



ANNUAL REPORT **2013**



FROM THE EXECUTIVE COMMITTEE

Despite significant progress over the past decade, more than 6.5 million children died in 2012 - an average of 18,000 deaths per day. Adding to this enormous amount of individual suffering and loss of human capital, the same year saw over 2 million stillbirths and 300,000 maternal deaths. More than 90% of these deaths occurred in low and middle income countries and over two-thirds of them could have been prevented with existing interventions. If Norway's child mortality (3 per 1000) could be extended to the world, approximately 6 million child lives would have been saved in 2012. This represents "The Unfinished Agenda of the Millennium Development Goals".

Progress in reducing child mortality has been significant but inequitable. Deaths of children under five years of age are increasingly concentrated in Sub-Saharan Africa and South Asia. The proportion of these deaths that occur in the first month of life (the neonatal period) has increased 19% since 1990 because declines in neonatal mortality rates have been slower than among older children. India now accounts for more than a quarter of the world's neonatal deaths. Close to half of the stillbirths and neonatal deaths occur during delivery or on the first day of life. Also, most of these deaths could be prevented if all mothers and newborns received health interventions we know or have good reasons to believe are effective.

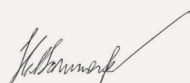
Most pregnant women and their newborns, many of whom experience impaired fetal growth, survive but repeated infections and suboptimal nutrient intakes impede their development. This prevents children from reaching their potential in terms of physical growth, cognitive development and educational and social achievement. There is an increasing appreciation that we need to approach health and development with a holistic perspective. The health and wellbeing of adolescents, especially of young girls, of pregnant women, of the babies they carry, their newborns, children and adolescents should be seen as a continuum. The health and wellbeing of adolescents, especially of young girls, of pregnant women, of the babies they carry, of the newborns which grow to become small, then bigger children and then adolescents should be seen as a continuum. Further, we now have evidence that a considerable part of the so called non-communicable diseases, which are becoming increasingly important as more and more children survive and populations grow older, are "seeded" or "programmed" at a very early age, possibly already during gestation. Therefore, a key to improving adult health lies in promoting the health and wellbeing of young women, of pregnant women and of their young children. Finally, while most medical research focuses on biomedical interventions, we need to also address social and behavioral determinants of health and development, especially for young women. Thus, education is a critical factor not only for their empowerment, but also for their own and their children's wellbeing. Our Centre for Intervention Science in Maternal and Child Health (CISMAC) intends to support a study that will measure the extent to which promoting and securing young Zambian girls' education delays the age of their first pregnancy and thereby improves their own as well as their babies' and children's future health and development.

Research on equitable delivery strategies that can be applied at scale is recognized as a high priority by the World Health Organization. It is also essential to improve existing interventions to simplify their delivery and maximize their impact. Further, there are promising interventions whose efficacy, effectiveness and cost-effectiveness need to be established so that they can be included in public health programs, adding new tools for the accelerated reduction of maternal and child mortality. By addressing the unfinished agenda, the intervention research planned by CISMAC is expected to contribute to accelerate the reduction in the number of maternal, perinatal and child deaths.

We believe that by undertaking excellent research we can measure the impact of interventions, learn how to best implement them and scale up programs, and thereby provide the evidence that decision makers need to make wise decisions both in the countries we work and on a global scale through our close collaboration with the WHO and UNICEF. This is also in line with the new Norwegian government's development cooperation strategy; its political platform states that Norway will further develop its efforts in global health, upholding its focus on women's and children's health, and that Norway's development policy will be even more informed and allocations adjusted by impact evaluations.

In 2013 our 6 initial CISMAL studies were further conceptualized and plans were concretized (see a brief description of the studies on page 11). Many studies are currently doing formative research which is a key to ensure that the interventions developed are deliverable. Some studies will now go into the phase of detailed protocol development, and will then embark upon study implementation. Other studies will need more time and, most importantly, further interaction with local authorities, with WHO, UNICEF and Norwegian authorities, to ensure that they meet the criteria of excellence that CISMAL embraces - relevance, quality in design and implementation, and appropriate analysis and communication. We look forward to support these studies towards achieving the CISMAL objective of generating evidence to effectively and equitably improve maternal and child health and development in low and middle income countries.

Bergen, Geneva and New Delhi, March 31st, 2014



Halvor Sommerfelt,
Director



Ingvild F Sandøy,
Deputy Director



José Martines,
Scientific Coordinator



Maharaj K. Bhan,
Chair, Technical Advisory Group

2013 – ESTABLISHING AN INTERNATIONAL RESEARCH CONSORTIUM

In 2013 the Centre for Intervention Science in Maternal and Child health (CISMAC) was established as a research consortium anchored at the University of Bergen's Centre for International Health at the Department of Global Health and Primary Care. It has partners in Ethiopia, India, Nepal, Uganda, South Africa and Zambia as well as in Norway. CISMAC collaborates closely with the Department of Maternal, Neonatal, Child and Adolescent Health of the (WHO).

