



BOOK OF SYMPOSIA

*The 10th Conference on
Global Health and Vaccination Research 2017*

Ensuring healthy lives for all

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Symposium 1

Health care in conflict-affected settings: The unfinished agenda

Chair: Henrik Urdal, PRIO, Norway

The focus of this symposium is on the impact of conflict on health care and health systems and potential health systems interventions to address the situation. Armed conflict has been described as a public health problem, an important contributor to the social and political determinants of health, and a driver of poverty and health inequity. The negative impact of armed conflict on health and health systems is further substantiated by the fact that no low-income conflict-affected country was able to achieve the health-related Millennium Development Goals (MDGs); a challenge that has been carried into the new Sustainable Development Goals (SDGs). If substantial progress has to be made on health in the context of the SDGs in conflict-affected countries, a broader understanding of the specific channels through which conflict affects health and health systems is needed. Additionally, context-specific interventions are key to effectively addressing the health challenges affecting these health systems. These are the main issues that this symposium seeks to contribute to the unfinished agenda of health systems in conflict-affected countries, especially from a multidisciplinary perspective. It will draw from expertise in public health, political science and development studies. Expected outcomes include jointly published papers on conflict and health between researchers from PRIO, Karolinska Institutet, The Economic Policy Research Centre (EPRC) in Kampala, and University of Port Harcourt, and a joint policy brief.

Presentations

1. Disrupting public health campaigns: Immunization and conflict

Gudrun Østby, Peace Research Institute Oslo (PRIO), Oslo, Norway.

2. Dynamics of war to peace transition in Northern Uganda: Implications for inequalities and access to health services

Ibrahim Kasirye, Economic Policy Research Centre (EPRC), Kampala, Uganda.

3. Health inequalities in Nigeria: Historical origins, the public discourse, and political intervention

Ukoha Ukiwo, Centre for Advanced Social Science (CASS), University of Port Harcourt, Nigeria.

4. Interventions for improving maternal, newborn and women's reproductive health in crisis settings: A systematic review

Primus Che Chi, Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden.

Short speaker biographies

Gudrun Østby (b. 1977) is Senior Researcher at the Peace Research Institute Oslo (PRIO), Norway, and Associate Editor of the *Journal of Peace Research*. She holds a PhD in Political Science from the University of Oslo (2011). Her current research interests include the link between armed conflict and maternal health, conflict-related sexual- and gender-based violence, education and conflict, horizontal inequalities and conflict; and urban violence. Østby heads the research project “Armed Conflict and Maternal health in Sub-Saharan Africa”, funded by the Research Council of Norway. Her work has appeared in journals such as *International Studies Quarterly*, *Journal of Conflict Resolution*, *Journal of Development Studies*, and *Journal of Peace Research*. She has done consultancy work for i.a. UNESCO, USAID, and the World Bank. Østby is also a member of the Yong Academy of Norway.

Ibrahim Kasirye (b. 1975) is the Principal Research Fellow at the Economic Policy Research Centre (EPRC), Uganda. He holds a PhD in Development Economics and Policy from the University of Manchester (2011). His key area of focus is empirical analysis of poverty and its impacts on access to education and health services. His current research interests examine the social determinants of health in Uganda. At EPRC, Kasirye heads the collaborative research initiative of *Supporting Policy Engagement for Evidence based decision making* (SPEEED). Kasirye joined EPRC under the Young Professional (YP) programme in 2002 and has worked at EPRC in various capacities including holding positions of Research Fellow and Senior Research Fellow.

Primus Che Chi (b. 1980) is a public health specialist, evidence synthesist and bioethicist with a particular interest in reproductive, maternal, newborn and child health (RMNCH), and health systems strengthening in low-resource and crisis settings. He is a Postdoctoral Researcher with the *Centre for Research on Healthcare in Disasters, Karolinska Institute*, Sweden and Associate Researcher with the *Peace Research Institute Oslo*, Norway. He holds a PhD in International Health (focus on maternal and reproductive health in crisis settings) from the University of Oslo. He has contributed in planning and implementing a number of operational research projects in the domains of RMNCH and research integrity across central and eastern Africa, including fieldworks in Cameroon, Burundi, DRC, and Uganda. Chi is a contributor to the Cochrane’s *Effective Practice and Organisation of Care* Group, and a member of the *Inter-agency Working Group on Reproductive Health in Crises* and the *Cameroon Bioethics Initiative*.

Ukoha Ukiwo (b.1968) is programme manager of the Nigeria Stability and Reconciliation Programme (NSRP) and senior lecturer at Department of Political Science, University of Port Harcourt, Nigeria. He earned his doctorate degree in Development Studies at University of Oxford, United Kingdom (2006). He also holds BA and MA degrees in Political Science from University of Port Harcourt, Nigeria. He has held research fellowship positions at the Centre for Advanced Social Science (CASS), Port Harcourt; Institute of International Studies, University of California, Berkeley; and Centre for Research on Peace and Development, University of Leuven. Ukiwo’s research is in the areas of group identities, inequalities and violent conflicts; democratization and political transitions; and peacebuilding. His articles have been published in *Oxford Development Studies*, *Journal of Modern African Studies*, *African Affairs*, *Africa Politique*, and *Africa Development*, among others.

Symposium 2

Product Development Partnerships- current projects and opportunities

Chair: Lene Lothe, Assistant Director Global Health Section, Norad

This session will present the work of five Product Development Partnerships (PDPs):

- Aeras
- Drugs for Neglected Diseases initiative (DNDi)
- International Partnership for Microbicides (IPM)
- Medicines for Malaria Venture (MMV)
- TuBerculosis Vaccine Initiative (TBVI)

Each PDP will present the current status of their work and projects (approximately 15 minutes each), followed by a session where the focus is on already existing as well as present opportunities for collaboration between the PDPs and Norwegian research groups in tuberculosis, malaria and HIV respectively. The presentations are followed by a session of approximately 15 minutes ('speed-dating') where the audience interact with the PDP of their choice.

Presentations

1. Progress in TB Vaccine Development

Dr. Dereck Tait, Senior Clinical Director & Head of Office, Aeras Africa

2. Drug development for African Trypanosomiasis, DNDi model for innovation and access

Dr. Olaf Valverde, Medical Manager, DNDi

3. Addressing Women's Sexual and Reproductive Health Needs: Partnering for HIV Prevention Research.

Bashir Hansraj, Director of Manufacturing and Formulation Sciences, IPM

4. Equitable access to malaria medicine: Addressing today's needs of tomorrow's challenges

Dr. David Reddy, CEO, MMV

5. TBVI - A bottom-up approach to accelerating TB Vaccine Research & Development through Partnership

Danielle Roordink, TBVI

Short speaker biographies

Dr. Dereck Tait, MB, Chb, is Senior Clinical Director & Office Lead in Aeras Africa in Cape Town. As a key member of the clinical development department, Dr. Tait provides product specific clinical development leadership. Prior to joining Aeras in 2012, Dr. Tait was Director of an independent clinical research consultancy providing expert advice to a number of companies on various aspects of antiviral drug development. Prior to this he served as Chief Medical Officer for Arrow Therapeutics in London for four years, Vice President of Clinical Research at Idenix Pharmaceuticals in Boston for two years, and spent 10 years in clinical research with a focus on anti-infective drug development at the Wellcome Foundation/GlaxoWellcome/GlaxoSmithKline. Dr. Tait completed his undergraduate medical training at the University of Pretoria in South Africa, and postgraduate training in Microbiology and Virology at the University of KwaZulu-Natal, South Africa and at the Royal Postgraduate Medical School in London.

