



**Final Report:
MicroResearch Nova Scotia Workshop
Colchester East Hants Health Centre (CEHHC),
Truro, Nova Scotia
September 19 – September 30, 2016**

Building Local Capacity for Community Focused Research to Improve Local Health Outcomes

Introduction and Background

MicroResearch is an innovative research training program for community members that began in 2008 in Africa under the leadership of Drs. Noni MacDonald and Bob Bortolussi of the IWK Health Centre in Halifax, NS. In 2016 the MicroResearch Africa program was adapted for use in communities in Nova Scotia. The program provides community focused research training, mentorship and small grants for health research projects conceived and done locally.

“The goal of MicroResearch is to improve health care outcomes with innovative community based research that assures quality and integration of research into the fabric of the local health system and the community”.

Between September 19-30, 2016 the first ever MicroResearch Nova Scotia Workshop was held in the Northern Zone of the Nova Scotia Health Authority at the Colchester East Hants Community Health Centre in Truro, NS.

MicroResearch-NS in the Northern Zone was led by Drs. Noni MacDonald, Bob Bortolussi and Ryan Sommers in partnership with:

- Dalhousie University Faculties of Medicine, Health Professions and Agriculture.
- Nova Scotia Health Authority, Research Development Office, Public Health Services , Provincial Library Services
- IWK Health Centre. Pediatrics, Research Services
- Colchester East Hants Health Centre Foundation

Rationale for MicroResearch NS

Nova Scotia rates poorly on many health indicators compared to other provinces, and health care funding is becoming increasingly limited. The gaps in knowledge translation/ adaptation/ implementation at the community level are widening and there is a need to better align local

resources to improve outcomes at the community level. Continuing to deliver health care – preventive, acute and chronic – as is currently done, will not bring the changes needed to improve local health outcomes and meet the Nova Scotia Health Priorities. While the business plans at NSHA, IWK and Dept. of Health and Wellness all encourage strategies and collaboration to address complex health problems; local health problems need community-focused, locally driven, sustainable, culturally and local resource appropriate solutions. Building on this need, MicroResearch-NS aims to develop local community focused research capacity to find solutions to local health problems deemed important by local participants.

MicroResearch NS Program Model

The fundamentals of the MicroResearch NS program include:

- Training – participants are taught practical and applied community focused research skills
- Interdisciplinary collaboration - teams work together to move a research idea to a fundable proposal
- Seed funding - of up to \$3000 to support quality projects
- Project management – teams work together to carry out the community project
- Knowledge sharing – of research outcomes with stakeholders



See MacDonald et al MicroResearch: Finding sustainable local health solutions in East Africa through small local research studies. *Journal of Epidemiology and Global Health* 2014;4:185–93

Program Accreditation

The MicroResearch NS workshop received accreditation from Dalhousie University Continuing Professional Development, Faculty of Medicine for 40 Category 1 RCPS / CCFM credits. The full program was also reviewed by the Royal College of Physicians and Surgeons of Canada and Category 2 and 3 credits can be garnered for those physicians who complete the entire program. Continuing Professional Development credits can also be garnered by other health professional participants for their continuing education.

MicroResearch NS Workshop in Truro

After considerable discussion by the MicroResearch NS Advisory Committee, Colchester East Hants Health Centre (CEHHC) in Truro NS was selected as the first site for a MicroResearch NS Workshop. Dr. Ryan Sommers, the Medical Officer of Health for NSHA's Northern Zone, family physician and the Medical Site Lead for CEHHC agreed to become the site co-ordinator/leader for the first MicroResearch-NS workshop. The Dalhousie University Faculty of Agriculture and the CEHHC Foundation were also approached to become partners. Their enthusiasm and the leadership shown by Dr. Ryan Sommers was a key contributing factor that made the workshop a reality and a success.

Participants: Workshop participants were recruited through use of posters - see **Appendix 1**, personal invitations from Dr. Ryan Sommers and through word-of-mouth. Seventeen participants initially enrolled in the Workshop on Day 1 with one more joining on Day 2 for a total of 18 participants. However, due to other unexpected commitments, one participant had to withdraw on Day 3 for a final class of 17. A complete list of participants is available in **Appendix 2**.

Pre Workshop Assessment

A summary of the findings of the pre-workshop assessment are shown in **Appendix 3**. All of the 18 participants completed the evaluation questionnaire on Day 1.

The two most common reasons participants gave for attending the workshop were: 1) recognition that there is a big need for research at the community level, and 2) interest to enhance or develop research skills. The physicians appreciated being able to get Continuing Professional Development (CPD) credits for this work. All participants noted, albeit using different words, that they wanted to learn how to do research, especially at the community level as well as several noted importance of learning how to work on a research team.

Although 4 of the 18 participants who enrolled had previous experience as a research principal investigator, none of the others had ever designed a research project from the beginning and they noted that research at this level i.e. focus in the community was predominately lacking.

Workshop Facilitators and Guest Lecturers: All of the faculty who facilitated the workshop had research experience and the majority had MicroResearch teaching experience. A complete list of faculty can be found in **Appendix 4**.

