build and extend the achievements of the United Nation's *Millennium Development Goals* (MDG) initiative. Encouraging national support for research infrastructure and developing local capacity to address complex health problems, remains a priority of the SDGs.

MicroResearch (www.microresearch.ca) is an innovative strategy aimed at building the capacity of local health care professionals to better address community health care problems by finding local solutions for local problems. The program began in 2008 as a collaboration between faculty at Mbarara University of Science and Technology (Jerome Kabakyenga) and Dalhousie University (Robert Bortolussi and Noni MacDonald). Since then, the research capacity building workshops have been held in 10 countries with 1,452 participants. As of October 2025, 149 locally driven research projects have been funded and launched with 52 completed, with results published in peer reviewed international health journals.

MicroResearch Process

The MicroResearch process advances in three phases: (i) Training Workshops are the first phase in the process. (ii) Teams formed during the workshops are then able to refine and improve their research ideas for a grant submission to MicroResearch and review by an international panel of research experts from Canada and Africa. Once the research teams have responded to the reviewer recommendations with changes to their proposal, approval is given on scientific merit. (iii) Teams are then able to submit their proposal to their local Research Ethics Committee (REC or IRB) for approval and carry out their research. They are also encouraged to bring their findings back to the community through a Knowledge Translation plan. This report outlines the Research Training Workshop held at Kenya Medical Training College (KMTC) Mombasa Campus, September 22 to October 3, 2025.

Workshop Objectives and Organizers

The class comprised 23 participants from KMTC and 2 participants from the Ministry of Defense in Nairobi with coaches and co-teachers from Kenya and Canada.

This workshop involved 5 teams. Participants were recruited from 22 campuses of KMTC from Western and Central Kenya.

The key objectives for the participants of the MR Virtual Workshop:

- To develop skills needed for community focused research,
- To develop skills to work in a multidisciplinary group and to become a team, and to write a successful community focused research proposal overview



Organizers

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Facilitators, Guest Lecturers, and Coaches

Facilitator: Tony Otley; aotley@dal.ca	Facilitator: Beth Cummings; eacummin@dal.ca
Co-teacher: Mr. Francis Gachanja; fgachanja@kmtc.ac.ke	Coach: Dr. Lucy Manyara lmanyara@kmtc.ac.ke
Co-teacher: Mr. Peter Nandwa; pnandwa@kmtc.ac.ke	Coach: Dr. Dorothy Mutie; dmutie@kmtc.ac.ke
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Co-teacher: Eglah Kiplagat (Time management); ekiplagat@kmtc.ac.ke	Co-teacher: Dr. Lucy Manyara (Use of AI) lmanyara@kmtc.ac.ke

Workshop Partners

This workshops and projects emerging as a result are supported by partners including:

- Dalhousie University (Volunteer teachers)
- IWK Health (Volunteer teachers)
- MicroResearch private donors
- Kenya Medical Training College

Workshop Planning and Recruitment

Participants were given the opportunity to participate in MicroResearch (MR) because of their role at KMTC. Thus, 23 of 25 participants were employed by KMTC and came from a wide range of disciplines and professions within health and the teaching and administration of healthcare. Two participants were recruited through partnership between KMTC and the Ministry of Defense.



The pre-workshop assessment was completed by 23 of the 25 participants (92%). As shown in the Pre-Workshop evaluation, 20 participants had previous research experience: 11 as study participants, 7 as research assistants, 6 as site investigators and 7 as principal investigator. Participants indicated the top things they wanted to get out of the workshop were learning to write a research proposal, research methodology & learning how to analyze data, and how to publish a paper or disseminate their results.

Workshop

The ten-day workshop combined lectures and daily small group interdisciplinary, interactive working sessions. Many of the lectures, support materials and tool kits were recently updated and refreshed in 2025 to include a new session on Research in Medical Education and new slides on using the artificial intelligence in research, principles in clinical research challenges in research, ethics, knowledge translation, budget, research to policy, and how to get published. Session lectures began at 08:30 local time. Session lectures were followed by group work sessions in the afternoons with the coaches. The lectures, exercises, and group work over the nine days led the participants step-by-step through the development of a research proposal overview. Participants moved from formulating an idea to the development of the research question, to the selection of methods to fit the questions taking into account the budget available. This was followed by the formulation of the overview of a knowledge translation plan and determination of what communities to engage, when and how. Daily workshop attendance ranged from 96% to 100%.