Dr. Olaf Valverde Mordt works at DNDi as Medical Manager in human African trypanosomiasis drug development program since June 2009. Most recently served as Country Coordinator for MdM in Indonesia (2006-08), has over 20 years of field humanitarian experience mostly with MSF in Latin America, Africa and Asia, including the MSF Access to Essential Medicines Campaign in Guatemala and Indonesia. Involved in Malaria, HIV, Cholera, vaccination, emergencies and other health issues. He participated in the initial steps of access to AIDS treatment in Central America. He was general Director of the Spanish section of MSF between 1995 and 1997. He faced human African trypanosomiasis in Uganda (1989), Angola (1995) and DR of Congo (2003). He is medical doctor trained in Madrid (1984), Diploma in Tropical Medicine in Barcelona in 1988 and he is MSc in Public Health in Developing Countries for the London School of Hygiene and Tropical Medicine since 1994.

Bashir Hansraj is the Director of Manufacturing and Formulation Sciences at the International Partnership for Microbicides (IPM), a nonprofit product developer. He has over 30 years of experience in Research and Development and manufacturing environment within the Global Pharmaceutical organisations. During his career in the Pharmaceutical industry he has worked for 6 major global organisations and developed multiple drug products indicated for various conditions. His current role within IPM is to develop HIV prevention products and new sexual and reproductive health solutions for women in developing countries. His responsibility spans from early stage preformulation studies to commercial readiness to provide access to cost effective treatments.

Dr. David Reddy has been CEO of Medicines for Malaria Venture since January 2011. Under his leadership, this not-for-profit research foundation has brought forward 6 new antimalarial drugs, broadened its malaria-drug pipeline to include 9 novel drugs in clinical

development. MMV’s current activities focus on facilitating access to these medications and developing new compounds that address key unmet medical needs such as drug resistance, new medicines for pregnant women and children and simple, easy-to-take and safe drugs to support malaria elimination and eradication. Prior to joining MMV, David was a Vice President in the Global Product Strategy unit at F. Hoffman-La Roche Ltd, Basel Switzerland, where he served as Pandemic Taskforce Leader. Prior to that he was the Global Franchise Leader for HIV/AIDS at Roche, where he oversaw the successful development and introduction of enfuvirtide, the first HIV fusion inhibitor. He was also responsible for developing Roche’s HIV drug access policies and initiatives. His résumé includes over 20 years of ‘Pharma’ experience, including successful leadership of drug development teams, licensing and alliance management, product and disease area management, market analytics and business planning. His roles also included interfacing with governments, NGOs and patient advocacy groups around access to medicines for priority diseases. David holds a PhD in Cellular and Molecular Biology from the University of Auckland, New Zealand. His PhD thesis involved cloning the serotypic antigen for rotavirus and development of a recombinant rotavirus vaccine. He completed a post-doctoral fellowship at the Freidrich Miescher Institute in Basel, where he cloned and expressed developmentally-regulated brain-derived microtubule associated proteins.

Danielle Roordink, MSc, is TBVI’s Project Manager. She is responsible for the management of TBVI’s research projects. She also coordinates the initiation, development and monitoring of projects for research and development of TB vaccines together with TBVI’s research partners. Before joining TBVI Danielle was Networking Officer at the European and Developing Countries Clinical Trial Partnership (EDCTP), and prior to that Assistant Programme Manager at the Dutch organisation for Health research (ZonMw).

Symposium 3
Addressing obstetric violence to ensure patient safety and high quality health care during pregnancy and childbirth
Chair: Jennifer J. Infanti, Norwegian University of Science and Technology, Norway

The 5th Millennium Development Goal (MDG) motivated the development of health policies and reforms around the world to increase the number of antenatal care visits during pregnancy and births in health facilities. Evaluations of the MDGs are now showing that maternal and infant health outcomes are improving, and maternal mortality ratios are declining, on a global level. However, ensuring patient safety and high quality obstetric care is a lingering and unfinished agenda, and increasing evidence shows a range of disrespectful and abusive practices that women experience during antenatal care and childbirth at the hands of health care providers. Such transgressions of the ethics of care are a challenge to

patient safety and trust in larger health systems. They undermine the quality of patient-provider relationships and obstetric services, and are an impediment to achieving the SDG of ensuring healthy lives for all. This symposium will provide an overview of the study of abuse in health care, moving from controversies to promising public health, feminist, human rights and ethics perspectives (*Katarina Swahnberg*). We will then explore obstetric violence as a specific form of abuse in health care and violence against women, through empirical examples from our research in Nepal (*Poonam Rishal*) and Sri Lanka (*Dinusha P. Chamanie Perera*). We will argue that possible solutions to obstetric violence lie in addressing structural health inequities which are rooted in social, gender and ethnic hierarchies and prejudices. Our final panelist (*Kunta Devi Pun*) will share personal examples of transformative clinical education and teaching experiences in an interactive conversation with the symposium chair (*Jennifer Infanti*). This conversation will highlight possible directions forward, and lead into a facilitated discussion with the audience about strategies to improve the quality of obstetric care globally and thereby contribute to the SDG to ensure healthy lives for all.

1. Abuse in health care: From controversy to description to intervention

Katarina Swahnberg, Linnaeus University, Sweden

2. Women's perceptions of neglect by antenatal health care providers in Nepal

Poonam Rishal, Norwegian University of Science and Technology & Kathmandu Medical College and Teaching Hospital, Norway & Nepal

3. Obstetric violence and structural gender inequity in Sri Lanka

Ragnhild Lund, Norwegian University of Science and Technology, Norway

4. Transforming obstetric care from nursing apprentice to educator

Kunta Devi Pun, Norwegian University of Science and Technology & Kathmandu University School of Medical Sciences-Dhulikhel Hospital, Norway & Nepal

5. Facilitated panel discussion with the audience

The speakers in this symposium are part of the ADVANCE study team (Addressing Domestic Violence in Antenatal Care Settings). ADVANCE is a collaboration of researchers in Sweden, Norway, Nepal and Sri Lanka, funded by the GLOBVAC programme of the Research Council of Norway and led by Professor Berit Schei at the Norwegian University of Science and Technology. For further information, see: <http://www.ntnu.edu/advance>

Short speaker biographies

Jennifer J. Infanti is a postdoctoral researcher in global health in the Department of Public Health and Nursing at the Norwegian University of Science and Technology in Trondheim, Norway. Jennifer's PhD degree is in social anthropology. Broadly, her research focuses on the social and cultural factors influencing health and well-being. Jennifer has also held employment positions with non-profit organisations at local, national and international levels in Brazil, Canada, New Zealand and Switzerland.

Katarina Swahnberg is a professor in Health Sciences and Global Health in the Department of Health and Caring Sciences at the Linnaeus University in Kalmar, Sweden. Katarina is also a registered nurse, educated at the Red Cross Nursing School in Stockholm, Sweden. Katarina's research consists mainly of two themes: (1) abuse in health care, and (2) male and female victimisation and ill-health. Both themes have a strong focus on the development of interventions and changing violent practices.

Poonam Rishal is a PhD candidate in global health at the Norwegian University of Science and Technology (Trondheim, Norway) and Kathmandu Medical College and Teaching Hospital (Kathmandu, Nepal). Poonam trained as a medical doctor in Nepal, and worked in rural areas of the country as a medical officer and program manager with the Adventist Development and Relief Agency in Nepal and the Britain Nepal Medical Trust. Poonam also has a master's degree in International Community Health from the University of Oslo. Her current doctoral studies aim to improve the capacity of Nepal's health sector to effectively identify and assist pregnant women living with domestic violence.

