How can Canadian, African and other Health Systems benefit from each other?

BACKGROUND

On 25 February 2021, the Innovating for Maternal and Child Health in Africa (IMCHA) initiative and Dalhousie University co-hosted a virtual event on health systems strengthening for maternal and child health (MCH) and sexual and reproductive health and rights (SRHR). The event presented findings from IMCHA, an eight-year, $36 million initiative jointly funded by the Canadian Institutes of Health Research, Global Affairs Canada, and the International Development Research Centre. IMCHA funded 19 research teams in 11 sub-Saharan African countries. Each team was led by an African Principal Investigator (PI), working in close collaboration with an African Decision-maker co-PI and a Canadian researcher co-PI. Each team addressed pressing maternal and child health issues, and generated evidence to inform policy and practice. IMCHA also funded 2 regional Health Policy and Research Organisations, whose mandate included supporting the research teams in disseminating their experiences and policy recommendations to influential decision-makers in their own country and abroad.

The goal of this event was to share the experience of some of the IMCHA teams and some Canadian experts, and generate discussion that could benefit health systems in Africa, Canada and beyond. By engaging the Canadian public and interested stakeholders in health systems strengthening, the event provided a platform for exchange and cross-learning regarding implementation research on health systems strengthening to improve MCH/SRHR. The event also provided an opportunity for participants to reflect on what research gaps continue regarding health systems strengthening.

Six IMCHA research teams were showcased, including one whose Canadian team members were based at Dalhousie University in Nova Scotia.

The conference was chaired by **Dr. John LeBlanc**, Associate Professor, Department of Pediatrics, Community Health and Epidemiology and Psychiatry, Dalhousie University

Opening remarks were made by:

- **His Excellency Dr. Mpoki Ulisubisya,** High Commisisioner of the United Republic of Tanzania to Canada,
- **Dr. Annette Elliott Rose**, Vice-President, Clinical Care and Chief Nurse Executive, IWK Health Centre,
- **Dr. Montasser Kamal,** Program Leader, Health Research Partnerships, International Development Research Centre, and
- **Dr. Christine Chambers,** Scientific Director, Canadian Institutes of Health Research - Human Development, Child and Youth Health Institute, and Professor, Dalhousie University.

The event was organized as a plenary session followed by break-out group discussions.

KEY POINTS FROM THE PLENARY SESSION

Delivering integrated health services for neonates

This presentation was made by **Dr. Linda Nyondo-Mipando**, Deputy Dean of Academics, School of Public Health and Family Medicine, College of Medicine, Malawi.

Reducing maternal and newborn illness and death requires addressing issues of access, stigma, healthcare workers' training, scarce resources, leadership and management skills and continuous monitoring and evaluation. Health systems therefore must be integrated and coordinated to ensure that all factors leading to poor maternal and newborn outcomes are addressed as a whole and not one by one. Integrated and coordinated health systems also allow patients to access services in timely and effective ways. Resources such as human resources, infrastructures, equipment and medical supply, and up-to-date technology must be integrated to allow continuity of care, such as babies remaining with their mothers unless illness requires their separation. Integration implies necessary care and support at each stage of a woman's journey from presentation to a health facility to post-discharge follow up. Teamwork and cost-effectiveness will also benefit from health systems integration. For instance, community health workers can identify problems and facilitate timely referral of pregnant women presenting danger signs for delivery at the health facility. This can have a big impact on reducing serious illness and death for women who arrive at a health facility in need of emergency care, which can strain services when health facilities are short staffed.

Integrating mental health into routine maternal care in low- and middle-income countries

This presentation was made by **Dr. Bibilola Oladeji,** Head of Department (Psychiatry) and senior lecturer, University of Ibadan College of Medicine, Nigeria.

In low-resource settings, a lack of qualified human resources is a barrier to help with mental health issues for women during the perinatal period. New resources are needed for this underserviced health issue. In

the meantime, it is critical to give health workers skills and confidence to deal with perinatal depression, since this is a debilitating condition. This recognizes the importance of task shifting, i.e. providing front-line health care workers with skills and responsibilities that were not a part of their original health training, and developing their capacity and confidence. This will allow the detection and management of perinatal depression to become part of routine clinical services offered at health facilities. Senior health care workers have important roles in training and supervising these frontline care providers.

The importance of leadership and management to support improved quality in maternal and newborn health care

This presentation was made by **Dr. Angelo Nyamtema,** Medical director, St. Francis Referral Hospital, Tanzania.

