

MicroResearch Workshop University of Nairobi

October 13th –October 24th 2014

Nurturing a Research career

Workshop for Community Based Researchers

Held at

University of Nairobi,

Nairobi, Kenya

Hosted by the University of Nairobi Institute of Tropical and Infectious Diseases

(UNITID)

Under the leadership of **Professor Mwanda Walter Otieno**, Director of UNITID, Chair MicroResearch secretariat



From Left: Fred Mose, Professor Walter Mwanda(Director UNITID), Dr Tobias Kollman , Prof Ndavi(acting Principal CHS), Dr Leah Bii ,KMTCC, Sr. Aquinatta (Implementation Science Fellow, UON)

Facilitators, Lecturers, and Coaches

<p>Noni MacDonald, MD, MSC, FRCPC, FCAHS, Professor of Pediatrics, IWK Health Centre and Dalhousie University, Halifax, Canada noni.macdonald@dal.ca</p>	<p>Tobias Kollmann, MD, PhD, Clinician Scientist, CFRI Associate Professor, Division of Infectious and Immunological Diseases, Department of Pediatrics, University of British Columbia, Vancouver Canada tkollm@mac.com</p>
<p>Mark L Chindia BDS, MSc, FFDRCSI ,Professor of Maxofacial Surgery, School of Dentistry, University of Nairobi and Secretary of the Kenyatta National Hospital/university Of Nairobi – Ethics &Research Committee.</p>	

Coaches	
Group 1: Dr Mary Adam , Research, Kijabe Newborn Community Health Project	Group 2: Micah Oyaro PhD Department of Human pathology, Immunology Unit, University of Nairobi. mkongeri@yahoo.com
Group 3: Otieno Walter Odhiambo Lecturer, Implementation Science Fellow University Of Nairobi otienogo@gmail.com	Group 4: Sr .Aquinatta Lumuli Implementation Science Fellow, University Of Nairobi.
Group 5: Rysper Rajula Eve Implementation Science Fellow, University of Nairobi	Group 6: Dr Leah Bii, and Dr Everline Wesangula Lecturer, KMTC

MicroResearch Training organizing committee

Prof Mwanda Walter Otieno,	Chairman	UON
Fred Mochache Mose	Co-ordinator	UON
Dr. Leah Chebet Bii	Member	KMTC
Dr. Peris Jelagat Kipchumba	Member	KMTC
Mr. Kipturgo Matthew	Member	KMTC
Dr. Evelyn Wesangula	Member	KMTC

Funding

Funding for the MicroResearch Workshop at UNITID at the University of Nairobi

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1. University of Nairobi Institute of Tropical and Infectious Diseases, University of Nairobi
2. Personal Donations :Professor Walter Mwanda and Noni Macdonald
3. Prime_K University of Nairobi
4. International Development Research Centre (IDRC), Global Health Research Initiative
5. Canadian Child Health Clinician Scientists Program (CCHCSP)
6. Canadian Paediatric Society (CPS)
7. IWK Health Centre
8. Dalhousie Medical Research Foundation
9. Dalhousie University
10. University of British Columbia

SUMMARY OF MICRORESEARCH ACTIVITIES, 2014

INTRODUCTION AND BACKGROUND

The absolute need for capacity building in research was recognized several years ago by African nations. Lack of grant funds for small research projects is a major obstacle to research development in many of these countries as are lack of opportunities to learn how to do community directed research. Small projects are the fuel, upon which research skills are honed and a track record is established; both are known critical factors in research grant proposal success. Especially a community-focused approach to research has been shown to provide opportunities to find sustainable local solutions to local problems and to work with communities to improve health outcomes.

Micro-Research (MR), a concept modeled on Micro-Finance, was conceived in 2008 by Jerome Kabakyenga, Dean of Medicine of Mbarara University of Science and Technology (MUST), Noni MacDonald and Bob Bortolussi both Professors at Dalhousie University and the IWK Health Centre. The MicroResearch Program uses educational tools, mentors, seed grant support and peer-to-peer multidisciplinary collaboration with the support of Canadian and African research coaches to help local African faculty and health care workers answer their own community focused research questions and then translate their findings to help improve health outcomes. This concept is so appealing and successful that MicroResearch has received support from a number of organizations

The goal of each MR workshop is to enhance the participants 'skills for:

1. Grant proposal development and management
2. Avoiding pitfalls in research
3. Research ethics
4. Research manuscript development
5. Avoiding pitfalls in presentations including abstracts
6. Technical report writing
7. Knowledge translation and policy development
8. Time/resource management and career planning
9. Community engagement
10. Career documentation