Ragnhild Lund has been Professor of Geography/Development Studies at the Norwegian University of Science and Technology since 1994. Her research topics are theories of development and geography, gender and development, development-induced displacement, post-crisis recovery, transnational feminism and women's activism. She is author of *Gender and Place* (1994), and co-author of *Renegotiating Local Values: Working Women and Foreign Industry in Malaysia* (1994), *In the Maze of Displacement* (2003), *Global Childhood, Globalization, Development and Young People* (2008), *The Tsunami of 2004 in Sri Lanka: Impacts and Policy in the Shadow of Civil War* (2010), and *Gendered Entanglements: Re-visiting Gender in Rapidly Changing Asia* (2015). In addition, she has published scientific articles on gender, activism, mobility, livelihoods, orphanhood/HIV/AIDS, and urban-rural linkages.

Kunta Devi Pun is a PhD candidate in global health at the Norwegian University of Science and Technology (Trondheim, Norway) and Kathmandu University School of Medical Sciences-Dhulikhel Hospital (Kavrepalanchowk, Nepal). Kunta is also Associate Professor of Nursing at Kathmandu University School of Medical Sciences, where she has educated many student nurses and midwives. She is also a trained nurse-midwife herself. Kunta received her Master's degree in Midwifery from Victoria University in Melbourne, Australia. Her current doctoral work incorporates qualitative and quantitative research techniques, and aims to improve the safety of pregnant women experiencing domestic violence in Nepal.

Symposium 4

Ensuring surgery for all; How to build necessary and sustainable capacity?

Chair: Margit Steinholt, Helgelandssykehuset, Sandnessjøen, Norway and
Håkon Angell Bolkan, NTNU

More than 70 % of the world's population lack access to safe and timely surgical and anaesthetic care. This causes more deaths than HIV, TBC and malaria combined. Recent studies have showed surgery to be highly efficient and cost-effective interventions necessary to reduce mortality and morbidity for millions of people including pregnant women, children and young, economically productive adults. The Lancet commission, Global Surgery 2030, states: "We believe that provision of laparotomy, caesarean delivery, and treatment of open fracture are bellwethers of a system functioning at a level of complexity advanced enough to do most other surgical procedures. Hence, we refer to them as the Bellwether Procedures."

The health system response to the surgical burden has been disproportionately limited, particularly in the world's poorest countries. The President of the World Bank, Jim Yong Kim has declared surgery to be the "neglected stepchild of global health". Hence, anaesthesia is the invisible best friend.

Access to safe, affordable anaesthesia and surgery is fundamental to achieving Universal Health Coverage, and attaining Sustainable Development Goal 3. Based on convincing evidence for the need and possibility to change the current status of surgery worldwide, the 2015 World Health Assembly unanimously adopted a resolution to strengthen emergency and essential anaesthesia and surgical care in all member states.

"For the millions of patients without access to surgical care, it is a personal issue. For developing nations, it is an economic issue. For the world, it is a moral issue, a question of equity. Surgery has been called the "neglected stepchild of global public health." To achieve the recently approved global development goals, world leaders must explicitly develop systems to bring access to safe, affordable and timely surgery to those who need it".

Editorial, *The New York Times*, September 2015.

This symposium explores approaches to build sustainable surgical and anaesthetic capacity in low- and middle income countries.

Presentations

1. **Welcome**, Margit Steinholt
2. **The way forward with Global Surgery: World Health Organization and academic partnerships.** 15 min.
Lars Hagander, Paediatric Surgery and Global Paediatrics, Department of Paediatrics, Clinical Sciences Lund, Lund University, Sweden.

3. **Building surgical capacity at a local hospital; experiences from Cambodia.** 20 min
Dr. Nguon Sophy, Deputy Director of MR5H (Military Region no 5, Hospital) Battambang, Cambodia.
4. **The role of Anaesthesia and the World Federation of Societies of Anaesthesiologists (WFSA).** 10 min
Jannicke Mellin-Olsen, President-Elect WFSA, Norway
5. **The role of task-sharing for expansion of the surgical workforce in LMICs.** 10 min
Håkon Angell Bolkan, General Surgeon, St. Olav Hospital, Norway; Research Fellow, NTNU, Norway; Chairman CapaCare, Sierra Leone/Norway
6. **Discussion/panel debate.** 25 min

Short speaker biographies

Dr. Nguon Sophy, Deputy Director of MR5H (Military Region no 5, Hospital) Dr Sophy is a surgeon with experience from both military and civilian hospitals. During the civil war in Cambodia (1979 -1997), he served as a field surgeon. He has extensive experience from traumas caused by landmines and warfare. In recent years most traumas in Cambodia are due to traffic accidents. Dr Sophy will present the results from a training program for head trauma and complicated fractures. The training is conducted locally with supervision from the University Hospital of Northern Norway.

Lars Hagander, MD, MPH, PhD (M), consultant Pediatric Surgeon at Lund University Children's Hospital and leads the research group on surgery and public health. He holds a MD and PhD from Lund University, and a Master's degree in public health from the Harvard School of Public Health. Dr Hagander has worked as a Paediatric Surgeon in Bangladesh, Vietnam, Rwanda, Liberia and Haiti, and was for two years a global surgery Research Fellow at Harvard Medical School. He recently co-chaired the Lancet Commission on Global Surgery and was a commissioner of the Lancet Oncology Commission on Global Cancer Surgery. Dr Hagander is a member of WHO GIEESC and will be director of the WHO collaborating Centre for Surgery and Public Health at Lund University.

Jannicke Mellin-Olsen, MD, DPH, consultant anaesthesiologist, Bærum Hospital and president-elect of the World Federation of Societies of Anaesthesiologists (WFSA), which works on education, advocacy, research and safety globally. She is the liaison to the WHO and the ICRC and also member of WHO GIEESC. She was the driving force for the Helsinki Declaration on Patient Safety in Anaesthesiology, which has gained global spread. She is also a member of the Board of Directors of the Patient Safety Movement, aiming at eradicating preventable deaths in healthcare worldwide.

Håkon Angell Bolkan, MD, Senior Surgical Fellow, Oxford University Hospital Trust, Research Fellow NTNU. Dr. Bolkan is former president of MSF Norway, and founder of CapaCare, an organization developing surgical capacity in Sierra Leone. Dr. Bolkan's research is about surgical health systems in Sierra Leone and safety and feasibility of introducing task-sharing to expand the surgical workforce in the country. He was team leader for the Norwegian Ebola mission in Sierra Leone in 2015.

Symposium 5

Novel anti-microbial strategies

Chair: Tone Tønjum, UiO and Magnus Steigedal, NTNU

Antimicrobial resistance (AMR) is emerging as a major local and global threat to health care practice. Due to AMR, we are running out of effective therapy against infections. We will highlight the gravity of the current situation and recent developments in terms of innovative preventive, diagnostic and therapeutic measures to combat AMR.

Presentations

1. **“The enigma of TB lymphadenitis in Ethiopia”**
Abraham Aseffa, Armauer Hansen Research Institute (AHRI), Addis Ababa, Ethiopia
2. **“AMR in respect to Salmonella and unmet Mdg goals”**
Abhilasha Karkey, Oxford University Clinical Research Unit in Kathmandu, Nepal
3. **“Identification of potential antimicrobial targets using methods of network systems biology”, Eivind Almaas, NTNU, Norway**

Short speaker biographies

Abhilasha Karkey, Oxford University Clinical Research Unit in Kathmandu, Nepal is a medical microbiologist by training. She recently completed her doctoral thesis from the University of Oxford and is involved with several infectious disease research projects. Her main research includes looking at nosocomial infections and antibiotic resistance patterns within the population, as well as molecular epidemiology of enteric fever within the study population in Kathmandu.