Team Research Proposals

As in previous workshops, the major educational component was centered on the proposal overview development in the interdisciplinary groups. There was a significant amount of content on Day 1 to orientate and allow participants to develop their own ideas into a research question based on their own experiences. On Day 2, the collaboration began when participants were divided into five groups. Working in breakout rooms, the groups then discussed each member's question and applied the FINER criteria (discussed during the lecture on Day 2) and selected the "best" one to develop into a research proposal throughout the rest of the workshop. On Day 3, a spokesperson for each group presented the topics to the class and noted the question selected by the group and the rationale for its selection. The questions selected on Day 3 were:

- Group 1 - Tausi (Peacocks) - What knowledge and perceptions influence cervical cancer screening among women aged 25–49 years and HPV vaccine acceptance for their daughters aged 9–14 years in outpatient clinics at Mbagathi County Referral Hospital, Nairobi City County, Kenya?
- Group 2 - Nyangumi (Whales) How prepared is Kenya Medical Training College to leverage AI for transforming Health Professional Education and Training?
- Group 3 - Eagles - What is the role of psychosocial engagement and resilience building programmes in preventing mental illness and suicidal ideations amongst KMTC students?
- Group 4 - Rhinos - What barriers do community health promoters face in improving uptake of maternal health services in North Pokot Sub County?



- Group 5 - Twiga (Giraffes) - What are the healthcare factors contributing to high neonatal mortality rate in Migori County?

A discussion followed each group's presentation, with emphasis on the importance of narrowing and refining each question.

The series of lectures that followed provided knowledge and skills needed to develop these questions into research proposal overviews. All the lectures included core elements to the MR concept, which were essential in preparation for the presentation on the final day.

Throughout the workshop, each group became a team, sharing their expertise, working together on their proposals, guided by their coach.



Final Day of the Workshop

On the final day of the workshop, each team presented the overview of their proposal in an eleven-minute presentation to a panel of three local experts. The review panel, along with the two Canadian facilitators, adjudicated each team's presentation and suggested how the proposals might be further strengthened.

The local review panel included:

- Dr. Marsella Ogendo, Senior Principal Lecturer, Pharmacy, KMTC.
- Dr. John Aswani, Senior Chief Principal Lecturer, Chair of Ethics Board, KMTC, Obstetrician/Gynecologist
- Dr. Munyoki Nyamai; Head of Department of Medical Laboratory Sciences and Pharmacy, Muranga University

Final Team Questions:



1. What is the level of knowledge and perceptions of cervical cancer, its risk factors, and prevention and Human Papilloma Virus vaccination for their daughters among women attending Outpatient Clinics in Selected Public Hospitals in Kenya?
2. What is the utilization of Artificial Intelligence in training and research among lecturers at Kenya Medical Training College?
3. What is the utilization of peer counselling services among students in selected campuses of Kenya Medical Training College?
4. What is the perception of CHPs on the utilization of the 3-DM in reducing maternal mortality in North Pokot Sub County, Kenya?
5. What are the skills and practice gap in labour monitoring and resuscitation in the management of birth asphyxia among nurses at the Migori County Teaching and Referral Hospital?

Review Panels General Comments

The local expert judges noted that all teams had clearly worked hard and presented their proposal overviews well. The reviewers were impressed by the professional presentations of the PowerPoints.

The panel members felt that all five teams showed that they worked well together, with each member contributing to the final proposal presentation. The teams made great progress in refining their research topic and plan over the two-week workshop. The clarity of each team's research question will benefit from some refinement. Expansion and refinement of the methods for each team will be important to work on with the local coaches to strengthen the proposals before submission. Budgets were generally well done but will also need to be refined as the specific research plan is further developed. Teams are encouraged to clearly demonstrate the link between the background they are presenting and their specific study question to show their project is well-justified, that the design/methods are appropriate, and will be understood by a reviewer from outside of KMTC and Kenya. All of the projects will contribute valuable insights for KMTC and local communities in Kenya and are worthy to proceed for a formal application for a MicroResearch Grant proposal on January 15, 2026.

Workshop Evaluation

An assessment of the workshop by participants as well as how well their team functioned was obtained using structured evaluation forms submitted with 21/25 (84%) of participants completing the form.

Overall, the workshop was highly regarded by participants. Some found the course length too short and suggested a 3-week workshop instead of 2.

“Appears a little overloaded for 10 days, but everything is relevant and organized.”

“Quite interactive with facilitators who have mastered this art. Well done.”

Lectures that participants indicated were particularly helpful included knowledge translation, grant writing, and how to get published. Overall, respondents indicated that the lectures and workshop content helped to “demystify” research and provided participants with the tools needed to help create positive changes in



their communities:

"I will look into how my students are taught research, translate knowledge to colleagues at the college and approach my project differently."

Most participants responded in their evaluation that working as a team enhanced their research and the workshop experience stimulated their interest in research. Several indicated potential challenges in continuing to work as a team, including geographical distances, time constraints, and budget concerns; however, communication and planning could help overcome these issues.