Leadership and management skills are critical for improving the quality of maternal and newborn health services. Although leadership and management concepts were familiar to senior Tanzanian administrators and clinicians, front-line workers had received little or no formal training about these skills. Interactive 3 to 4 days workshops were very effective in introducing skills such as identifying and solving problems. Also, the recent focus by the Tanzanian health system on the importance of these skills encouraged frontline workers to apply the new skills they learned in leadership and management courses. The benefits to quality of care include continuous monitoring of processes and outcomes at the health facility level and the ability of senior officials to monitor progress and help facilities undertake quality improvement initiatives.

Strengthening quality through the use of health data: shared challenged for Canadian and African health systems

This presentation was made by **Dr. Heather Scott,** Obstetrician gynaecologist and maternal fetal medicine specialist and Chief of Obstetrics, IWK Health Centre, Associate Professor, and Director, Global Health Unit, Department of Obstetrics and Gynaecology, Dalhousie University.

Accurate obstetrical and newborn data are critical to monitoring quality of services and health outcomes. However, their interpretation depends on context, available resources and the degree to which recorded data represent what actually happened in a health facility. Even if accurate, some data, for example maternal and newborn death rates, have the straightforward interpretation that “lower is always better” whereas other data, particularly about health system processes, need a more nuanced interpretation. For example, a caesarian section rate in a high-income secondary hospital will depend on the health status of the patients, availability of services, and preferences of patients and practitioners. These factors have relevance to low-income countries as well but some, such as the health of women presenting in labour and the availability of services to manage complicated deliveries will be the most important factors for maternal and newborn outcomes. Practitioners and decision-makers in high and low-income settings can learn from each other how to interpret these data and use them to make changes to their own practices and to their respective health systems. For example, practitioners in low-income settings have learned how to effectively prioritize scarce resources to increase the likelihood of having healthy mothers while practitioners in high-income countries rarely have to deal with such scarcity except in remote underserved areas such as Canada’s north. Lessons from the ‘global south’ can be more readily applied to those situations. Low-income country practitioners can also learn how rates of procedures such as C-sections vary widely in high-income settings and may be only loosely tied to health outcomes of mothers and newborns. Practitioners in high-income settings can be reminded that the use of expensive, invasive albeit life-saving strategies such as C-sections should be primarily based on optimizing the health of mothers

and babies and less so on the preferences of families and practitioners. Another important learning is that senior practitioners such as obstetricians, pediatricians, and public health officials help support accurate data collection and interpretation at the health facility level through regular on-site supportive supervision.

BREAK-OUT GROUP DISCUSSIONS

After the plenary session, participants were divided in four groups that were each co-moderated by a Canadian and an African expert. A summary of the discussions in each group is provided below.

Quality of care and safety standards

Session co-facilitated by**:**

- **Dr. Zubia Mumtaz**, Program director, Global Health, School of Public Health, University of Alberta and
- **Dr. Marsha Campbell-Yeo,** Professor and Clinician Scientist, School of Nursing and Departments of Pediatrics, Psychology and Neuroscience, Dalhousie University

In Canada, healthcare quality is maintained through ongoing education and monitoring of care in clinical settings. For instance, there are yearly national conferences in which health system professionals, policymakers, families, patients, administrators, and medical staff exchange ideas and learn from successes and failures. This occurs in low-income settings as well but to a lesser degree because of limited human and material resources. For example, Tanzania has teams composed of clinicians and administrators at the regional level that visit health facilities every two years to design and implement quality improvement plans with health facility staff. Regardless of the wealth of a nation, engagement in quality improvement initiatives depends on acknowledging gaps in quality of care, initiating change and allowing time for change to occur. Creating a culture of trust, learning, and open communication sends the message that "we are here to learn from one another about how to do better". Focusing on improving one area at a time and increasing access to human and material resources may help improve poor quality of care and increase engagement and accountability. This is particularly important in low-resource settings, where clinical needs are high and resources few.

Education and training

Session co-facilitated by:

- **Dr. Angelo Nyamtema** and
- **Ms. Shawna O'Hearn**, Director, Global Health Office, Dalhousie University

In low-resource settings, health professionals are often required to work beyond the level of their competencies. Improving competency-based education can help transform power structures, thereby enhancing health systems' performance. It was noted that there is a lack of gender equity in many training programs.