Abraham Aseffa, Armauer Hansen Research Institute (AHRI), Addis Ababa, Ethiopia is A/D/Director General for Research and Innovation (formerly Scientific Director) at the Armauer Hansen Research Institute (AHRI) in Ethiopia. He graduated in Medicine from Addis Ababa University (1984) and studied Microbiology at the University of Leipzig, Germany (Dr. med, 1990). He taught Microbiology at Gondar (Ethiopia) until 1998 when he joined the University of Lausanne for postdoctoral research. He moved to AHRI in Addis Ababa as senior scientist in 2001. He has supervised several postgraduate students and published extensively on infectious diseases. Abraham has also been active on strengthening regional partnership particularly in clinical trial capacity building and health research ethics, including as chair of the Pan-African Bioethics Initiative (PABIN). He has served in several WHO/TDR, WHO and EDCTP advisory bodies. He is a member of the Ethiopian (EAS) and the Third World Academy of Sciences (TWAS).

Eivind Almaas, NTNU, Norway has been head of the “Network Systems Biology” research group at Dept. of Biotechnology (NTNU) since 2009. The main research focus is on the

application of complex network analysis to biological systems to understand mechanisms of antimicrobial resistance. The work in his group addresses this challenge through development and analysis of a variety of biological networks, as well as through constraint-based analysis, modeling and reconstruction of genome-scale metabolism.

Symposium 6

Food based approaches: combat addressing maternal undernutrition during pregnancy

Chair: Penjani Kamudoni, Institute of Health and Society, University of Oslo

Maternal nutrition during pregnancy represents the greatest environmental influence on birth size in low resource settings. Globally iron-deficiency anemia occurs in a third of all pregnant women; of which half of the cases are due to Iron deficiency.

Routine use of vitamin and mineral supplements has been widely used to address micronutrient deficiencies at population level. In particular, the World Health Organisation (WHO) recommends iron-folic acid supplementation for pregnant women as part of the routine antenatal care. However, compliance to such supplement regimen has been reported to be low, thus undermining the effectiveness of such an approach in combating micronutrient deficiencies. Furthermore the sustainability of supplementation-based interventions in low income countries is reliant on external financial support. Food fortification (addition of vitamins/minerals during food during processing) has alternatively been used to increase micronutrient intake across population groups. Although fortification enhances intakes at the lowest tail of the intake distribution, a risk for excessive nutrient intake may be posed among those with already high intakes. Food-based approaches have been least exploited in optimizing maternal nutrition though being a more sustainable approach in addressing undernutrition in the long run. Likewise, fewer studies have investigated the feasibility of such type of interventions in low resource settings.

It is against this background that a research project constituting a series of studies was undertaken to develop food-based recommendations feasible for a setting where food security is not ensured. A trial is underway examining the magnitude of the health benefits which can be yielded from the food-based intervention. This symposium focuses on the studies which aimed at investigating the feasibility of optimizing pregnancy nutrient intake through a food-based approach and consequently the development of the food based recommendations which could fulfill this.

The studies which will be discussed include cross-sectional surveys examining dietary intakes (nutrient intakes and food patterns) across an agricultural year, i.e. planting and harvesting season; a longitudinal study examining pregnancy weight gain and its correlates. In addition, an explorative qualitative investigation of food beliefs and taboos and socio-cultural influences will also be discussed. The studies will be discussed in the following presentations:

Presentations

1. Overview of food-based approaches

Penjani Kamudoni, Post-doctoral researcher, Institute of Health and Society, University of Oslo, Norway

2. Pregnancy weight gain, Haemoglobin status among pregnant women in Mangochi, Malawi

Shyreen Chithambo, Masters student, Institute of Health and Society, University of Oslo, Norway

3. The socio-cultural context of food in Mangochi, Malawi

Alister Munthali, Professor, Centre for Social Research, University of Malawi

4. Seasonality differences in pregnancy dietary intakes in Mangochi, Malawi

Katrine Hjertholm, Doctoral researcher, Institute of Basic Medical Sciences, University of Oslo, Norway

5. Designing pregnancy food-based recommendations through linear programming

Penjani Kamudoni, Post-doctoral researcher, Institute of Health and Society, University of Oslo, Norway

Short speaker biographies

Penjani Kamudoni is a nutrition epidemiologist who has previously worked with and undertaken research on child nutrition and is currently undertaking post-doctoral research focused on developing and evaluating pregnancy food-based recommendations in Malawi. She is affiliated with the Institute of Health and Society, University of Oslo as well as the Malawi College of Medicine..

Shyreen Chithambo is a registered nurse currently completing an Mphil in International Community Health at Institute of Health and Society, University of Oslo, Norway.

Alister Munthali is a Professor in Medical Anthropology and is currently the Director for centre for Social Research in Malawi. He has previously done research in the causes, treatment and prevention of childhood illnesses.

Katrine Hjertholm, is a clinical nutritionist and presently a PhD fellow at Institute of Basic Medical Sciences, University of Oslo, Norway.

Symposium 7

Norwegian networks and initiatives in global health

Chair: Erik Eik Anda, UiT, The Arctic University of Norway

This session will provide an opportunity to get to know networks and initiatives related to global health in Norway. The main aim of the session is to explore venues for cooperation and synergies between the initiatives.

Each initiative will present the current status of their work and projects. The presentations will be followed by a moderated panel session where the focus is on already existing as well as present opportunities for collaboration and synergies.

1. The Norwegian Forum for Global Health Research (Forum)

Bente Moen

The purpose of the Norwegian Forum for Global Health Research (Forum) is to promote research and education of high quality with the aim of improving health and health services for marginalized population groups in low and middle-income countries. Forum has existed since 2006. The main objectives are to:

- improve and strengthen the involvement of Norwegian research institutions in global health research and education*
- contribute to increased international collaboration in global health research and training*
- improve funding for relevant and high-quality global health research by the Norwegian Government and other sources*

Government and other sources

- contribute to national and international processes and initiatives within global health and health research.*

2. The Norwegian Institute of Global Health (NIGH)

Bjørn Gunnar Iversen

The Norwegian Institute of Global Health (NIGH) is a shared initiative between the largest Norwegian universities, the Regional Health Authorities, the Norwegian Institute of Public Health, and other partners, to strengthen global health research, education and capacity building in Norway. The establishment of NIGH was recommended by the «HelseOmsorg21» strategy process launched by the Ministry of Health and Care Services in 2013, as a way to promote excellence and the international impact of Norwegian global health activities through closer collaboration between Norwegian institutions. The first board meeting of NIGH was held in January 2017.

3. The Norwegian Research School of Global Health (NRSHG)

Elisabeth Darj

The Norwegian Research School in Global Health, for PhD candidates, is funded by the Norwegian Research Council for a six-year period, starting in 2016. The research school brings together expertise from all Norwegian institutions and from international networks. The aim is to build capacity in global health by a strong national team, in order to meet challenges within education and research. There are 100 members in the research school, all are registered at a Norwegian University and studying various global health projects. Professor Elisabeth Darj at Department of Public Health and Nursing at NTNU is the director of the school.

4. The Norwegian Association for Development Research (NFU)

Erlend Eidsvik

The Norwegian Association for Development Research (NFU) works to promote development-related research and training in Norway, and to connect the Norwegian development research community by supporting links and providing channels for interdisciplinary exchange and cooperation between members. The association is organizing the biennial national NFU conference and co-organizing the biennial Nordic Development Conference. In 2017 NFU has teamed up with EADI (European Association for Development Research and Training Institutes) to organize a joint EADI/NFU-conference in Bergen, in collaboration with the University of Bergen and Chr. Michelsen Institute. NFU runs the academic journal Forum for Development Studies jointly with the Norwegian Institute of Foreign Affairs (NUPI). NFU awards master theses and academic articles within development research.