CISMAC aims to provide high quality evidence to inform policy decisions that can effectively and equitably improve maternal and child health (MNCH) and development in low and middle income countries (LMIC). Through randomized control trials, feasibility studies and implementation research, CISMAC will develop and evaluate new interventions, work towards improving existing interventions and design approaches to better deliver such interventions. Through close collaboration between the partner institutions, CISMAC intends not only to achieve research of excellent quality but also strengthen the capacity at the partner institutions. CISMAC-generated evidence will influence health policy in the study countries and in other LMIC, as well as informing and helping to shape Norwegian overseas development cooperation.

In October-2013 CISMAC held its official opening with a symposium in Bergen. It also held a workshop where the partners met to discuss CISMAC's vision and strategies for generating solid evidence for the promotion of maternal and child health. At the GLOBVAC conference in Bergen, around 300 scientists met to address implementation- and health-system research relevant to LMIC. Several CISMAC affiliated researchers gave presentations about their studies and CISMAC was presented in a plenary session.

During 2013, CISMAC established its management structure including an administrative team that will facilitate the coordination of the activities undertaken at the different partner institutions. We plan to hold annual conferences and several conference calls per year in order to ensure that researchers involved in studies across three continents (Asia, Africa and Europe) engage with each other, and that together we form a research consortium that promotes high quality research as well as a constructive exchange of ideas. We will use our web page (www.cismac.org) extensively for internal and external communication. It will facilitate cross-continental interaction and the exchange of ideas, and thereby enhance the quality and impact of our studies.



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” On the evening round, the little four year old girl is ill. Her mother, a young Miskito girl with long black hair, following the child’s slightest movements, wipes her forehead and chest with a white cotton cloth. The baby coughs violently, her lips turning blue before she again gasps, and we put on the oxygen mask. At midnight the nurse wakes me up; the child is getting worse. Her breath is rapid, the nostrils extending for each inspiration. Suddenly she twitches. Her breath slows down, her lips go blue and then she is quiet; her chest no longer moves. There is a strange silence in the pediatric ward. The mother continues to wipe the baby’s forehead, neck and chest. She has not yet realized. I touch her, hold her firmly, and tell her that her child is dead.

Having gone to bed, I look at the unpainted walls of the small room. In a few hours it’s a new day beginning with our morning meeting. I will give my report, informing the new shift that we had 20 consultations in the in the outpatient department and admitted four, that the little girl in the ward died. Reports are made into numbers and numbers become statistics. Dead children are reported as child mortality per thousand live births.

In the silence of the warm night, I hear, through the thin plank wall, a woman crying; and I know that it’s like this every time, no matter where it happens, irrespective of skin color, poverty or number of siblings.

Freely translated from Ane Hoel and Mons Lie’s *Ensomme Nicaragua* [Lonely Nicaragua], ISBN 82-05-15097-4. Lie worked as a surgeon in Grey Memorial Hospital, Puerto Cabezas in 1983.

PARTNERS AND COLLABORATING INSTITUTIONS

ADDIS ABABA UNIVERSITY – SCHOOL OF PUBLIC HEALTH (SPH) (ETHIOPIA)



The SPH works towards advancing knowledge in public health that will contribute to the improvement of the health of individuals and populations in Ethiopia, East Africa and beyond. It is dedicated to the training of health professionals in public health; to the discovery, application and dissemination of new knowledge; and to the promotion of health and prevention of disease in communities and populations, in collaboration with governmental, non-governmental and international agencies. Many national and international institutions such as John Hopkins Bloomberg School of Public Health, University of Bergen, Harvard School of Public Health and the United Nation Population Fund chooses to associate with SPH because of the experience of mutual learning through collaborative research and training. As a pioneer in public health training in Ethiopia SPH attracts students from all over the country and provides them with hands-on experience in public health principles and practice. The first PhD Public Health training programme in Ethiopia was launched at the School in 2003. The SPH research is focused on health problems of major importance, such as sexual and reproductive health, child health, HIV/AIDS, malaria, tuberculosis and environmental health.

aau.edu.et

CENTRE FOR HEALTH RESEARCH AND DEVELOPMENT, SOCIETY FOR APPLIED STUDIES (INDIA)



The Centre for Health Research and Development, Society for Applied Studies (CHRD-SAS,), with research as a full time preoccupation, focuses on prevention of diseases, deficiencies and disabilities of public health importance with special emphasis on newborns, children and mothers through large intervention trials, impact assessment of interventions, exploratory research around proof of concept and policy research. It is amongst the few groups in India that conduct community-based or cohort studies with large sample sizes (largest almost 100,000 children under two years of age followed up for one year) in the urban resettlement neighborhoods of South Delhi, and Faridabad and Palwal districts of Haryana. It has skills and experience in regulatory aspects of product development, post marketing surveillance and large scale project management. CHRD-SAS investigators have made globally recognized scientific contributions and are well known for their capabilities in community health, nutrition, cognition, epidemiology, social science, infectious diseases, population based clinical research and cohort studies, advanced data management and biostatistics, and technology evaluation and diffusion. CHRD-SAS has a data management centre which is consistent with ICH-GCP and FDA requirements and has cleared an audit to conduct data management of phase III vaccine trials.

sas.org.in

CHR. MICHELSEN INSTITUTE (CMI) (NORWAY)



Improving health outcomes for the poor and vulnerable is crucial for human development and for the promotion of social justice. Knowledge and technology that may substantially improve the health conditions of poor populations are widely available. The main challenge is timely delivery of quality services to those who in need. There remain enormous obstacles to implementing health systems that deliver quality services, as well as being able to overcome the economic and social factors that are determinants for poor health and barriers to care.