Accreditation is an important determinant of education quality since institutions must maintain certain standards in order to be certified. However, this will only work where it is mandatory and where there are real consequences if accreditation is not maintained. In recent years, accreditation in Canada has evolved to reflect changing technology and social movements. For instance, simulation training now plays a central role in the education of health providers. Ethical issues can be addressed through simulation

training, illustrating that professional competency issues can be addressed without putting patients at risk. Simulation training is also gaining traction in Africa but high costs remain a barrier to widespread implementation. Although sophisticated simulation laboratories are beyond the means of many low-resource settings, much teaching can still be done with simple training kits and demonstration mannequins. As well, e-learning programs can supplement simulation training. To effectively improve on-the-job competencies, programs must be consistent with community and institutional needs. It is thus important to monitor and evaluate program effectiveness continuously.

Health system preparedness

Session co-facilitated by

- **Dr. Ermel Johnson,** Implementation Officer, West African Health Organisation, Burkina Faso, and
- **Dr. Joanne Langley,** Professor and Head, Division Of Infectious Diseases, Department of Pediatrics, Professor, Community Health and Epidemiology, Dalhousie University

Health system preparedness can be enhanced through capacity strengthening and continued education. Initiatives should go beyond short learning interventions and include multiple follow-ups over the long-term. For best outcomes, communities should be engaged in capacity-strengthening processes in a ground-up approach. This means diffusing some of the power inherent in hierarchical health systems and empowering community members to identify their own needs for better health and prevention. In Tanzania, existing resources are being used by medical staff and community members to collectively address new issues, such as the COVID-19 pandemic. Because community members take an active role in raising concerns and finding solutions, their priority issues are addressed. Contextual factors should also be considered in research, as quantitative data alone may misrepresent lived experiences. Qualitative research methods may complement understanding of how communities approach healthcare, as community members' voices are heard.

Health system strengthening and health information systems

Co-facilitated by

- **Dr. Damen Hailemariam,** Professor of Public Health and Health Economics, School of Public Health, Addis Ababa University and
- **Dr. Annette Elliott Rose**

Accurate health information system data are crucial to monitoring health system processes as well as health outcomes. Few countries excel in both. Canada, for example, collects health system process data but very few health outcome data. Canada's decentralized government structure also makes it difficult to compare data across provinces and territories. In contrast, many African countries have data systems that aggregate health data from the lowest level up to the national level. However, there may be weaknesses and gaps in data collection such as lack of a separate form to capture data about newborns or in capturing women's health indicators. There are also issues of training people who collect data and having standardized definitions. Regular quality review of data records and data entry is necessary to ensure high quality data capture. This of course places an additional burden on the limited resources available. Additionally, even when data is collected, there is an issue of appropriate and fulsome use of this data for planning purposes. People need to be trained to use the information at the local and regional/provincial and national levels for integrated human resources and health services planning that spans across the care sector levels providing MNCH care..

IN CLOSING

After reconvening from the group discussions, closing remarks were provided by:

- **Dr. John Dusabe-Richards,** Director, Global Health Division, International Development Research Centre,
- **Dr. Gail Tomblin Murphy,** Vice-President, Research, Innovation & Discovery and Chief Nurse Executive, Nova Scotia Health; Director, WHO/PAHO Collaborating Centre on Health Workforce Planning & Research, Dalhousie University, and
- **Dr. John LeBlanc**

Strengthening health systems, policies and practices contributes to delivering more effective maternal and child health services, improving sexual and reproductive health and rights for women and girls, and increasing preparedness for emergencies such as the COVID-19 pandemic. The IMCHA initiative has illustrated how health systems from Canada and Africa can learn from each other. Many IMCHA projects have demonstrated the effectiveness of task-shifting to meet recognized needs such as reducing maternal and neonatal mortality as well as less recognized needs such as perinatal depression. These are lessons that can apply to almost all health systems in the world.

The event agenda is provided in Annex. The recording of the event is available in English and in French.