5. Norwegian Medical Students' Association (NMSA)

Miriam Christ

The Norwegian Medical Students Association (NMSA) is a politically independent organization and a subdivision of the Norwegian Medical Association. NMSA is the union for medical students in Norway and Norwegian medical students who study abroad, and works to ensure their professional, economical and social interests. The Norwegian Medical Students Association also sees itself responsible for giving their members an understanding of different cultures, communities and national and international health problems. NMSA is also a member of the International Federation of Medical Students' Associations (IFMSA), where they work to improve medical education, human rights and global health on an international level.

Short speaker biographies

Bente E. Moen is the Director of the Centre for International Health, at the Department of Global Public Health and Primary Care, University of Bergen. She is a physician, with a PhD from 1991. She has been a professor in Occupational Medicine the past 19 years and has worked mainly in the area of occupational epidemiology and occupational exposure. The

past 15 years, she has been involved in research and training collaboration with institutions in Low Income Countries in East Africa. She has supervised 25 PhD students, written about 200 original papers in international journals and has been the editor of several books in Occupational Medicine as well as a Massive Open Online Course in Occupational Health for Developing Countries. She has been the Director of Norwegian Forum for Global Health Research since 2015.

Bjørn G. Iversen, MD, MSc, PhD, is Director of the Department of International Public Health at the Norwegian Institute of Public Health (NIPH). He is a medical doctor by training from the University of Bergen, and holds a PhD in communicable disease epidemiology from the University of Oslo, as well as an MSc in Communicable Disease Epidemiology from the London School of Hygiene & Tropical Medicine. He has more than 20 years' experience from surveillance, prevention and control of communicable diseases at NIPH. In 2012-2014 he was seconded to the World Health Organization to assist the establishment of a Palestinian national institute of public health. He presently serves on behalf of NIPH as Board Member of the Norwegian Institute of Global Health, the Norwegian Research School of Global Health, and the Centre for Intervention Science in Maternal and Child Health (CISMAC), and is responsible for the coordination of global health activities at NIPH.

Elisabeth Darj, MD, PhD, the first professor in Global Health at NTNU, Swedish obstetrician and gynecologist. She has been working clinically and with education and research at Uppsala University. Her research profile has been focused on reproductive health, mainly in low-income countries for the last 15 years. Professor Darj is supervising students at different level, such as PhD-, Master-, and medical students. A new two-year international Master Program in Global Health started in 2015 at NTNU, <http://www.ntnu.edu/studies/mspuhe/>. Every month a seminar in Global Health is held, open for all, and annually a Global Health Day, <http://www.ntnu.no/mh/globalhelsedag>. NTNU started together with universities in Bergen, Oslo and Tromsø, the National Research School in Global **Health** for PhD-students in April 2016, <http://www.ntnu.edu/nrsgh>.

Member of the Board of the Norwegian Forum for Global Health Research; Head of the Master Program in Global Health at NTNU; Director of the National Research School in Global Health; Leader of the scientific committee for research and development at Dept of Obs&Gyne, St Olavs Hospital; Visiting professor at Uppsala University; Member of the Swedish Medical Association; Authorized Medical Doctor in Norway and Sweden.

Erlend Eidsvik is Associate Professor at Western Norway University of Applied Sciences (HVL), Norway. He holds a PhD in geography from the University of Bergen. Since 2012, Eidsvik has worked at the Department of Social Sciences, Faculty of Education, Bergen University College, supervising and teaching geography for teacher students at a variety of courses in geography at undergraduate, graduate and PhD-levels. His research includes issues on migration, colonial history, exclusion, political ecology, resources management and climate mitigation, memory and education in postcolonial states, and education and the

Sustainable Development Goals. He has done fieldworks and field studies in Nepal, Tanzania, Uganda, Namibia and South Africa. He is currently HVL responsible for research cooperation with Southern Africa. Eidsvik has been active in NFU since 2012, and has been Chair since November 2015.

Miriam Christ is a medical student in her fourth year at the Norwegian University of Science and Technology (NTNU). She also holds a Bachelor in Psychology from NTNU. Since 2013, Christ has been active as a volunteer at the Norwegian Medical Students Association (NMSA), and since 2016 held the position as National Officer on Public and Global Health. This makes her NMSA's representative in meetings and forums for global health issues and responsible for coordinating NMSA's activities regarding global and public health. Christ is also part of IFMSA's (International Federation of Medical Students' Associations) Standing Committees on Public Health and Human Rights and Peace, and since 2016 observer in the Norwegian Forum for Global Health Research. Her main fields of interest are access to medicines and health care, inequities in health and neglected tropical diseases. This past year, Christ has also been part of the organizing committee of GLOBVAC Student Conference.

Symposium 8
Global health preparedness and rapid response
Chair: Anne Bergh, Norwegian Institute of Public Health

This session will provide an overview of the current landscape in global health preparedness and rapid responses to epidemic outbreaks and point to ways in which the global community can move forward to tackle some of today's biggest threats to health.

The presentations will be followed by a discussion on how global health preparedness and rapid responses fit in and add to the SDG agenda.

Presentations

- 1. Antibiotic use and Antimicrobial resistance**
Martin Steinbakk, Senior Medical Officer, Norwegian Institute of Public Health
- 2. Global Health Preparedness and the International Health Regulations - a framework**
Frode Forland, Norwegian Institute of Public Health

3. Coalition for Epidemic Preparedness Innovations (CEPI)

Johan Holst, CEPI-Secretariat, Oslo

Coalition for Epidemic Preparedness Innovation (CEPI) is a new global coalition to create vaccines for emerging infectious diseases, designed to give the world an insurance policy against epidemics. CEPI was launched in January 2017 with an initial investment of US\$ 540 million from governments of Norway, Germany and Japan plus the Bill & Melinda Gates Foundation and the Wellcome Trust. In addition the European Commission plans to co-fund projects with CEPI for € 250 million. CEPI's initial target diseases for the first funding call are MERS-CoV, Lassa and Nipah. CEPI's headquarter is situated in Oslo, with nodes in Delhi and London.

4. Global preparedness plans do not describe how to prevent a socially unjust next influenza pandemic

Svenn-Erik Mamelund, Professor, Oslo and Akershus University College

Short speaker biographies

Martin Steinbakk, MD, Specialist in Medical Microbiology and Senior Medical Officer at the Norwegian Institute of Public Health with responsibilities connected to National Microbiological Reference Functions, AMR surveillance, and infection control. His expert background is in diagnostic microbiology and infectious diseases. Through the Norwegian Working Group on Antibiotics (NWGA) and The European Committee on Antimicrobial Susceptibility Testing (EUCAST), he has been involved in standardizing antimicrobial susceptibility testing and interpretation in Europe. He has also been part of the Norwegian Antibiotic Resistance Surveillance Programme (NORM/NORM-VET since implementation in 2000). He was part of the Management Board and Steering Committee during the upstart period for the Joint Programming Initiative on Antimicrobial resistance (JPIAMR). He has participated in advice for the Ministry of Health and Social Affairs concerning Antibiotic use and Antimicrobial resistance thorough a series of National Strategies, Action Plans and an Expert Group Report.