CMI has a strong record of research and policy advice in low and middle income countries. CMI competencies are based in the social sciences; studying health systems and focusing on health service delivery. Its inputs to CISMALC will mainly be in the areas of behavioural economics and measurements of the economic outcomes of interventions. In addition, it will contribute to highlighting such areas as health worker performance, health worker motivation and demands for health services.

cmi.no

HAWASSA UNIVERSITY - SCHOOL OF PUBLIC AND ENVIRONMENTAL HEALTH, COLLEGE OF MEDICINE AND HEALTH SCIENCES (ETHIOPIA)



The school of public and Environmental Health at the College of Medicine and Health Sciences of Hawassa University in Ethiopia has an extensive experience in operational research of national priorities, client satisfaction surveys, quality of care assessments and public health interventions. As part of the College of Medicine and Health Sciences, it contributes to the work of the teaching at the referral hospital in the South of Ethiopia that serves more than 12 million people. The College has years of experience in collaborating with national and international institutions and currently collaborates with WHO, CDC, USAID and UNFPA as well as a series of universities and NGOs within and outside the country.

hu.edu.et

MAKERERE UNIVERSITY - COLLEGE OF HEALTH SCIENCES (UGANDA)



By being a leading and transformational institution for academic excellence and innovation in health sciences in Africa, Makerere University College of Health Sciences, aims to improve the health of the people of Uganda through innovative teaching, research and provision of services responsive to societal needs. It is the oldest medical training unit in East Africa; having trained medical and health professionals for over 80 years. It also has a strong background and competency in the conceptualization and undertaking of randomized controlled trials pertaining to nutrition and infectious diseases in Africa. The clinical teaching disciplines of the College of Health Sciences are currently integrated with the Mulago Hospital.

mak.ac.ug

NORWEGIAN INSTITUTE OF PUBLIC HEALTH (NIPH) (NORWAY)



The vision of NIPH is to improve public health. It has a strong background and competency in public health surveillance and monitoring. It acts as a national competency institution on issues related to forensic science, physical and mental health, prevention of communicable diseases and prevention of harmful environmental influences. It collaborates with the WHO, EU, EEA and national health authorities in and outside of Norway including in low- and middle-income countries on global health issues.

fhi.no

TRANSLATIONAL HEALTH SCIENCE AND TECHNOLOGY INSTITUTE (INDIA)



Established in 2009, the Translational Health Science and Technology Institute (THSTI), aims to fast-track health care solutions that will meet the needs of rapidly developing and transitioning India. It aims to improve the health of the most disadvantaged. THSTI forms a pivotal node in a broader cluster of institutes, which specialize in translational research. The synergy engendered by the cluster creates a unique institutional ecosystem where multidisciplinary research can be conducted, and ultimately translated to targeted medical innovations that will improve public health.

THSTI has a strong background and competency as an interdisciplinary research centre where research on the biological basis of childhood health and disease leads to knowledge-driven interventions and technologies that can be sustainably implemented. The Paediatric Biology Centre (PBC) is the THSTI entity CISMAL will collaborate with for a trial to measure the efficacy of zinc in young infants with serious bacterial infections.

thsti.res.in

UNIVERSITY OF BERGEN – CENTRE FOR INTERNATIONAL HEALTH (NORWAY)



The Centre for International Health (CIH) is a centre at the Faculty of Medicine and Dentistry, University of Bergen that aims to initiate and foster education and research relevant to important health problems in LMICs. It holds a leading position in Scandinavia in international and global health. The centre conducts research in a variety of areas such as maternal and child health and nutrition, HIV infection, tuberculosis, reproductive health and malaria, and is also involved in vaccine development for important infectious diseases. Fourteen professors as well as 53 postdoctoral fellows and PhD students are presently employed at CIH. Capacity strengthening linked to research projects African and Asian countries is a high priority for the centre.

uib.no/cih/en

UNIVERSITY OF FORT HARE - EFFECTIVE CARE RESEARCH UNIT (SOUTH AFRICA)



A vibrant, equitable and sustainable African university, the University of Fort Hare, South Africa, aims to provide high-quality, international-level education and research that will contribute to the advancement of knowledge, which is both socially and ethically relevant, and which can be applied to the scientific, technological and social- economic development of South Africa and the wider world. The Effective Care

Research Unit (ECRU) at the University of Fort Hare and linked to the University of the Witwatersrand and Eastern Cape Department of Health has a strong background and competency in randomized clinical trials, systematic reviews and evidence-based health care to improve maternal health in South Africa and beyond. Based in a hospital complex, ECRU has access to a large population base and facilities for participating in major clinical trials.

ufh.ac.za



UNIVERSITY OF TRIBHUVAN - DEPARTMENT OF CHILD HEALTH (NEPAL)