Coaches: with skills in research design were also recruited to support each team with the development of their ideas and proposal. A list of coaches can be found in **Appendix 5**.

Workshop logistics: All of the workshop sessions were held in the Colchester East Hants Health Centre on weekdays from 12-4:30 PM. The workshops began on Monday, September 19th and ended on Friday, September 30th 2016.

Workshop format: The MicroResearch NS workshops combined interactive seminars, exercises and daily small group interdisciplinary, project development sessions supported by local site coaches. Course participants were divided into three "groups" by the MicroResearch NS faculty on Day 2 of the workshop series such that each group included a variety of professional

disciplines and gender equity across the groups. Each of the three teams had 5 - 6 members. By Day 5, these three groups had evolved into “Teams” who focused their time, energy and effort on addressing a research question they had agreed to investigate.

Workshop Program Overview:

The daily program of lectures, discussions and exercises is summarized in **Appendix 6**.

Day 1: Dr. Ryan Sommers, welcomed participants and the coaches noting that the workshop was built on experience in Africa and would help community health providers and volunteers find solutions for local community health problems. The introduction was followed by an over view of web and library resources and opportunities. At the end of the presentations, each participant was challenged to prepare a research question, for presentation on Day 2, based on their experience and passion (i.e. community based AND community directed).”

Day 2: The second day began with a lecture on “How to develop a research question” and the teams vigorously discussed the merits of each of their individual research questions. One question was then selected as their team workshop project. A spokesperson for each team then presented the list of topics to the entire class, noted the one selected by the team and then the rationale for its selection (**Appendix 7**).

Research Questions:

The three topics selected by the teams on Day 2 (i.e. unrefined questions) for development into an overview research proposal during the workshop were presented by each team to the full Workshop on Day 3 and are included below:

Team 1: What barriers exist that prevent people wanting to die at home remain at home?

Team 2: What factors affect safe needle disposal in Indian Brook - a First Nations community?

Team 3: Is food insecurity prevalent in post-secondary students within the Northern Zone of NSHA?

Throughout the first week, there were discussions by the participants, faculty and coaches to strengthen the research questions, select appropriate research methods to use to address the question, optimize community engagement, to ensure the project would meet ethical requirements, and to draft a project budget.

During Week 2 of the workshop series, attention shifted to the development of a PowerPoint presentation of the Background and Methods for the research idea and a focus on Knowledge Translation (KT). Teams were supported by the lecturers and coaches to fine tune their proposed KT strategy,

Team Research Proposal Overview Presentations and Judging

The three refined questions presented by the teams on Day 10 for adjudication were:

Team 1: *“What are the challenges identified by bereaved caregivers and frontline professionals when a palliative care patient wishes to die at home in Colchester East Hants counties?”*

Team 2: *“What can be done to improve safe needle disposal in the community of Sipekne’katik?*

- *What factors affect it?*
- *What interventions would the community support and accept?*

Team 3: *“Is food insecurity present in undergraduate and college students attending post secondary institutions in Colchester?”*

- *To determine whether or not food insecurity exists in this population*
- *To determine what the major contributing factors are to food insecurity in Colchester if it does exist”*

The highlight on the final day of the workshop series (**Appendix 8**) was the oral presentations describing how each team would attempt to answer their research question. Each presentation included a 10 minute overview of the team’s research proposal followed by comments and questions from the judges and audience and then constructive suggestions from the other participants on how the proposal might be strengthened.

Judges:

Three distinguished judges were invited to adjudicate the presentations.

- Dr Patrick McGrath, Vice President Research, Innovation and Knowledge Translation NSHA/IWK, a clinical and research psychologist
- Ms. Shawna O’Hearn, Director Global Health Office, Faculty of Medicine, Dalhousie University, who is an Occupational Therapist
- Ms Marie McCully Collier, a Board Member at the NSHA, and a retired registered nurse and program manager/supervisor with Public Health who Chaired the Public Health Association of Nova Scotia.

The judges listened to the presentations, asked questions and then deliberated to decide if each of the three projects could be developed into a full MicroResearch NS grant proposal. Their Evaluation and scoring system was based on MicroResearch principles (**Appendix 9**).

Best Presentation:

The judges commented on the high caliber of all three team presentations and the thoughtful responses to the questions they were asked following their presentations. The selection of the “winning team” was difficult, but they chose:

Team 3: *Hungry for answers: Food insecurity among postsecondary students in the Colchester area.*

The judges were enthusiastic supporters of all three MicroResearch NS teams and unanimously recommended that every team be encouraged to develop a full project proposal. All of the teams presented a clear rationale for their plans and demonstrated a passion to undertake them. They all identified the communities they would be working with and a knowledge translation strategy to

shorten the time between discovery and implementation. The judges had many specific suggestions for strengthening each proposal (**Appendix 10**). Each team is also supported by a volunteer coach who will work with them to ensure ultimate success.