This was the fourth workshop to be held at the University of Nairobi in collaboration with UNITID and it was a full-day, two week course. Participants were recruited using letters and email invitations, posters and leaflets(see Appendix 2) in addition to personal outreach beyond the University of Nairobi including Kenya Medical Training College (KMTC) and several regional and district hospitals, public health and the Ministry of Health (see Appendix for list of participants, their backgrounds and work site). The MicroResearch also included participants from the Arid and semi arid lands (ASAL). Applicants sent in a one page CV. Potential participant applications were selected for suitability based upon recommendations as well as professional expertise to achieve a diverse class covering most major health-related disciplines. All 35 participants were a priori committed to developing their skills in clinical research, especially research that could improve health outcomes



The Program

The workshop combined lectures, interactive sessions and daily small group interdisciplinary, interactive working sessions with local UON coaches. The revamped all-day Workshop lecture and program schedule is shown in Appendix. Daily attendance was 100% for all but one day when 3 participants had to attend the Biometric workers registration exercise at Samburu and Kisii Counties.

Course participants were divided into six groups by the MicroResearch faculty such that each group included a range of professional disciplines and institutions. Many members had not met nor worked with each other previously. The collaboration started with discussion of the research questions put forward by each member of the group. The research questions were based on their own experience and passion (i.e. were not just community based but community directed). These questions were further developed via the lecture: "How to develop a research question". The group then vigorously discussed the merits of each question and selected one to work on as their team workshop project. A spokesperson for each group then presented the list of topics to the entire class, noted the one selected by the group and then the rationale for its selection.

The six topics selected on Day 2 (i.e. unrefined questions) for development into the skeleton of a proposal during the workshop were:

Team 1: How has health system in Pumwani maternity hospital contributed to birth asphyxia?

Team 2: Burden of cerebral palsy among children under five years on mothers health in Naivasha and Lari Sub Counties.

Team 3: Why is maternal mortality still high despite free maternity services in Arid and Semi-arid Areas (ASALs)

Team 4: Can peer education and college based family planning provision be an acceptable intervention in the prevention of unwanted pregnancies and unsafe abortions among KMTTC students?

Team 5: Reasons for low uptake of intrauterine contraceptive device as a family planning method among women of child bearing age in Bureti Sub County

Team 6: Why growth monitoring and promotion (GMP) should be strengthened both at the facility and community level.

The 10 day workshop was completed with the six groups presenting a 10 minute overview of their research proposal followed by a 10 minutes of comments and questions from the judges and then 5 minutes of constructive suggestions from the other participants on how the proposal might be strengthened.

A distinguished group of judges participated and decided on the best presentation. These included Professor Francis Onyango, Associate Professor, Department of Paediatrics, University of Nairobi; Dr Hudson Alumera, Department of Periodontology; University Of Nairobi, Dr Florence Nderitu KMTTC, Assistant Chief Pharmacist (MPH) The scoring system used took into account MicroResearch principles.

Best presentation winner: Team 1



From Left :Mr Simon Mbugua(Kijabe Hospital)Ms Felistus(Mama Lucy Hospital),Mathew Kipturgo(KMTTC),Dr Mary Adam (Kijabe ,Coach),Ms Winnie Mutahi(UON),Daniel Mwangi(Pumwani),Fred Mose (MR Co-ordinator),Daria Sikolia(KMTTC),Eve Rajula(Coach ,UON)

Judges' Summary Comments: Proposal Presentations October 24th 2014

The judges were deeply impressed with and impassioned by all four projects and recommended unanimously that all of them should be allowed to advance towards a full proposal for grant funding. However, they also were united in their opinion that all 6 of the projects would still require work before being ready for submission to international peer review (Detailed comments for each project to follow).



Judges Debriefing session, From left Dr Tobias Kollman(University Of British Columbia),Prof Walter Mwanda (Director UNITID ,Chair MicroResearch)Dr Florence Nderitu(KMTC),Dr Hudson Alumera (UON),Prof Francis Onyango(Uon Dept of Pediatrics)

In general, the judges felt that the title (project question) of each of the projects could be further refined, or at least improved and/or more narrowly focused. The main suggestion was that the titles should be phrased in a more active language, and clearly state the problem and target. They also commented that several of the projects would benefit if the background provided was more clearly targeting the question at hand, with specific evidence ('hard numbers') given in support. Similarly, the methods for nearly every project needed to be focused more directly on the objectives, i.e. matched. Lastly, each of the teams needed to help shape the application into a 'story', i.e. continuation of a 'thread' that reaches from title through background, objectives and methods

Daily summary activities

DAY 1 (Monday 13th October, 2014)

The invited participants were introduced to the Micro Research (MR) team which comprised of: Noni MacDonald, Eisha Grant and Robert Bortolussi Dr Tobias Kollman,(who was introduced in absentia but arrived on a later date).