The Department of Child Health (DCH) at the Institute of Medicine, University of Tribhuvan, has a strong background and competency in intervention research, with a special emphasis on maternal and child health. It strongly supports the CISMACH goal of merging estimation of the impact of health interventions with postgraduate training. Participation in CISMACH will enable DCH to continue expanding its 17-year collaboration with the CIH, training postgraduates in international health as well as in intervention research and their clinical and epidemiological methods. The CISMACH collaboration will strengthen the University's and country's academic development as well as encourage the implementation of health programmes aimed at improving maternal and child health.

tribhuvan-university.edu.np



UNIVERSITY OF ZAMBIA SCHOOL OF MEDICINE (ZAMBIA)

The School of Medicine (SOM) at the University of Zambia aims to provide excellent tertiary education and training in health sciences in order to address current and emerging health needs. The Department of Public Health at the SOM has a strong background and competency in public health and epidemiology, and the Department's Zambia Core Epidemiology research group has been involved in intervention research and health policy research for the last 10 years, in close collaboration with the CIH. The Department is very keen to further expand this collaborations with via CISMACH in the field of intervention research. The aim is to generate knowledge and provide evidence that can influence policy and contribute to the welfare of the Zambian people. Through this collaborative work under CISMACH, the research group would like to contribute to the country's efforts in reducing the disease burden, especially that of mothers, newborns, children and adolescents. It also strongly supports CISMACH's approach of merging excellent science with careful measurements of health intervention impacts and linking these research activities closely with postgraduate training.

unza.zm

THE WORLD HEALTH ORGANIZATION (WHO)

The Department of Maternal, Newborn, Child and Adolescent Health (MCA) leads the WHO's efforts to improve the health of these population groups. MCA promotes and supports research, and focuses on developing, evaluating and delivering interventions that reduce the disease burden of mothers and young children in LMIC. The work with CISMACH expands and consolidates MCA's long-standing collaboration with the CIH and provides MCA with an additional opportunity to promote intervention research led by LMIC institutions and strengthen these institutions' ability to conduct high quality studies to improve maternal, newborn, child and adolescent health.

who.int/maternal_child_adolescent/en



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WE NEED TO APPROACH
HEALTH AND DEVELOPMENT
WITH A HOLISTIC PERSPECTIVE.

From the Executive Committee

CISMAC STUDIES

DELAYED BCG VACCINATION IN HIV INFANTS IN UGANDA

It is possible that BCG vaccination at birth can protect infants against several serious infections, not only against tuberculosis. Randomized control trials are required to inform the development of strategies for BCG vaccination by measuring whether deferring BCG vaccination from birth to 14 weeks of age changes immune responses to BCG and the risk of serious illness during the first two years of life. The first draft Study Protocol for this study is being completed.



EDUCATION AND EMPOWERMENT OF ADOLESCENT GIRLS TO REDUCE TEENAGE CHILDBEARING IN ZAMBIA

Studies in low and middle income countries show an association between low educational attainment and risky sexual behaviour, early marriage and pregnancies. Teenage pregnancies are associated with high risk of preterm birth, and unplanned pregnancies may be terminated by unsafe abortion, with its inherent risks. Increasing age at first pregnancy and birth is therefore likely to translate into improved maternal and child health. The net attendance in primary and secondary school for rural girls in Zambia is 77% and 20%, respectively. Together with Zambian authorities and the WHO the Project Management Team of our planned CISMAC study explores the possibility of evaluating the impact of an intervention to promote education and empowerment of Zambian adolescent girls. In the latter half of 2013, the key investigators made field trips to a number of rural primary schools and interacted with teachers and parents. They are developing plans for the necessary formative research to inform intervention design.



IMPACT OF KANGAROO MOTHER CARE (KMC) WITH SUPPORT FOR LOW BIRTH WEIGHT INFANTS IN INDIA

Low birth weight infants account for 60-80% of all neonatal deaths. However, over 75% of deaths among these infants could be prevented even without access to intensive care. Providing low birth weight babies the necessary care in the community could make a major contribution to enhancing neonatal survival, particularly in India where over 25% of infants are born with low birth weight. This study aims to develop and evaluate an intervention package based on the promotion of KMC in the community. It is being developed in collaboration with the WHO and will be conducted in two stages. The first stage will consist of formative research to design and develop an intervention package and pilot test it to assess its acceptability among mothers of low birth weight babies. The second stage will be a randomized controlled trial to ascertain the impact of community based KMC on survival of low birth weight infants during the neonatal period and in the first 6 month of life. The state government of Haryana, India, is a partner in this effort.



INCREASING COVERAGE OF POSTNATAL CARE ON THE FIRST DAY AFTER BIRTH BY IMPROVING HEALTH SYSTEMS PERFORMANCE IN INDIA

Close to 50% of newborn deaths LMIC happen on the first day after birth. Reaching newborns with improved care in this period can bring major improvements in survival. Unfortunately, postnatal care coverage on the first day is low. The aim of this study is to find effective ways to increase this coverage and the quality of care to newborns in the first 24 hours after birth. This study will explore various mechanisms, including regular home visits during pregnancy by community health workers and the use of mobile phones, to ensure regular contact with mothers during pregnancy and with health facilities for the provision of postnatal care within 24 hours of birth. Additional interventions, such as establishing linkages between Sick Newborn Care Units and referral facilities and automated messaging or phone calls between community health workers, primary health care facilities and referral facilities, will be explored as ways to provide more complex care for newborns with problems.