Workshop Assessment

An assessment of the workshop by participants was obtained using structured evaluation forms submitted anonymously. Thirteen of the seventeen (76%) participants completed the final participant evaluation form. The scores and summary of comments are presented in **Appendix 11**. Of note, the majority of the participants rated the workshop highly and would recommend to a colleague. Helpful comments for future workshops included the importance of informing participants in advance about the time required; e.g. “takes time beyond regular day” and “has home work” and that the whole program takes about 12 to 18 months to complete the full project. Similarly the suggestion for modifying the workshop time to 4 half days per week and then 2 the final week needs to be considered to give participants the time to catch up with their work commitments. There was a suggestion that groups/teams from one workplace be permitted to attend MicroResearch NS as a group, and choose their own research question (e.g. one pertinent to their workplace). This model has been recently been tried in MicroResearch workshops in Kenya with good success.

Team Evaluations

Most teams worked quite well together. They commented that ongoing support from their employer, coach, and the expertise of MicroResearch facilitators would help ensure their success. The potential obstacles for completing their project in a timely way included: work commitments, tight timelines and the ability to get ethics approval for their study (**Appendix 12**).

Program Costs

In addition to personnel, the costs associated with delivering the Truro workshop included mileage, office supplies, tote bags, and jump drives. These costs were covered by the Office of Research Development and Research Services at NSHA and IWK. The IWK Research Services office supported website development and NSHA, IWK and Dalhousie University supported the lecturers and steering committee members that made the workshop possible. The Colchester East Hants Health Centre and Public Health Services at NSHA provided teaching space, refreshments, audio visual and other supports that enabled the success of the workshop. The Colchester East Hants Health Centre Foundation has committed to pay \$3000 for each of the project grants that are approved following the scientific review process.

Plans for expanding the MicroResearch NS program across Nova Scotia are funding-dependent. It is our intention to offer a workshop in the North End of Halifax in the Winter, 2017 and in Antigonish NS in the Spring of 2017.

Comments and Recommendations

Dr. Patrick McGrath noted that all three MicroResearch questions developed are of great importance at the community level and that none could be answered appropriately using a centralized top-down approach. He underlined the importance of growing MicroResearch NS as it offers local health care providers the tools for finding local solutions for local health problems that can improve local health and well being outcomes for local communities. This approach

also fits well with the strategic plans for NSHA, IWK and the Nova Scotia Department of Health and Wellness. He also congratulated the local site leader, Dr. Ryan Sommers and Dr. Noni MacDonald and Dr. Bob Bortolussi, MicroResearch co-founders and the teachers, coaches and participants on the success of the first NS workshop.

Ms Sharon Crowe, Executive Director of the CEHHC Foundation was so impressed by the three MicroResearch NS presentations and the importance of these projects to her local community that she “threw away” her prepared notes and spoke from her heart. She noted that this truly was community-focused research that will have important impact on improving local health and well being. She commented that “The CEHHC Foundations is very proud and pleased to support these important research projects”.

Peggy O'Reilly noted how alone she had felt working as a public health nurse in Sipekne'katik – where there are so many problems that it is overwhelming. Now she feels that she has a team to help her find solutions to a significant needle disposal problem her community saw as important. She also invited MicroResearch NS to come to Sipekne'katik to hold a MicroResearch Workshop there.

Outcomes and Recommendations from the 1st MicroResearch Nova Scotia Workshop

Administrative Considerations:

To be successful, the MicroResearch NS program requires strong administrative coordination and financial support from the partner organizations. Currently the partners include: NSHA, IWK Health Centre, Dalhousie University but other partners could be included going forward.

Each site needs solid, dedicated local leadership (e.g. a community “champion”) and local organization for MicroResearch NS to be successful. A knowledgeable and capable local community leader is key to recruiting a wide range of diverse participants (e.g. beyond the health sector), securing appropriate schedules, meeting spaces and AV/food requirements.

Support for teams after the workshop concludes is needed to ensure each team completes and submits a full proposal for funding consideration. The Coaches are important for supporting and encourage teams to complete their proposals.

Educational Considerations:

Having a variety of topic experts participate in the delivery of the workshop sessions and provide insights to support teams was very helpful (e.g. Bev White, Katie McLean, Sandra Crowell, Ryan Sommers) and kept the workshop sessions interesting for participants.

This was the first MicroResearch workshop offered outside of Africa. More work is needed to adapt the Toolkits for use in the Canadian context.

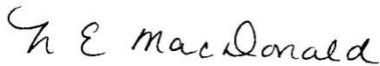
The Career Planning and Time Management lecture on Day 9 should be shortened or revised. The lecture on CV's could be dropped. The lecture order could be reshuffled and a lecture on preparing research budgets could be added.

Future Implications:

The success and enthusiasm of this CEEHC MicroResearch NS Workshop supports further expansion of the workshop program across Nova Scotia. In order to achieve continued success, infrastructure support is needed to manage the program. Funding is also needed for the small research grants.

Two MicroResearch NS workshops are currently being considered: one for the North End of Halifax in Winter, 2017 and another in Antigonish for the Spring of 2017.

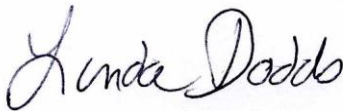
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