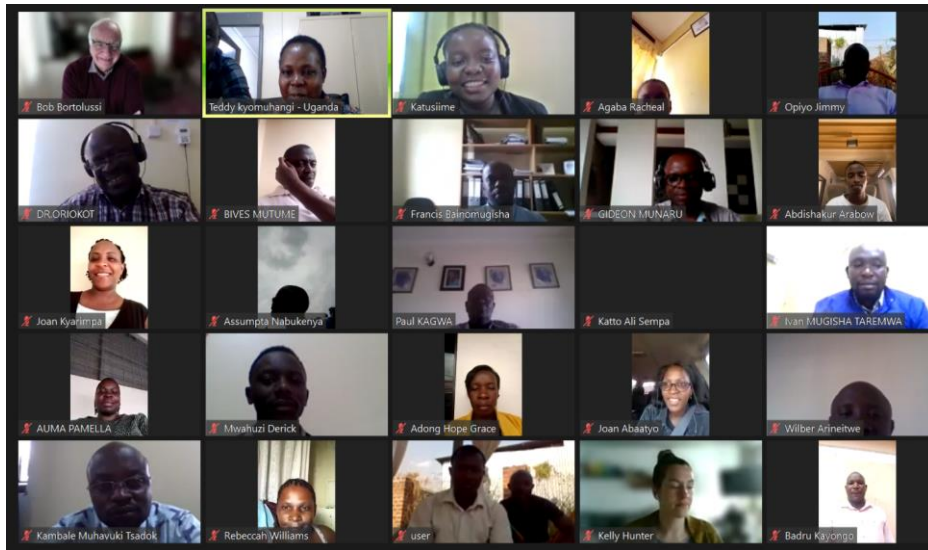




MicroResearch Virtual Workshop Report
 Maternal Newborn Child Health Institute
 Mbarara University of Science and Technology

Participants, coaches and facilitators from the virtual MUST Workshop



Building capacity for community focused health research

February 20 – March 3, 2023



A. Organizers

The 15th MicroResearch (MR) training program for the Maternal, Newborn and Child Health Institute (MNCHI) site at Mbarara University of Science and Technology (MUST) in Mbarara, Uganda was held virtually from February 20 – March 3, 2023. The main organizers for this virtual workshop were:

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B. FACILITATORS, GUEST LECTURERS & COACHES

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C. Introduction and Objectives

The 15th MicroResearch (MR) training program for the Maternal, Newborn and Child Health Institute (MNCHI) site at Mbarara University of Science and Technology (MUST) in Mbarara, Uganda was from February 20 – March 3, 2023.

The class comprised of 29 participants from multiple sites in Uganda with coaches and co-teachers in Mbarara and in Canada. PowerPoint presentations were projected to the participants in Mbarara using the Zoom video conferencing platform. Lectures were all recorded and posted to a private YouTube channel, to which participants were given access. Participants also had access to the PowerPoint presentations and supporting educational materials on the private MicroResearch curriculum website.

This workshop involved 5 teams. Participants were recruited from Mbarara University of Science and Technology (Mbarara), Lira University (Lira), Bishop Stuart University (Mbarara), Kampala International University (Kampala), St. Mary’s Lacor Hospital (Gulu), Mbarara Regional Referral Hospital (Mbarara), and St. Francis Family Helper Programme (Mbarara). One participant also joined from Somali National University in Somalia. Further, one person from Kabale University (Kabale, Uganda) audited the course as an observer. MUST acted as the host for all institutions.

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

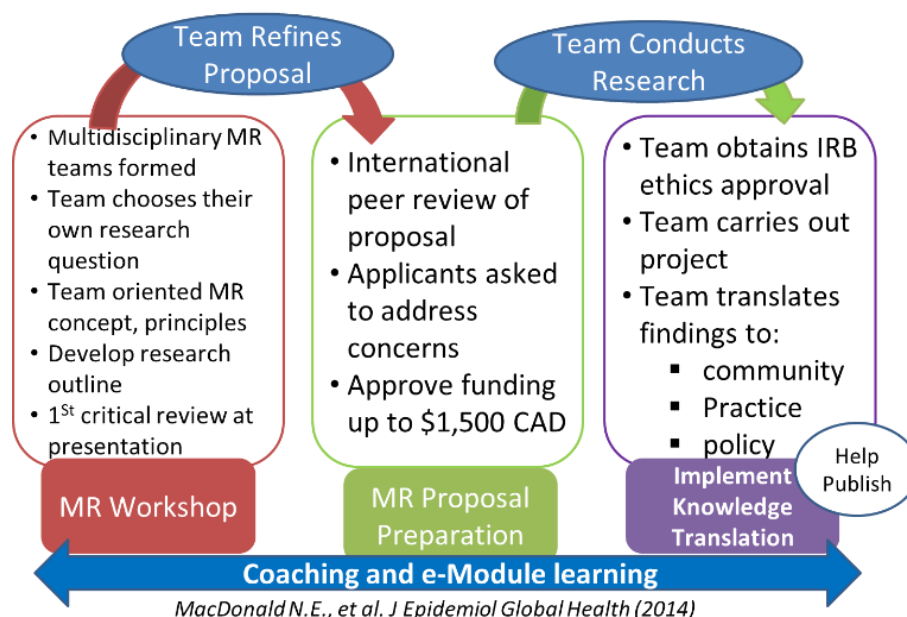
- to develop skills needed for community focused research,
- to develop skills to work in a multidisciplinary group and to become a team, and
- to write a successful community focused research proposal overview.