SUPPLEMENTATION WITH HIGH DOSES OF VITAMIN B12 IN PREGNANCY AND IN INFANCY TO IMPROVE COGNITIVE FUNCTIONING IN EARLY CHILDHOOD IN NEPAL

Many women and children in LMIC have inadequate vitamin B₁₂ status. Vitamin B₁₂ is crucial for normal cell division and differentiation and vitamin B₁₂ deficiency is associated with impaired fetal growth, premature birth as well as suboptimal brain development and function. Poor vitamin B₁₂ status is common in people on vegetarian diets. The objective of this study is to measure the effect of supplementation with vitamin B₁₂ on cognitive functioning in early childhood. This will be done by administering Vitamin B₁₂ or a placebo in pregnancy or in early childhood to 1,600 children in Nepal and then follow the children up through their early childhood. The study is in its early planning phase.

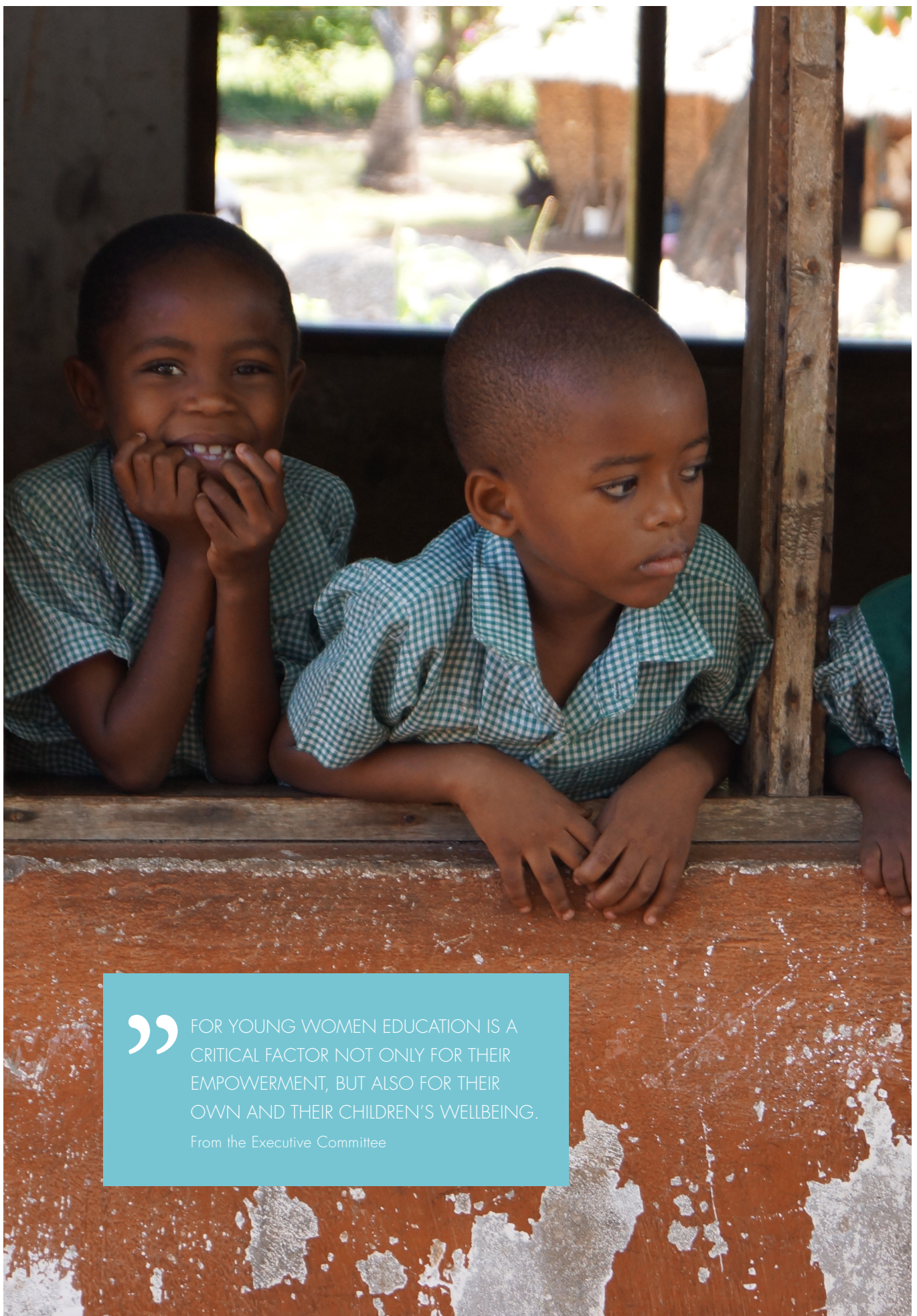


LONG LASTING IMPREGNATED BED NETS (LLINs) AND INDOOR RESIDUAL SPRAYING (IRS) TO REDUCE THE RISK OF MALARIA IN PREGNANCY AND TO INCREASE BIRTH WEIGHT IN ETHIOPIA

This study is an extension of the project “Combining indoor residual spraying and long-lasting insecticidal nets for preventing malaria: Cluster randomized trial in Ethiopia” funded by the Research Council of Norway. Malaria in pregnancy causes anaemia, may cause hypertensive disease and increases the risk of spontaneous abortion, stillbirths, premature delivery and low birth weight. However, sound evidence is lacking on the extent to which programme-based interventions against malaria pre-conceptually and in pregnancy prevents these conditions.



