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A Report on the summer course I attended at McGill Summer Institute of  
Infectious Disease and Global Health, Montreal, Canada.

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## **Acknowledgement**

I would like to extend my gratitude and appreciation for the Norwegian Research School in Global Health (NRS GH) for the golden opportunity I got to take part in the summer institute of Infectious Disease and Global Health at McGill in TB research Methods and anti-microbial resistance (AMR) special session.

## **Course Title**

Tuberculosis (TB) research Methods and AMR special session

I was involved in TB research methods course at McGill summer institute of infectious disease and global health from the 11th of June to the 15th of June and AMR on the 16th of June.

## **Description of the courses**

TB research method was an intensive 5 days course involving interactive lecture and group work. Every day from 9 o'clock to 2:30, we had interactive lecture from a well experienced TB researchers working in different developing and developed settings. The program started by welcome and introduction from McGill summer institute staff members and followed by lectures on "how research ends TB" and overview of qualitative and quantitative research methods. We also discussed the "DPSICO-TB" which focused on developing TB research objectives. In the afternoon small group, I participated in "Economic evaluation" which was very interesting and my first experience to take part in this subject area. We had a very active and creative group which end up developing research protocol entitled "Active TB Case Finding Approaches in Hard to Reach Populations of the Niger Delta: A Cost-effectiveness Study". It was very successful in understanding and writing the protocol in such short period.

Overall, the whole 5 days ended up following the same path of lecture and group work. We have addressed topics such as trial design and selecting study population, clustered trial designs, planned and unplanned secondary analysis, and interim analysis, stopping rules,

applying randomized control trial in to practice for clinical and public health decisions as well as data analysis in the second day. The third day focused on Economic evaluation which covered introduction to modeling and decision analysis, economic analyses, key studies in economic analysis as well as economic data analyses. Operational research, the SORT IT model, principal and structure of a research protocol were addressed in the fourth day. Examples of operational research which lade to changing policy and practice have been presented. Other successful TB research projects has been presented and discussed.

The fifth day focused on TB diagnostic methods including Molecular methods for typing and branding the tubercular bacillus and molecular typing for patient, outbreak and population level studies of TB epidemiology. Systematic review and meta-analysis as well as individual data meta-analysis was discussed.

Networking and meeting new people working on TB from different continent in the world was one big chance that I appreciated beyond the course. I end up to be a good friend of some of the participants. Future collaboration has been discussed widely.

The course ended up with course evaluation and a certificate will be sent by email.

On the 6<sup>th</sup> day, I attended Anti-microbial resistance special session. The session was arranged for the first time and the magnitude and challenge of AMR and current research activities on the field has been presented and discussed.

In general, it was an amazing experience and it is a very useful course for my future career as well as my PhD work. It helped me to revise and understand my research methods in my PhD work. I am critical of the strength and limitations of my protocol after the course. It makes my learning process easier and evidence based.

I am also equipped and refreshed to develop a protocol in my fields of interest with easy and practical research protocol developing methods.

I am thankful to the NRS GH for the chance I have got to take part in this course and I hope other PhD student working on TB research will also have the chance to attend the course in the future.



Picture: Economic Evaluation small Group Participants