D. Background

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 (<http://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 9 countries with 1,184 participants. As of January 2023, 130 locally driven research projects have been funded and launched with 51 completed, with results published in peer reviewed international health journals.

MicroResearch Process



As shown in the figure above, 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 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. MR successful proposals at MUST have been funded through a local and international Rotary partnership. Given the different teams here, more work is needed to have more local Ugandan Rotary clubs participate as well as more Rotary clubs in Atlantic Canada and beyond.

E. Workshop Events and Outputs

Participants were recruited through word-of-mouth at MUST and Mbarara Regional Referral Hospital, as well as from direct requests from teams from other sites. The 29 participants included a wide range of disciplines and professions including medicine, nursing, midwifery, laboratory sciences, public health, students, and counselling.

The pre-workshop assessment was completed by 27 of the 29 participants (93%). As shown in the Pre-Workshop evaluation, 24 participants had previous research experience; 12 as study participants, 16 as research assistants, 4 as site investigators and 6 as principle investigator. Participants indicated the top things they wanted to get out of the workshop was improving research skills, ability to write grant applications, and for networking and mentoring opportunities.

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 2021 to include new slides on using the internet, principles in clinical research challenges in research, ethics, knowledge translation, budget, research to policy, and how to get published. Session lectures began at 3:00PM local time in Uganda. Session lectures were followed by group work sessions 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 and 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 80% to 100%.

On the final day of the workshop, the five teams presented their proposal overview in 10-minute PowerPoint presentations. Four panelists were present to provide feedback and constructive criticism.

F. Team Proposals

As in previous workshops, the major educational component was centred 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 - Lived experiences of unmarried teenage mothers in accessing Maternal and Child Healthcare services at Mbarara Regional Referral Hospital.
- Group 2 - Acceptability of pre-nuptial Sickle Cell screening among young people in Northern Uganda
- Group 3 - What is the level of performance of community health workers in responding to disease outbreaks in Bushenyi district?
- Group 4 - Reduction of prevalence of sickle cell disease through health education on sickle cell trait in Bundibugyo district.
- Group 5 - What coping mechanisms and social support are available to pregnant adolescents with depression?

A discussion followed each group's presentation, with emphasis on 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, including knowledge translation, ethical issues, community engagement and budget development. 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, working together on their proposals, guided by their coach.

G. Workshop Partners

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

- Maternal Newborn Child Health Institute
- Mbarara University of Science and Technology
- Healthy Child Uganda, Mbarara, Uganda (Technical support)
- Dalhousie Medical School, Dalhousie University (Volunteer teachers)
- IWK Health (Volunteer teachers)
- MicroResearch private donors
- Academics without Borders
- Rotary International and Rotary Clubs in Atlantic Canada

H. Final Days

On the final day of the workshop, each team presented the overview of their proposal in a ten-minute presentation to a panel of four 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. Samuel Maling – Associate Professor of Psychiatry, Mbarara University of Science and Technology
- Dr. Jonans Tusiimire - Senior Lecturer Department of Pharmacy, Deputy Dean Faculty of Medicine, Mbarara University of Science and Technology
- Dr. Imelda Tamwesigire – Senior Lecturer Department of Community Health, Mbarara University of Science and Technology
- Dr. Gertrude Kiwanuka – Associate Professor and Dean, Faculty of Medicine, Mbarara University of Science and Technology

Review Panels General Comments

The local experts 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 expert panel members felt that all five teams showed that they worked hard as a team, 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 KT plans and budgets were generally well done but will also need to be refined as the specific research plan is further

developed. Each research proposal will need some refinement before it is ready to be submitted for a MicroResearch grant. Teams need to show their project question is well-justified, that the design/methods are appropriate, and will be understood by a reviewer from outside Uganda. All of the projects will contribute to betterment of Ugandans, and worthy to proceed for a formal application for a MicroResearch Grant proposal in May.