This study will measure the impact of LLINs and IRS on maternal and child health. Extensive epidemiological and entomological surveys in the study area in Ethiopia were undertaken in the autumn of 2013, revealing large differences in malaria incidence between villages. The data from these surveys provide critical information for the on-going development of study protocols for our large cluster-randomised trial.



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FOR YOUNG WOMEN EDUCATION IS A CRITICAL FACTOR NOT ONLY FOR THEIR EMPOWERMENT, BUT ALSO FOR THEIR OWN AND THEIR CHILDREN'S WELLBEING.

From the Executive Committee

PROJECTS SUPPORTED BY CISMAL

COHORTS AND REGISTRY METHODOLOGIES IN CISMAL

CISMAL aims to undertake interventions addressing the continuum of maternal neonatal and child health care from preconception, pregnancy, during labour and childbirth, in the postnatal period and into childhood and adolescence. This requires the ability to track individuals and their health determinants, health system encounters and outcomes over a long period of time. To achieve this, the project's principal objective is to develop, customize and utilize health registry methodology to enable optimal data collection for CISMAL studies following participants over a prolonged period of time. The project is closely aligned with the ongoing WHO and NIPH harmonized Reproductive Health Registries (hRHR) initiative in developing ready-made generic templates for registry-based reproductive health data collection. These are being harmonized with ICD and WHO indicator definitions, for development of sustainable and robust free and open source e- and mHealth solutions, which can be used in any CISMAL study aiming to follow participants throughout the continuum care and over an extended period of time.

PROMISE-EBF FOLLOW-UP STUDY

The PROMISE-EBF trial (T. Tylleskär et al., Lancet 2011, 378: 420-7) estimated the effect of peer counselling to promote exclusive breastfeeding on infant feeding patterns and illness in Burkina Faso, South Africa and Uganda. CISMAL supports a Grand Challenges Canada-funded study to follow-up the PROMISE-EBF children with respect to their development and physical growth.



CISMAC RESEARCHERS

BERTIL TUNGODDEN

Bertil Tungodden is a professor at the Norwegian School of Economics (www.nhh.no/en). His research areas are behavioral and experimental economics, development economics and distributive justice. He has extensive experience in conducting lab and field experiments both in LMIC and rich countries. Tungodden has published in numerous international journals in economics, philosophy, and science and serves at several editorial boards.



Publications

ESKINDIR LOHA SHUMBULLO

Eskindir Loha Shumbullo is a faculty member at the School of Public and Environmental Health, College of Medicine and Health Sciences of Hawassa University, Ethiopia. His PhD thesis was “Variation in Malaria Transmission in Southern Ethiopia: the impact of prevention strategies and a need for targeted intervention” was defended at the University of Bergen in 2013. Currently, he coordinates the Cluster Randomized Control Trial of Malaria prevention and control interventions (short name “MalTrials”) project at Hawassa University which was funded by the Research Council Norway (GLOBVAC).



In addition he is the Ethiopian coordinator of the NORHED funded project “South Ethiopia Network of Universities in Public Health: improving women’s participation in post-graduate education.”

Publications

HALVOR SOMMERFELT

Halvor Sommerfelt has through international collaborative ventures with research groups in South Asia, Africa, Europe and the U.S. undertaken collaborative research focused on child health and nutrition. This research spans microbiological and vaccine development studies to intervention trials of downstream biomedical and behavioral interventions to promote child health and development. Halvor has since November 2007 been a member of Independent Assessment Committee for Advance Market Commitment for vaccines (<http://www.vaccineamc.org>). He is a Professor in epidemiology at the CIH and a senior researcher at the Department of International Public Health at the Norwegian Institute of Public health, and leads CISMAC.



Publications

INGVILD FOSSGARD SANDØY

Ingvild Fossgard Sandøy, is an associate professor at the Department of Global Health and Primary Care, and postdoctoral fellow at the Centre for International Health, University of Bergen (UiB). She is also deputy director of CISMAL. Her research focus is on reproductive health, epidemiology and prevention of HIV and other sexually transmitted infections, and social epidemiology.



Publications

JOSÉ MARTINES

José Martines coordinated the promotion of newborn and child health research at the Department of Maternal, Newborn, Child and Adolescent Health of WHO, Geneva for over 20 years before joining CISMAL in 2013. During his work at the WHO he fostered international collaboration to advance newborn and child health research and to promote the utilization of research findings in policies and programmes. His work led to the identification of global research priorities and the implementation of large-scale community-based intervention trials that influenced policy on newborn health, control of childhood illness and infant nutrition. The research he promoted invariably involved the collaboration of multidisciplinary teams and the engagement of users, particularly ministries of health. His work has focused on South Asia, Sub-Saharan Africa and Latin America and led to collaborations with researchers and research institutions in over 30 countries. His academic qualifications include an MD in pediatrics, an MSc in Human Nutrition and a PhD in Nutrition Epidemiology.



