Maternal, Child and Reproductive Health Initiative

The Maternal, Child and Reproductive Health (MCRH) Initiative works in developing countries to improve the health of the most vulnerable women, children and adolescents within the framework of the Agenda for Sustainable Development (SDGs). We work in many areas, including malaria in pregnancy, the causes of maternal mortality, human papillomavirus (HPV) infection, the impact of HIV/AIDS on women’s and children’s health and maternal immunisation, paying particular attention to inequalities. Our working model is based on the translation of scientific evidence generated by research to concrete actions undertaken to inform and influence policy and to train health professionals in various countries.

It is essential to maintain the focus on the maternal and child health agenda defined by the Sustainable Development Goals (SDG, 2016-2030). Despite improvements in women’s and children’s health over the last decade, both groups still face disproportionate inequalities in access to quality health care. For many women in the developing world, pregnancy and childbirth are particularly frightening and dangerous times in their lives, when illness and even death happen all too frequently. This not only affects women but also their families and communities. However, solely addressing the direct obstetric causes of maternal mortality is not enough. Taken together HIV/AIDS, malaria and tuberculosis are among the leading causes of maternal mortality in low- and middle-income countries.

Moreover, one of the problems which continues to hamper progress in the reduction of maternal and child mortality in developing regions is the lack of reliable data on the levels and causes of mortality.

Carrying out a complete diagnostic autopsy, the gold standard for determining the cause of death, is not feasible in many settings, not only because of the technical expertise required but also because cultural mores or religious beliefs lead people to refuse consent. Thus, other more practical tools for cause of death need to be developed.

Every year 287,000 women die from complications related to pregnancy, childbirth, and postpartum, most of them preventable.
Maternal mortality ratio (per 100,000 live births), 2015

Over 80% of all births occur in countries where maternal cause of death data do not exist or are incomplete.

Pregnant women are twice more likely to die from malaria than other adults.

ISGlobal has a long tradition history in malaria research. In recognition of the institution’s work and achievements in the field, ISGlobal was officially designated a World Health Organisation (WHO) Collaborating Centre for Malaria Control, Elimination and Eradication, in 2013.

Malaria in pregnancy
Malaria infection during pregnancy is one of the main contributors to both maternal and neonatal mortality, mostly as a result of low birth weight and prematurity, and also due to maternal anaemia or maternal malaria infection (placental parasitaemia). As a result, an estimated 10,000 women and 200,000 infants die every year in Africa. Research undertaken in this area includes:

- An evaluation of the safety and efficacy of alternatives to sulfadoxine-pyrimethamine for Intermittent Preventive Treatment during pregnancy (IPTp).
- A study of the epidemiological and clinical features of Plasmodium vivax malaria in pregnancy.
- Studies of the cost-effectiveness of malaria control interventions in infants and pregnant women.
- The implementation and evaluation of Intermittent Preventive Treatment in Infants (IPTi), a cost-effective strategy for preventing malaria in the first year of life. The findings of this research led the WHO to recommend the implementation of IPTi in malaria endemic areas.
- Operational research on mechanisms for the delivery of IPTp in malaria-endemic countries aimed at improving the coverage of this preventive treatment.
- Pharmacosurveillance studies and research on possible interactions between antimalarial and antiretroviral drugs in children and pregnant women.

Causes of maternal mortality
The Initiative has undertaken the largest necropsy study of maternal deaths in Africa and a multi-centre study to design and assess minimally invasive autopsy techniques for determining cause of death that could provide a feasible alternative to complete autopsies. We also belong to the CHAMPS child health surveillance network.

Human papillomavirus vaccine
ISGlobal has collaborated with the Manhiça Health Research Centre and the Ministry of Health of Mozambique on a pilot demonstration project, in preparation for the implementation of a national HPV vaccination programme, and has undertaken studies on the acceptability, feasibility and economic implications of such programmes.

Maternal immunisation
Maternal immunisation offers an exceptional opportunity to protect pregnant women and their babies from diseases that cause substantial morbidity and mortality. ISGlobal aims to determine the burden of vaccine-preventable diseases that affect pregnant women and their infants in preparation for the evaluation of vaccines during pregnancy in resource poor settings.

Inequalities in maternal and reproductive health
As part of the effort to achieve universal health coverage and in the context of the SDG targets for maternal and neonatal health, we generate evidence on inequalities in access to quality health care services and on the factors contributing to such inequalities in low-income settings.
Since 2012, we have participated in the meeting of the WHO Evidence Review Group on malaria in pregnancy, convened by the WHO Global Malaria Programme (GMP), to review the evidence and to develop and update specific prevention guidelines for malaria in pregnancy.

ISGlobal advocates for equity and quality care in MCRH, pushes for R&D to address knowledge gaps and promotes the design of evidence-based programmes and policies, which are key to improving the quality of care for pregnant women with malaria. As part of this work, we participated in a work group set up by the WHO to review the evidence on malaria in pregnancy outside of Africa and to develop specific prevention guidelines for those regions.

The initiative has established and participates in various alliances of stakeholders who share common areas of focus in MCRH, including the UN Secretary General’s health initiative for women, children and adolescents (Every Woman Every Child), the Partnership for Maternal, Newborn & Child Health (PMNCH), and the Malaria in Pregnancy working group of the Roll Back Malaria Partnership.

ISGlobal also participates in decision-making forums and helps to raise awareness and inform the public debate by regularly producing policy papers and case studies, particularly on the link between inequity and maternal and child health.
ISGlobal coordinates various training programmes, capacity building workshops and academic courses on MCRH, with the support of the University of Barcelona and in collaboration with other academic and research centres. Upgrading the technical knowledge and leadership skills of key players in the field of MCRH who come from high burden countries is one of the Initiative’s key priorities. Examples of the Training and Education Programme’s activities include:


- A module on Maternal and Reproductive Health is included in the Master of Global Health, co-organised by ISGlobal and the University of Barcelona.

- Short courses on “Maternal and Reproductive Health and Nutrition” and “Food Security from the Global Health Perspective”, in collaboration with Médicos Sin Fronteras-Spain.

- Training of health and education professionals in Mozambique, for example, in preparation for the future nationwide implementation of the HPV vaccine supported by “la Caixa” Foundation.

- Training of researchers at PhD level.
Cervical cancer is the second most common cancer in women worldwide. 99% of maternal deaths occur in developing countries (sub-Saharan Africa and South Asia) and in the most vulnerable groups of women.
ISGlobal’s mission is to promote health equity through excellence in research and the translation and application of knowledge. Our vision is a world in which all people can enjoy good health.

ISGlobal Initiatives

- Antibiotic Resistance
- Chagas
- Malaria Elimination
- Maternal, Child and Reproductive Health
- Urban Planning, Environment and Health