Frode Forland MD, DPH, is a Specialist Director for Infectious Diseases Prevention and Control at the Norwegian Institute of Public Health, with responsibilities connected to e.g. Surveillance, Advice, Research, Preparedness and Antimicrobial Resistance. He has led the work with the Global Health Preparedness Program and is engaged in Global Health work on several international arenas, including the WHO, EU and the Global Health Security Agenda. He is Vice Chair of the Norwegian Forum for Global Health Research, he is member of the Advisory Forum for ECDC and he was a Board Member of Guidelines International Network for several years. He has done research in the field of Global Health, Evidence Based Medicine, Guidelines Development and Public Health. He was previously Director of Primary Health Care in the Norwegian Directorate of Health, and has worked at the Royal Tropical Institute in Amsterdam and at the European Centre for Disease Prevention and Control.

Johan Holst is a Senior Scientist with basic academic training as a pharmacist and research experience with development and evaluation of vaccines. From 1988 to 1998 Johan Holst was Head of Control at the Department of Vaccinology at Norwegian Institute of Public Health, with a primary focus on the the Norwegian vaccine against serogroup B meningococcal disease, MenBvac[®]. He has participated in numerous clinical trials, including the pivotal placebo-controlled double-blind efficacy trial of MenBvac[®] in 180.000 Norwegian teen-agers from 1989 to 1991. Johan Holst has served as advisor to various WHO research programs, PAHO and the United Arab Emirates. He has also been a consultant for various vaccine companies such as Chiron, Novartis and Wyeth; as well as assisting several biotechnology groups. He has published more than 50 papers in peer-reviewed journals, a couple of book chapters and being a co-inventor of three patents. Currently he works with product development within CEPI.

Svenn-Erik Mamelund (born 1969) has a PhD in demography and is a Research Professor at the Work Research Institute at Oslo and Akershus University College. He has previously worked as a researcher at the Norwegian Institute of Public Health, where his work included studies of transnational historical data from influenza pandemics, and the 1918 Spanish flu in particular. Mamelund's last journal article was Mamelund, S-E., Haneberg, B., Mjaaland, S. (2016): A missed summer wave of the 1918-1919 influenza pandemic: evidence from household surveys in the USA and Norway. *Open Forum Infectious Diseases* 3(1).

Symposium 9

International actors' policy influence: case studies on abortion and family planning policy in sub-Saharan Africa

Chair: Katerini T. Storeng, Centre for Development and the Environment, University of Oslo, Norway

The Sustainable Development Goals (SDGs) for 2030 renew governments' commitments under the MDGs to reduce maternal mortality; achieve universal access to sexual and reproductive health information, education and services; ensure reproductive rights; and achieve gender equality as a matter of women's and girls' human rights (Ipas 2015). Advancing women's access to safe and legal abortion is a priority for women's reproductive health and rights, in accordance with the new SDGs focused on health and gender equality. Developing sound policy to address these issues is crucial given the human and health systems cost of unwanted pregnancy and unsafe abortion.

This panel explores how international actors – multilateral organisations, donors, and non-governmental organisations – influence legal reform and policy change on abortion in diverse policy contexts in sub-Saharan Africa. Abortion and family planning policy has received very little scholarly attention, but are pertinent case studies because of the tensions that often

arise between ‘global’ and ‘local’ norms in policy development and implementation in these areas. Better understanding of international actors’ policy influence, particularly in ‘policy transfer’ between global and national levels, is crucial to ensure that policy development is commensurate with national priorities, political values and health systems contexts.

The panel will include an introduction followed by three country case studies from South Sudan, Burkina Faso and Malawi.

Presentations

1. Introduction - Working “behind the scenes”: international NGOs’ role in the global-national transfer of abortion policy

Dr Katerini Storeng, Centre for Development and the Environment, University of Oslo, Norway

2. Managing reproductive sensitivities to ‘deliver’ a new nation in South Sudan

Dr Jennifer Palmer, London School of Hygiene & Tropical Medicine & Centre of African Studies, University of Edinburgh, UK

Adoption of international protocols and best practices, including for sensitive policy issues like family planning, is seen by many within South Sudan as a way to demonstrate legitimacy as a new state. However, this outlook contradicts a strong pro-natalist discourse that emerged during the war. This presentation traces how international actors engage with both discourses in an increasingly narrow humanitarian space.

3. Public policy, discretion and the introduction of new abortion drugs in Burkina Faso

Dr Fatoumata Ouattara, Institut de recherche pour le développement, Burkina Faso and France

How has the abortion drug misoprostol come to circulate within Burkina Faso’s formal and informal health sectors despite the country’s restrictive abortion law? This presentation examines how this recent development has forced policy actors to confront uncomfortable questions about Burkina’s abortion policy and push a taboo issue into the public domain.

4. A struggle for legitimacy – liberalizing the abortion law in Malawi

Maren Olene Kloster, Centre for Development and the Environment, University of Oslo, Norway

This presentation analyses international NGOs’ strategies to liberalize Malawi’s restrictive abortion law at a time when the Catholic Church and the population reject liberalisation of the abortion law as both immoral and ‘un-Malawian.’

Discussion

Short speaker biographies

Dr Katerini Storeng is Associate Professor at the Centre of Development and the Environment and holds a Young Researcher fellowship from the Norwegian Research Council's GLOBVAC Programme. She is also honorary lecturer at the London School of Hygiene & Tropical Medicine in the UK, Her research examines the social and political factors impacting on people's health, health systems and health policy development, with a current focus on international actors' impact on reproductive health policy change, and civil society engagement in global health.

Dr Jennifer Palmer is Deputy Director of the Health Humanitarian Crises Centre and a social scientist affiliated with the Centre for Maternal Reproductive & Child Health (MARCH) at LSHTM and the Centre of African Studies at the University of Edinburgh. Jen is interested in the implementation of health programmes in conflict-affected and emergency settings. She pursues two main research streams: reproductive health and sleeping sickness, both predominantly in humanitarian crisis settings.

Dr Fatoumata Ouattara is Associate Professor at the Dr Fatoumata Ouattara, Institut de recherche pour le développement in Burkina Faso and France. She is a social anthropologist with research interests including the analysis of health systems and health care provision, maternal health, prevention of mother-to-child transmission in the context of HIV infection, and post-abortion social experiences and constraints. She conducts ethnographic research into these topics in Burkina Faso.

Maren Olene Kloster is a PhD candidate at the Institute for Health and Society and research fellow at the Centre for Development and the Environment, University of Oslo. Her research is supported by the Research Council of Norway's GLOBVAC programme, as part the research project *NGOs and the transfer of global maternal health policies (NGOMA)*. Her research focuses on the links between international NGOs' global policies and their national-level programmes in Malawi.

Symposium 10
Uniting Art, Evidence, and Advocacy: Unpacking the <Immune Nations>, Evidence-Based Art Exhibit
Chair: Steven J. Hoffman, University of Ottawa, Canada

The Millennium Development Goals (MDGs) expired in 2015 with insufficient progress made towards universal vaccination. The last several years has witnessed extremely heated and polarized international public debate on vaccines, ranging from questions related to their safety to their unacceptably high price in many of the world's poorest countries. These debates have stimulated discourse around a number of broader ethical issues related to global health such as how to best achieve universal health coverage while balancing personal freedom and public health. Developing the <Immune Nations> exhibit has represented a unique opportunity to convene a group of health researchers and visual artists aiming to constructively reframe current discourses surrounding vaccines, identify the limitations of

existing approaches, and combine art with research evidence to strategize creative ways of promoting universal vaccination. Art/creative research has the potential to play an important role in helping to foster a more nuanced, evidence-based discourse around vaccines, at the very least by articulating elusive or emotionally charged issues in ways that other forms of communication often cannot.