Publications

JUSTUS HOFMEYR

Justus Hofmeyr, is an obstetrician working at Frere and Cecilia Makiwane Hospitals, Eastern Cape, South Africa. His research focuses on randomized clinical trials and systematic reviews relevant to maternal and perinatal health in low-income settings. He has published >250 peer-reviewed papers in this field. His research unit (Effective Care Research Unit) is accredited as a World Health Organization Collaborating Centre in Research Synthesis. His current and planned randomized trials include calcium supplementation before pregnancy to prevent pre-eclampsia; Upright posture and gentle assisted pushing for childbirth; and effects of contraceptive choice on HIV acquisition, side effects and contraceptive benefits.



Affiliation: Effective Care Research Unit, Universities of Witwatersrand and Fort Hare Eastern Cape Department of Health.

Publications

KAREN MARIE MOLAND

Karen Marie Moland is a social scientist with a background in nursing. She is a professor at the CIH with project and research experience from Kenya, Ethiopia and Tanzania focusing on implementation of global programmes in local health systems within reproductive and maternal health and prevention of mother to child transmission of HIV infections. Her main theoretical interest is medical anthropology, culture, knowledge and power and structural inequality. Her main methodological approach is ethnography. She has been heavily involved in research- and competence building collaboration with institutions in eastern Africa for the last 15 years through NOMA, NUFU and NFR programmes.



Publications

KJELL ARNE JOHANSSON

Kjell Arne Johansson is an Associate Professor in medical Bioethics with a particular interest and expertise in equity sensitive cost-effectiveness analysis. He has worked on priority setting and bridging theories of distributive justice in global health into practice. In his research he aims at measuring fairness concerns and incorporate this information into standard cost-effectiveness analyses. He has experience from mathematical modeling of interventions against HIV infection, climate change and diarrhea and pneumococcal vaccines. Recently he has worked on methods for extended cost-effectiveness analyses (ECEA) and priority weights.



Publications

MPUNDU MASAKA

Mpundu Makasa, lecturer at the Department of Public Health, School of Medicine, University of Zambia, was trained as a physician and with a Masters degree in Public Health and a PhD from CIH. The PhD research work was on “Epidemiological context of Sexually Transmitted Infections: Determinants, aetiological agents, trends over time and linkages to HIV transmission in Zambia”. She worked for many years in the primary health care system initially as a clinician and later as a district health planner at the District Health office in Lusaka. The main areas of interest are reproductive health, including sexually transmitted infections and HIV.



Publications

NITA BHANDARI

Nita Bhandari has extensive experience in and focuses her research efforts on community based studies aimed at developing and evaluating interventions that can enhance child health and nutrition. Nita is Director of CHRDS-SAS, India, a not-for-profit research organization. She also heads the Population Science Partnership Centre, a partnership between SAS (<http://sas.org.in>) and Translational Health Science and Technology Institute (<http://thsti.res.in>). She is an honorary Visiting Professor at the CIH, and Adjunct Faculty at Christian Medical College Vellore, India (www.cmch-vellore.edu) and THSTI.



Publications

SARMILA MAZUMDER

Sarmila Mazumder is a community health researcher with competence in the areas of child health and nutrition. She has extensive experience in program evaluation, designing and implementation of interventions in child health research. Her interest areas include health system and implementation research focussing on behavioural change to improve maternal, neonatal and child health. She is a Deputy Director of CHRDS-SAS and investigator in several research trials. She has research publications in international and national peer reviewed journals.



Publications

SUDHA BASNET

Sudha Basnet, conducted as the principal investigator a large hospital based clinical trial on therapeutic zinc for childhood pneumonia and was involved in the community based trial on zinc and pneumonia in Nepal in collaboration with the CIH. She is an Associate Professor of Pediatrics at the Institute of Medicine, Tribhuvan University, Nepal and currently a PhD fellow at the University of Bergen.



Publications

SUNITA TANEJA

Deputy Director, CHRDS-SAS. Dr. Sunita Taneja a PhD from All India Institute of Medical Sciences in New Dehli, is a child health researcher with extensive expertise in multiple facets of population based research including observational and intervention studies; design, implementation, analysis, community engagement and leadership. She has coordinated large multicentre trials. Her skills include protocol development, coordinating field, laboratory, data management and data analysis.



Publications

VICTORIA NANKABIRWA

Victoria Nankabirwa is a CISMALC researcher and senior lecturer at the School of Public Health, Makerere University. She has taught in several epidemiology courses at Makerere University, Uganda, the University of Bergen, at the Mailman School of Public Health, Columbia University, New York, USA, and the Department of Public Health, University of Zambia. She has worked in the fields of reproductive and child health, perinatal epidemiology, experimental epidemiology and epidemiologic methods.