Recommendations and Comments

1. Broaden AI content:

- Use of artificial intelligence in research and work was a very hot topic of discussion. The availability of the MR AI videos by Allison Foo is an excellent addition to the workshop. Given that the KMTC workshop style dedicates the whole day to MicroResearch activities, the video links were shared on Day 1 and an interactive discussion was added on Day 6. Five homework questions were developed to encourage viewing of the videos. Dr. Lucy Manyara who has expertise in AI use and is teaching a course on this topic for medical educators, then led a discussion and summary of the videos and added points. Although adding this type of session may not be possible in all MR workshops, having a written summary of the video content that participants can refer to would be helpful. Dr Manyara has provided her slides and is very open to working with MR partners to create a written resource to accompany the online video to provide for the toolkit.

2. Add resources on Research in Medical /Health Professions Education

- A session on Research in Medical Education was added and well received at KMTC, generating good discussion. This can be made available to other workshops for presentation or inclusion in additional materials.

3. Provide list of important community issues ahead of the workshop

- Many institutions have programming involving students, trainees or staff in going to communities as a learning or outreach activity to understand issues that communities face. At KMTC this is referred to as Community Diagnosis where groups of students visit and work with a community, obtaining information from community members, to develop a report for the community leaders about an important issue in the community. If a summary list of these local issues were made available to participants in the month prior to the workshop, this could be food for thought and help to foster community-based research ideas.

4. Allow two methods slides

- The organizers and facilitators have noticed that in past workshops, although teams often have more well-developed method plans than they are able to convey on a single slide. This has led to critiques from judges that are not able to take into account the scope of the plans that



teams had made. Therefore, we experimented with allowing 2 methods slides and 11 minutes for presentation. The 2 experts who had past experience as MicroResearch judges commented that they found this a positive change which allowed the teams to more clearly describe their work and planned methods and helped to focus the question period. The facilitators also agreed. We note that some slides in the template list the options for the final presentation as 2 background and 2 methods slides, while most list 3 background and 2 methods slides. The best way forward may be the former.

5. Have participants download Zotoro and Zotoro Extender before start of the workshop

- At KMTC workshops, the librarian walks the group through use of Zotero reference manager tool for creating reference libraries and bibliographies. It would be more efficient for participants to download the software ahead of time. A one-page primer of how to do this could be shared ahead of time and participants could be advised to consult with their institution's librarian for help if challenges were encountered.

6. Edit slide deck to allow more flexibility between Canadian and International sites

- Some slides have examples or wording that is most appropriate for either an international or a Canadian site. It would be helpful in the slide deck to duplicate these slides to include both the Canadian and international version and hide the one that is not relevant to location of the workshop.

7. Consider adjusting the order of some presentations to help with timing and mental load

- Suggest that Research Ethics and Research to Policy be planned for different days. Research to Policy might be better paired with Writing a Report. How to Get Published is not key to development of the proposal plan so may be better situated later in the workshop i.e. - Day 8 or 9, rather than day 4.

8. Regular group meetings with Coaches

- Group meetings were held with coaches prior to their work with their teams on days 5 and 7, in addition to the day 3 initial meeting. This helped to create a community of coaches, allowed for the facilitators and other coaches to provide ideas and advice to help the teams in refining their questions and dealing with challenges.

9. Fix/modify MR slide deck slide template

- We found it challenging to modify/add slides because the template for the slide deck is formatted such that lines end up crowded and words overlap - it should be adjusted so the default is to single space, but we cannot determine how to do this. It will be helpful to review and fix the slide template.

10. Add Reporting Guideline checklists for Studies to Curriculum

- Information about reporting guidelines for studies should be included. This should be added to "How to Get Published" but also ideally to the either Research Challenges or Intro to Qualitative (COREQ) and Intro to Quantitative Research (STROBE) because they need to be considered when designing the study. All of these can be found on the EQUATOR (Enhancing the Quality



and Transparency of Health Research) network website <https://www.equator-network.org/>. A slide has been constructed for each and will be shared. Add pertinent checklists to the Additional Materials.

11. MOU renewal will be required

- This was the third workshop held in partnership with KMTC and MicroResearch. The MOU was for three years. There is interest on behalf of both parties to continue and build this partnership, so a renewed MOU will need to be worked on to go forward. KMTC has incorporated many MicroResearch approaches in their Research office and are enthusiastic supporters of MicroResearch. Both parties are likely to benefit from ongoing collaboration.

12. Aim to recruit a judge with expertise in Qualitative Research

- As many MicroResearch project proposals involve qualitative designs, it would be helpful to ensure at least one judge has expertise in this area.

13. Consider recording sessions given by local community engagement speakers/co-teachers.

- Boaz Obwengi, a public health officer in the Mombasa area, gave a great presentation with very practical examples/learnings. It would be helpful to have this type of talk available to future participants to give them clear understanding of the key role that proper community engagement plays. It could be included in the online curriculum resources.

Acknowledgements

We would like to extend our thanks to the local site for providing administrative and organizational support. As well to the local volunteer coaches and co-teachers for their continued involvement in MicroResearch. Thank you to the panelists for their valuable feedback and constructive critiques on the final day of the workshop. Finally, we thank the participants for their engagement throughout the ten days.

Respectfully submitted,

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