Day 10 Career Panel & Discussion

To make better use of time on Day 10, MUST arranged for three senior faculty members from MUST and Bishop Stuart University to be on the Career Panel: Dr. Francis Oriokot, Dr. Jerome Kabakyenga and Dr. Donah Asiimire. This panel discussion took place while the judges were deliberating virtually in a separate breakout room. This session was opened with a few sides to set the stage and then each panel guest was invited to succinctly provide insightful comments on how they had arrived in their current post. The panel was very well received with many warm comments in the chat.

I. Workshop Evaluation

An assessment of the workshop by participants as well as how well their team functioned was obtained using structured evaluation forms submitted anonymously with 28/29 (96%) of participants completing the form.

Overall, the workshop was highly regarded by participants and the virtual program was well accepted, although several felt the program was “too hectic” and the timing could be reconsidered to take into account other commitments:

“Time for the workshop. If could be adjusted from 3 to 4 or 5 o'clock, you might have realized that most of the participants are always working officers and most people are not in position to be granted short leaves for the training.”

Lectures that participants indicated were particularly helpful included knowledge translation, research methods, sampling and statistics, and how to develop a research question. 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:

“To be grounded in evidence based social research with focus on identifying the practical challenges and issues the vulnerable go through and be able to address the real underlying issues to transform society.”

“I really like the research field, but I didn't know how to get involved and to start. As soon as I heard that Micro Research is training people in research, I was very interested. I found an opened door that can lead me to the realization of my dreams, which are research!!!”

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 and time constraints, however, mentorship, access to experts, and funding could help overcome these issues.

J. Recommendations and Comments

1. Improving Participant/Teacher Communication:

- The icebreaker introductions on Day 1 helped familiarize the facilitators and participants and allowed people to feel comfortable to speak up throughout the workshop.
- Consider providing a special acknowledgement for participants who make good use of the chat and contribute to discussions throughout the workshop.
- The first presentation on Day 1 should include a mini-orientation on how to access the online curriculum and basics of how to use Zoom for comments, request to speak and access breakout rooms, as well as how to access and navigate the MicroResearch site. Alternatively, this could also be done by the local site a week before the workshop. It will help to confirm if their internet access is adequate and provide an opportunity to outline the expectations of the workshop, e.g. attendance and participation requirements. We recommend new participants attend an orientation session to ensure Zoom and Curriculum connections are established. This information could also be provided through a pre-recorded information session that participants are asked to watch as a pre-requisite.
- Develop a way to count participants who use a common laptop. This could be done through the local site when confirming with the participants about their commitment to attending the workshop.
- In order to get the full benefit of the workshop, we will recommend minimum internet access requirements.

2. Combat virtual viewing fatigue:

- Long virtual sessions can be tiring and may minimize learning potential.
- Should plan for 5 minute breaks for stretch and bathroom needs between sessions.
- Participants should be present at the scheduled time for the sessions. The local coordinator might be asked to do this to ensure sessions start on time as to reduce fatigue and not run late.

3. Program Observations and Suggested Changes

- Some lectures ran overtime - this limited time for group work. Organizers need to be clearer to co-presenters that MR is NOT intended to present extensive details as there are materials in curriculum site for more depth and importance of protected group work time. This can be emphasized both in the Train the Trainer session, as well as a reminder before the workshop.
- The Research Ethics lecture should be revised, shortened to provide an opportunity for discussion on controversial items.
- More effort needed to secure gender equity in future workshops. (This one was predominantly male)
- Having new teachers observe and co-teach alongside more experienced teachers provided a good learning experience and allows for the site to grow their teaching capacity.

4. Final two days of the workshop:

- For Day 9, presentations on Career Documentation, Time management and Grant Writing were introduced. These were well received and should become permanent within the workshop schedule.
- For Day 10, the participants should send in their final PPTs ahead of the start time. This is key in ensuring the files will load properly during the session.
- Timekeeper should give a “one minute warning” to presenters when they are nearing the time limit for their presentation.
- Five teams is too many and impacts the panelists’ ability to ask a lot of questions and provide more feedback.
- Having a Career Planning Panel discussion while the judges were in their breakout room provided a great opportunity for open discussion and conversation and was well received. This practice should be continued and be included as part of the Day 10 agenda. The local site will need to recruit the panelists. The three chosen speakers from MUST were excellent and raised many issues

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.

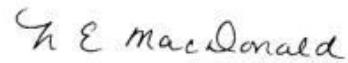
Respectfully submitted,



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