Publications

WAKGARI DERESSA

Wakgari Deressa has more than 12 years of research experience in malaria, HIV/AIDS, adolescent health risk behaviors, reproductive health and major parasitic diseases with a focus on community-based studies aimed at developing and evaluating interventions that can improve maternal health and child survival. He has been active member of different multidisciplinary collaborative research and capacity strengthening projects particularly in partnership with the University of Bergen. He is a member of CISMAL, MalTrials and Occupational Health and Safety research projects. With a rank of Associate Professor in epidemiology and public health, Wakgari is the Dean of the School of Public Health at Addis Ababa University in Ethiopia.



Publications

GRANTS AWARDED

In 2013, the NIPH CISMAL project successfully competed for funding of € 2.2 mill. by securing an European Research Council Consolidator Grant (No: 617639 HEALTHMPOWER) to implement a large randomized controlled trial to improve maternal and child health through feedback interventions from a reproductive health registry in Palestine. This ERC grant application was developed with input from the CISMAL-funded Postdoc at NIPH under the hRHR initiative in collaboration with the WHO.

RESEARCHERS (Project Team leaders and members and affiliates of the Technical Advisory Group)

NAME	INSTITUTION	MAIN RESEARCH AREA
Bernt Lindtjørn	University of Bergen	Epidemiology and clinical sciences
Bertil Tungodden	Chr. Michelsen Institute, Norwegian School of Economics	Behavioural economics
Bjarne Robberstad	University of Bergen	Global Health priorities
Eskindir Loha	Hawassa University	Epidemiology
Frederik Frøen	Norwegian Institute of Public Health	Harmonization of data management
Halvor Sommerfelt	University of Bergen	Epidemiology
Ingvild Fossgard Sandøy	University of Bergen	Reproductive health and epidemiology
James Tumwine	Makerere University	Epidemiology
Jan Van der Broeck	University of Bergen	Epidemiology and nutrition
Justus Hofmeyr	University of Fort Hare	Obstetrics
Karen Marie Moland	University of Bergen	Anthropology
Mpundu Masaka	University of Zambia	Epidemiology
Nita Bhandari	Society for Applied Studies, University of Bergen	Epidemiology and anthropology
Ole Frithjof Norheim	University of Bergen	Global health priorities
Ottar Mæstad	Chr. Michelsen Institute	Economics and global health
Prakash Sundar Shrestha	University of Tribhuvan	Clinical paediatrics and epidemiology
Sarmila Mazumder	Society for Applied Studies	Epidemiology and anthropology
Sudha Basnet	University of Tribhuvan, University of Bergen	Epidemiology
Sunita Taneja	Society for Applied Studies	Epidemiology
Thorkild Tylleskär	University of Bergen	Clinical paediatrics and epidemiology
Tor Strand	University of Bergen	Epidemiology and nutritional science
Victoria Nankabirwa	University of Bergen, Makerere University	Epidemiology
Wakgari Deressa	University of Addis Ababa	Epidemiology and Public Health

EXECUTIVE COMMITTEE

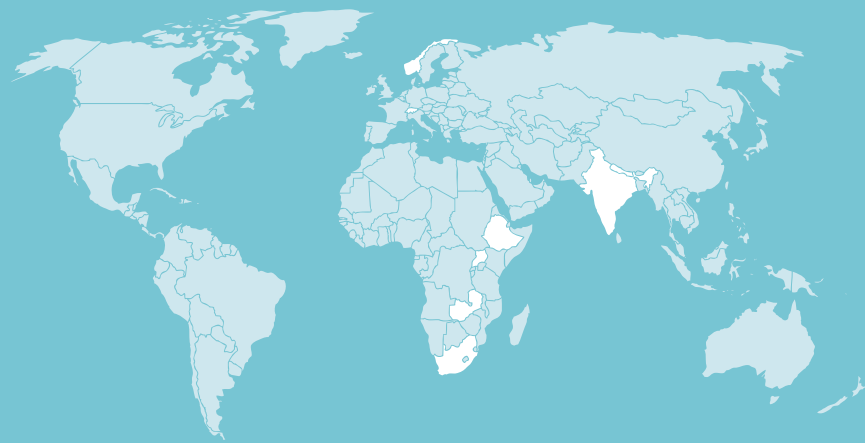
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Ingvild Fossgard Sandøy	University of Bergen	Deputy Director
José Martines	University of Bergen	Scientific Coordinator
Maharaj K. Bhan	University of Bergen, Indian Institute of Technology Delhi	Chair of Technical and Advisory Group

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NAME	INSTITUTION	ADMINISTRATIVE AREA
Ingvild Hope	University of Bergen	Research administration
Marte Haaland	University of Bergen	Coordinator
Sumathi Subramaniam	University of Bergen	Acting Administrative leader
Therese Istad	University of Bergen	Web and communication
Øyvind Mørkedal	University of Bergen	Economy



TOWARDS A BRIGHTER FUTURE FOR MOTHERS AND CHILDREN



CENTRE FOR INTERVENTION SCIENCE IN MATERNAL AND CHILD HEALTH (CISM MAC)

is anchored at the Centre for International Health (CIH), University of Bergen, Norway. CISM MAC is a consortium of CIH and research institutions in Ethiopia, India, Nepal, South Africa, Uganda and Zambia. The consortium also includes Chr. Michelsen Institute, the Norwegian Institute of Public Health and collaborates closely with the World Health Organization.

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