Prof Noni MacDonald :Trainer at MicroResearch UoN UNITID

The participants were taken through the course outline of the workshop and the main objectives of undertaking the exercise, which are:

- To develop skills needed in community based research
- To develop skills necessary to work in a multidisciplinary group
- To write a great community based research proposal overview

Eisha Grant, a former MR participant from Uganda who is a beneficiary of the MR grant, presented to the new members her teams' research topic and study findings.

The new members were then challenged to identify a research question from their own experience.



DAY 2 (Tuesday 14th October, 2014)

The participants were taught the different types of research methods: Qualitative and Quantitative, and when to use them. They were also taught the types of clinical studies including their advantages and disadvantages.

The class then went through the pitfalls in research. They were cautioned to always apply **FINER** when choosing a research question as well as use **PICOT** if they are checking on an intervention or are thinking of doing a comparison study.

The participants were then divided into 6 groups comprising of 5-6 members. They were instructed to share their individual research questions with their team members and as a group select one question which meets the FINER criteria which they will develop further. They would then present this question to the rest of the MR class.



Group 3 Discussions

DAY 3 (Wednesday 15th October, 2014)

The six groups presented their selected research questions to the rest of the MR team. The questions were critiqued by the class and the instructors. Each group was then assigned a coach who would help them refine their question and improve on it if need be.

The class was then taught on writing Grant proposals.





MicroResearch Participants during group Discussions
DAY 4 (Thursday 16th October, 2014)

The MR groups presented one slide each on their refined research questions and study methodology.

The participants were taught on **IMRaD** : Introduction, Methods, Results and Discussion. They were also taught on reviewing manuscripts which is necessary when reviewing work done by their peers.

The MR groups were then assigned to further refine their research questions considering what they had been taught in the day's class; noting background information relevant to their question and to note methods they will use to conduct their study given the scenario they are awarded the MR grant.



Group 4

DAY 5 (Friday 17th October, 2014)

The MR class was taught on how to write an abstract for presenting in a meeting. They were also taught on the different aspects and similarities of poster and oral presentation and how to prepare both. The class was also taught on the basics of research ethics.

The assignment for the day was for the MR groups to refine their background and study methodology. They were also told to define and discuss the budget of their study and come up with a justification for it. They were also instructed to define their study objectives.



From Left Viola Kipkemoi(KMTC),Christopher maina(Naivasha)BellaH Jowi (Kijabe)Sr.Aquinatta (Coach,Fellow UON)Anne Irura(Litein),Tom OOGO(KMTC)

DAY 6 (Tuesday, 21st October, 2014)

The class was taught on knowledge translation, which entails knowledge creation and its application. They went further to define the basics of knowledge translation and how to move their research findings into influencing policy change at all relevant levels.

The class was then given an assignment to start on their final power point presentation and select their best orator who will represent their group on the final presentation day.



Group 6 members: From Left Violet Kanyanga (Busia), Loice Chesang (Homabay), Dr. Walter Odhiambo (Coach, Fellow UoN), Eliver Owino (Homabay), Galm Guyo (Marsabit), Fred Mose (Coordinator), Michael Kabwere (Kitui D. Hospital)

DAY 7 (Wednesday, 22nd October, 2014)

The participants learnt about engaging the community. Discussions went on in the class showing why and how communities need to be involved in defining health issues. It came out clearly that health workers need to work with the community to improve their health, and why it is important to share the knowledge learned, for example through community based research with the people to help shape community health care.



Group 4 members: From Left Dr Aswani (KMTTC), Maurine Nyanchama (Kisii level 6), Dr. Wesangula (Coach), Ms Margret Juma, Mr Kariuki (Embu Hospital), Mugure Kiambati (Pumwani), Dr Leah Bii (Coach, KMTTC), Ms Consolata

The class was given the day's assignment, which was for them to continue finalizing their power point presentations. They were also to revise their methodology and include the community engagement aspect. They were also tasked to think of questions they might be asked by the judges during their presentation and strategize on how to answer these questions.

DAY 8 (Thursday, 23rd October, 2014)

The participants were advised on how they should plan and document the progress of their career. They were given tips on how to plan their personal goals and professional goals.

They MR class was then given time to fine tune their group power point presentation, making it ready for their final presentation to the visiting judges.

DAY 9 (Friday, 24th October, 2014)

The MR groups presented their final work to a panel of judges.



Prof Walter Mwanda introducing the judges; from Left Prof Walter Mwanda, Prof Onyango, Dr Nderitu, Dr Alumera and Dr Tobias Kollman.