Vaccines are one of the most cost-effective public health interventions in the world and will be heavily relied upon for making progress towards the Sustainable Development Goals (SDGs) in the future. For instance, SDG 3 (*Ensure healthy lives and promote well-being at all ages*) is one that lends itself directly to vaccines and the use of vaccines against many infectious diseases. By improving health and well-being, we additionally have a greater chance of reducing poverty and improving economic and social development for everyone, as SDG 1 beckons (*End poverty in all its forms everywhere*). Immunized children are more likely to stay healthy and less likely to miss school, enabling SDG 4 that calls for better education and improving future earnings (*Ensure inclusive and equitable quality education and promote life-long learning opportunities for all*).

Our panel at the conference will introduce audiences to the history, central debates and research agenda that gave rise to *<Immune Nations>*, our experimental evidence-based artistic-research exhibition emerging from the three-year Vaccine Project (<http://www.thevaccineproject.com/>) completed as part of the International Collaboration for Capitalizing on Cost-Effective and Life-Saving Commodities (i4C) that is funded through the Research Council of Norway's GLOBVAC Programme (Project #234608).

Presentations

1. **Art, Evidence, Advocacy: the backstory to *Immune Nations***

Steven J. Hoffman, BHSc JD MA PhD LLD

Scientific Director, CIHR Institute of Population & Public Health

Director, Global Strategy Lab

Associate Professor of Law, Medicine and Public & International Affairs,

Centre for Health Law, Policy & Ethics, University of Ottawa, Canada

Adjunct Associate Professor of Global Health & Population,

Harvard T.H. Chan School of Public Health, Harvard University, USA

2. ***Immune Nations*: a description of the process and projects**

Natalie S. Loveless, PhD, MFA

Assistant Professor of Contemporary Art and Theory, University of Alberta

Adjunct Professor of Women's and Gender Studies, University of Alberta

Director, Research-Creation and Social Justice CoLABoratory

3. **Art-Science Collaborations: a discussion of *Immune Nations* in context of other similar projects such as *The Body in Question(s)*, *Imaging Science*, & *Perceptions of Promise*.**

Sean Caulfield, Centennial Professor, Department of Art and Design, University of Alberta

Short speaker biographies

Steven J. Hoffman is the Director of the Global Strategy Lab, an Associate Professor of Law, Medicine and Public & International Affairs at the University of Ottawa, and the Scientific Director of the Canadian Institutes of Health Research's Institute of Population & Public Health. He holds courtesy appointments as an Associate Professor of Clinical Epidemiology & Biostatistics (Part-Time) at McMaster University and Adjunct Associate Professor of Global Health & Population at Harvard University. He is an international lawyer licensed in both Ontario and New York who specializes in global health law, global governance and institutional design. His research integrates analytical, empirical and big data approaches to craft global regulatory strategies that better address transnational health threats, social inequalities and human rights challenges. Currently he is co-principal investigator of the “Strengthening International Collaboration for Capitalizing on Cost-Effective and Life-Saving Commodities (i4C)” project with Trygve Ottersen at the Norwegian Institute of Public Health.

Natalie Loveless is a Canadian conceptual artist, curator, writer, and assistant professor of contemporary art history and theory in the Department of Art and Design at the University of Alberta, where she specializes in feminist and performance art history, art as social practice and artistic research methodologies (research-creation). Her dialogic and instruction-based wall-drawing installations, performance actions, and video works have been presented in festivals, galleries and artist-run centers in the Americas, Europe and Asia. Curatorial projects include “Participatory Dissent” (Western Front/LIVE Biennial, Vancouver, 2008), “Intervene, Interrupt: Rethinking Art as Social Practice” (University of California, Santa Cruz, 2008), “New Maternalisms” (Mercer Union/FADO, Toronto, 2012), “New Maternalisms-Chile” (MNBA and MAC, Santiago, 2014), and “New Maternalisms Redux” (FAB Gallery, Edmonton, 2016). Recent projects include: “Maternal Ecologies: An Autoethnographic and Artistic Exploration of Contemporary Motherhood”. She is the director and founder of the Research-Creation and Social Justice CoLABoratory. For more information please see: www.loveless.ca.

Sean Caulfield is a Centennial Professor in the Department of Art and Design at the University of Alberta. He has exhibited his prints, drawings, installations and artist’s books throughout North America, Europe, and East Asia. Recent exhibitions include: *The Flood*, Art Gallery of Alberta; *Firedamp*, dc3 Art Projects, Edmonton; *The Body in Question(s)*, UQAM Gallery, Montreal; *Perceptions of Promise*, Chelsea Art Museum, New York, USA/Glenbow Museum, Calgary; *The New World*, The Centre for Modern and Contemporary Art, Debrecen, Hungary. He has received numerous grants and awards for his work including: The Special Award of the Rector of the Academy of Fine Arts in Warsaw, Krakow Triennial, 2015; SSHRC Dissemination Grant: Canadian Stem Cell Network Impact Grant; and a Visual Arts Fellowship, Illinois Arts Council, USA. Caulfield’s work is in various public and private collections including: Houghton Library, Harvard University, USA; Fitzwilliam Museum, Cambridge, England; Blanton Museum of Art, University of Texas, Austin, USA.

Symposium 11

Malaria control tools in East Africa: Durability of LLINs in Tanzania and LLIN/IRS combination in Ethiopia

Chair: Hans J. Overgaard, Norwegian University of Life Sciences (NMBU), Norway

In 2015 the Millennium Development Goals (MDGs) were reviewed. The malaria targets had been convincingly met. Between 2000 and 2015, malaria mortality was reduced by 60%, from 47 to 19 deaths per 100,000 persons, translating into 6.2 million lives saved. During the same period, malaria incidence was reduced by 37%. The reductions were attributed to upscaling of malaria control measures, including vector control which mainly relies on insecticide-treated nets (ITNs) and indoor residual spraying (IRS). The proportion of children sleeping under ITNs increased from 2% to 68% during the MDG period. The new Sustainable Development Goals (2016-2030) include the aim to end epidemics of malaria by 2030. Global malaria should be reduced by at least 90% by 2030 with interim targets of 40% by 2020 and 75% by 2025. This will be achieved by ensuring universal access to malaria prevention, diagnosis and treatment supported by innovation and research.

In 2015, about 75% of children <5 yrs in Sub-Saharan Africa were protected either by ITNs or IRS. However, these tools need to be developed and improved to achieve malaria elimination. It is essential to understand the effective life of LLINs and risk factors for LLIN degradation and loss. This is needed by governments to select the most cost effective nets and estimate the correct timing of repeated distribution campaigns. The benefits of combining LLINs and IRS are still unclear. What is the best combination of these two interventions? Two projects funded by the GLOBVAC program address these issues. The ABCDR project (2013-2017) in Tanzania investigates the useful life of LLIN products by assessing attrition, biological efficacy, chemical residue, and physical degradation. The MalTrials project (2013-2017) in Ethiopia investigates whether a combination of LLINs with IRS will enhance the protective benefits and cost-effectiveness of interventions against malaria and its effect on mosquito behavior, as compared to each intervention alone.

Presentations

1. How long do mosquito nets last, and why does it matter?

Hans J. Overgaard, NMBU, Norway. Presenting results on attrition, degradation, and the functional survival of mosquito nets 1-2 years after distribution.

2. A cross-sectional analysis of mosquito nets in Tanzanian households in 2013

Zawadi Mageni, Ifakara Health Institute, Tanzania & London School of Hygiene and Tropical Medicine. Results are presented on ownership, use, and access of mosquito nets in households of different socioeconomic status and geographical location.

3. A cluster randomized control trial on the effect of Indoor Residual Spray (IRS) and Long-lasting Insecticide treated Nets (LLIN) on malaria

Bernt Lindtjørn, University of Bergen, Norway. This presentation describes the results from the malaria prevention trial in central Ethiopia.