Acknowledgement

We would like to thank the organising committee members, including:

From Dalhousie University:
- **John LeBlanc**, Associate Professor, Department of Pediatrics, Community Health and Epidemiology and Psychiatry, Dalhousie University
- **Janet Rigby,** Research Officer, WHO/PAHO Collaborating Centre on Health Workforce Planning & Research, Dalhousie University
- **Alicia McVarnock,** Research Assistant, Dalhousie University
- **Gail Tomblin Murphy,** Vice-President, Research, Innovation & Discovery and Chief Nurse Executive, Nova Scotia Health; Director, WHO/PAHO Collaborating Centre on Health Workforce Planning & Research, Dalhousie University
- **Shawna O'Hearn**, Director, Global Health Office, Dalhousie University

From the IMCHA initiative team:
- **Marie Renaud**, Program Officer – Knowledge Translation
- **Heidi Monk**, Program Officer – Knowledge Translation
- **Nafissatou Diop**, Senior Program Specialist
- **Sana Naffa**, Senior Program Specialist

Annex 1

Conference Agenda

25 February 2021

11:00 - 1:30pm AST (3:00pm - 5:30pm UTC)

11:00	**Welcome**
11:00-11:05	**Dr. John LeBlanc** Associate Professor, Division of General Paediatrics, Community Health and Epidemiology, Dalhousie University Master of ceremony for the event
11:05-11:08	**His Excellency Dr. Mpoki Ulisubisya** High Commissioner of the United Republic of Tanzania to Canada
11:08-11:11	**Dr. Annette Elliott Rose** Vice President, Clinical Care & Chief Nurse Executive, IWK Health Centre
11:11-11:14	**Dr. Montasser Kamal** Program Leader, Health Research Partnerships – Global Health Division, International Development Research Centre
11:14-11:17	**Dr. Christine Chambers** Scientific Director, Institute of Human Development, Child and Youth Health - Canadian Institutes of Health Research
11:20	**Plenary**
11:20-11:30	*Delivering integrated health services for neonates* **Dr. Linda Nyondo-Mipando** Deputy Dean of Academics, School of Public Health and Family Medicine, College of Medicine, Malawi
11:30-11:40	*New approaches within the health system to introduce the community mental health program: Human resource for health training needs and supports required to integrate maternal mental health services into primary care* **Dr. Bibilola Oladeji** Head of Department and Senior Lecturer, University of Ibadan College of Medicine, Nigeria
11:40-11:50	*The importance of leadership and management to support improved quality in maternal and newborn health care* **Dr. Angelo Nyamtema** Medical Director, St. Francis Referral Hospital, Tanzania
11:50-12:00	*Strengthening quality through the use of health data: shared challenges for Canadian and African health systems* **Dr. Heather Scott** Associate Professor, Faculty of Medicine, Dalhousie University, Canada Director, Global Health Unit, Department of Obstetrics and Gynaecology Chief of Obstetrics, IWK Health Centre
12:00 pm	**Post-Plenary Discussion**
	Q&A session: Participants will be able to write their questions during the presentations

12:15 pm	Breakout Groups

Education and training
Dr. Godfrey Mtey
Principal medical officer, Ministry of Health, Tanzania
Ms. Shawna O'Hearn
Director, Global Health, Dalhousie University, Canada

Quality of care and safety standard
Dr. Zubia Mumtaz
Program Director, Global Health, School of Public Health, University of Alberta, Canada
Dr. Marsha Campbell-Yeo
Associate Professor, School of Nursing, Dalhousie University, Canada

Health system strengthening and health information systems
Dr. Damen Hailemariam
Professor of Public Health and Health Economics, School of Public Health, Addis Ababa University
Dr. Annette Elliott Rose
Vice President, Clinical Care & Chief Nurse Executive, IWK Health Centre, Canada

Health system preparedness
Dr. Ermel Johnson
Implementation officer, West African Health Organisation, Burkina Faso
Focal point for IMCHA's West Africa Health Policy and Research Organization
Dr. Joanne Langley
Professor of Paediatrics, Head of Division of Infectious Diseases and Community Health and Epidemiology, Dalhousie University, Canada

12:55 pm	Group reports to plenary

12:55pm-1:00pm	*Education and training*
1:00pm-1:05pm	*Quality of care and safety standard*
1:05pm-1:10pm	*Health system strengthening and health information systems*
1:10pm-1:15pm	*Health system preparedness*

1:15 pm	Closing Remarks

1:15pm-1:20pm	**Dr. John Dusabe-Richards** Director of Global Health Division, International Development Research Centre
1:20pm-1:25pm	**Dr. Gail Tomblin Murphy** Vice President of Research and Innovation, Nova Scotia Health Authority
1:25pm-1:30pm	**Dr. John LeBlanc**