APPENDIX 1: LIST OF QUESTIONS PER GROUP

Team 1

1. What are the effects of free maternity services on maternal mortality in selected hospitals
2. Effects of vaginal infibulation (vaginal suturing) on mother and child during delivery among northern Kenya communities
3. What are the factors contributing to neonatal sepsis in Mama Lucy Kibaki hospital
4. How has health system in Pumwani maternity hospital contributed to birth asphyxia
5. What factors contribute to utilization of health facility among women during labour and **delivery?**
6. How does the use of narratives help in prevention of maternal morbidity among agricultural community

Team 2

1. Effectiveness of referral systems at tier one in promoting maternal newborn health in Lari Sub County, Kiambu County
2. Factors associated with neonatal sepsis in Naivasha Sub County
3. Adherence of Exclusive breastfeeding among HIV positive women in Kiambu County Referral Hospital
4. Factors associated with uptake of Pneumococcal conjugate vaccine among HIV infected children Vis a Vis HIV negative children in Limuru Sub County
5. Burden of cerebral palsy among children under five years on mothers health in Naivasha and Lari Sub Counties.

Team 3

1. What are the effects of the low coverage and utilization of laboratory services among women in Samburu County
2. Why is maternal mortality still high despite free maternity services in Arid and Semi-arid Areas (ASALs)
3. What is the impact of 'Beyond ZERO- campaign' project on the reduction of maternal mortality rates in ASALs
4. What are the risk factors for Low-Birth-Weight in ASALs
5. What are the Knowledge, Attitudes and Practices of fathers towards maternal and child health care in ASALs
6. What are the maternal preferences in choosing skilled or non-skilled delivery in ASALs

Team 4

1. Do health worker at Pumwani Maternity Hospital have the required knowledge and attitude for the promotion of the practice of Kangaroo Mother Care in the prevention of **Perinatal** mortality?
2. What are the factors contributing to the incidence of **Unsafe** Abortions in women of reproductive age (15-30 years) at Karatina Level 4 **Hospital?**
3. What are the determinants of the choice of IUCD as a family planning method among women of reproductive age attending Kisii Level 6 Hospital ?
4. What are the maternal factors influencing birth preparedness and readiness for complications among women of child bearing age in Kibera Lindi Village Nairobi County ?
5. Can peer education and college based family planning provision be an acceptable intervention in the prevention of unwanted pregnancies and unsafe abortions among KMTC students?
6. What are the factors contributing to the incidence of cerebral palsy in children born to mothers aged 25 years and below?

Team 5

1. Reasons for high home deliveries as compared to hospital deliveries
2. Contributing factors to aflatoxins poisoning in Ukambani.
3. Cold chain management practices in health facilities in Samburu Central Sub County
4. Causes of Ante Partum Haemorrhage in Kisauni Sub County
5. Reasons for low uptake of intrauterine contraceptive device as a family planning method among women of child bearing age in Bureti Sub county
6. Reasons for under reporting of neonatal tetanus in routine surveillance in Samburu
7. Reasons for high caesarian section in Samburu county referral hospital

Team 6

1. Why growth monitoring and promotion (GMP) should be strengthened both at the facility and community level
2. Why poor infant feeding practices are major contributions to morbidity and mortality among infants and young children.
3. What are the factors influencing the uptake of cervical cancer screening among women of child bearing ages (15-49)
4. What are determinants of preterm deliveries among pastoral communities
5. What are the factors contributing to continued **FGM practices?**
6. Why are there increased cases of malaria among pregnant mothers and infants despite free ITNs distributions

Appendix 2: List of Participants

	NAME	GENDER	ISTITUTION	PROFESSION	EMAIL	SIGNATURE	QUALIFICATION
1	DANIEL KAMAU	M	PUMWANI	MATERNTY	kamaujan09@gmail.com		B.Sc(public health)
2	CHRISTOPHER MAINA	M	NAIVASHA DIST HOSP	NURSE CH-PH	chrismachege2007@yahoo.com		B.Sc. N
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19	MARGARET JUMA	F	KMTC - Nairobi	NURSE	magjuma09@gamil.com		Degree
20	DR. MOHAMED GUYO	M	ISIOLO DIST HOSP	MEDICAL OFFICER	mguyo97@gmail.com		DEGREE
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35	VIOLA KIPKEMOI	F	KMTC - Nairobi	PUBLIC H. OFFICER	violajep@gmail.com	Degree

TIMETABLE For MicroResearch 2014

Day	Discussion	Activities
1	Introductions and Objectives, e-program, and Defining a research questions	Participant select a question
2	Research Principles, Pitfalls in Research;	Groups Formed Discuss Project Ideas
3	Getting started on writing a proposal	Project Proposal Reporting Meet coach, refine question
4	What editors are looking for How a manuscript is reviewed	Refine Proposal
5	Writing an abstract exercise Writing a Report Oral & poster presentations	Refine Proposal
6	Kenyatta Day: Holiday	

7	Basic and local Ethics Knowledge Translation Research into policy	Refine Proposal
8	Community engagement How grants are reviewed	Refine Proposal
9	Career Documentation and Planning	Prepare for Presentation
10	Presentations by Groups	Certificates and awards