4. Impact of IRS and LLIN interventions on entomological factors

Oljira Kenea, Addis Ababa University, Ethiopia. Presenting results on the effect of the interventions on human biting rates and densities of An. arabiensis.

Short speaker biographies

Dr. Overgaard is the PI of the ABCDR project and a medical entomologist. He is interested in the ecology, distribution, and behaviour of malaria and dengue mosquitoes and finding innovative solutions to control water-related diseases. He has experience from research and vector control operations in Africa, South America, and Asia. He currently leads a project on dengue early warning and response using entomological and immunological indices in SE Asia.

Zawadi Mageni is a PhD candidate at London School of Hygiene and Tropical Medicine and the ABCDR project. Her work deals with describing patterns of net ownership, use, and access in Tanzania as well as understanding factors affecting degradation and loss of mosquito nets. She has a special interest in perceptions, barriers, and motivators of net care and repair.

Prof Bernt Lindtjørn is the PI of the MalTrials project. He has a broad working experience from research and public institutions, international organisations and NGOs. His current research focus on population studies, maternal and child health, and control of tuberculosis, HIV, malaria and malnutrition

Oljira Kenea is a PhD candidate at Addis Ababa University and the MalTrials project. Oljira deals with the entomological impact of combining IRS and LLINs for malaria prevention in Ethiopia. He is interested in the ecology and behavior of insect vectors such as malaria mosquitoes. Currently, he is based at Wollega University, Ethiopia and involved in research and teaching medical entomology.

Symposium 12

The eRegistries Initiative: Using electronic health registries to improve quality and continuity of care for women and children

Chair: J. Frederik Frøen, Norwegian Institute of Public Health (Norway)

An electronic health registry (eRegistry) collects individual patient data at the point of care and creates a registry that provides aggregate data for national and global indicators. The central philosophy of eRegistries is to not only support upstream aggregate data needs, but to act as an eHealth ecosystem that optimizes the use of health information to support the care providers, clients and patients to improve the health and wellbeing of women and children. eRegistries directly respond to the health information needs of countries to aide and document their actions toward the UN Sustainable Development Goal (SDG) agenda, specifically in operationalizing the UN Global Strategy for reproductive, maternal, newborn, child and adolescent health (RMNCAH). The key target of the SDGs, Universal Health Coverage (UHC) for women and children, cannot be delivered effectively with quality and continuity of care without a seamless real-time flow of information about the individual along and across the health system.

GLOBVAC supports two related eRegistries projects in Palestine and Bangladesh. The extensive partnerships developed and sustained in Palestine and Bangladesh are critical to achieving these goals. Simultaneously, program impact requires attention not only to the implementation, but also to research, governance and priority setting both globally and nationally.

We will share our experiences developing and implementing innovative large-scale health information research projects focused on improving the health and well-being of women and children through the use of quality health information. The presenters will demonstrate the theoretical underpinnings of this approach, the implementation process and research towards an eRegistry in Palestine, and the design of an eRegistry for community-based health workers in Bangladesh. In addition, we will present and discuss the future of the eRegistries Initiative in both the Norwegian and global contexts; covering areas including research, implementation, partnerships, funding issues and business models.

1. eRegistries: a framework for data utilization – making clinical registries work for women’s and children’s health

Ingrid K. Friberg (Norwegian Institute of Public Health, Oslo, Norway)

2. eRegistries: Implementing and undertaking randomized controlled trials to assess the use of the Mother and Child Health eRegistry in Palestine

*Buthaina Ghanem , Palestinian National Institute of Public Health, Ramallah, Palestine
Kjersti Mørkrid Blom-Bakke , Norwegian Institute of Public Health, Oslo, Norway*

3. eRegistries: A protocol to evaluate a community-based health information system in rural Bangladesh

Jesmin Pervin (icddr,b, Dhaka, Bangladesh)

4. The eRegistries Initiative: ‘interactive information for health’ - where do we go from here?

Frederik Frøen, Norwegian Institute of Public Health, Oslo, Norway

Discussion

Short speaker biographies

J. Frederik Frøen, Norwegian Institute of Public Health is an ERC Consolidator Grantee, current Director of Global Women and Children’s Health. He manages the eRegistries Initiative, overseeing the integration and integrity of the research and implementation phases of the various projects. He is a founding partner with the NRC’s Centre of Excellence “Center for Intervention Science for Maternal and Child Health” (CISMAC), a member of the WHO mHealth Technical Evidence Review Group and the UN Multi-Agency eHealth Guideline Group. He was a co-founder and former chair of the International Stillbirth Alliance, and an executive committee member and lead author of both the Lancet Stillbirth series (2011) and the Lancet Ending Preventable Stillbirths series (2016). He is a former Fulbright visiting professor at Brigham and Women’s Hospital and visiting lecturer in obstetrics at Harvard Medical School, Boston, USA. He received PhDs in pediatrics and obstetrics from the University of Oslo.

Ingrid K. Friberg, Norwegian Institute of Public Health is a senior scientist with the Department of Global Women and Children’s Health and is leading the research and implementation of eRegistries in Bangladesh at the International Center for Diarrheal Disease Research, Bangladesh (icddr,b). Previously, she was part of the Lives Saved Tool (*LiST*) team at Johns Hopkins University, with roles ranging from development support, training, and analyses on the country and global levels. She

received her PhD from the Johns Hopkins University, Bloomberg School of Public Health, with a thesis investigating the association between *S. pneumococcus* and growth in infants in India.

Buthaina Ghanem, PNIPH, Palestine completed her Masters of Public Health from Al-Quds University in Palestine. Buthaina Ghanem has more than 23 years of professional working experience in managing different health programs mainly in the areas of Public Health, Communicable Diseases/ Public Health surveillance, Epidemiology, Expanded Program of Immunization, and International Health Regulations. She is currently working as the Maternal and Child Health (MCH) eRegistry team leader at the Palestinian National Institute of Public Health (PNIPH). The MCH eRegistry has been planned and is being implemented through a consensus-driven process with maternal-child health stakeholders. The MCH eRegistry will be implemented in all the 390 MCH clinics in the West Bank and in 27 clinics in Gaza where a phased implementation will be carried out. Efficiency and effectiveness of the customized interactive checklists, feedback to care providers and feedback to women will be evaluated through three randomized controlled research trails.

Kjersti Mørkrid Blom-Bakke, Norwegian Institute of Public Health is a postdoctoral fellow at the Norwegian Institute of Public Health's Department of Global Women and Children's Health. Her background is physiotherapy and she holds an M.Phil. in International Community Health. She received her PhD from the University of Oslo, Faculty of Medicine. The PhD thesis was in the field of ethnic differences in gestational diabetes mellitus, and she is a member of the Oslo Diabetes Research Center. Currently she is coordinating all research activities the department of Global Women and Children's Health is conducting in Palestine.

Jesmin Pervin, icddr,b , Bangladesh is a medical doctor and completed her Masters of Public health from James P Grant School of Public Health, BRAC University, Dhaka. She is working as Assistant Scientist in Maternal and Child Health Division in icddr,b, Dhaka, Bangladesh. Dr. Jesmin has more than 15 years of working experience as a clinician and public health researcher in Matlab, the field station known for high quality research in the field of Maternal, Child Health – Family Planning. Her main research areas are reproductive health, preterm and stillbirth issues, quality of care during pregnancy, delivery and post-partum periods, and also implementation research related to improving the perinatal health. At present she is involved in the research projects with the objectives of implementing evidence based interventions in the public health system to reduce perinatal mortality and to strengthening the extension of reproductive, maternal, newborn and child health (RMNCH) services in Bangladesh with an electronic health registry.