A new global consensus has been agreed on the key evidence-based interventions that will sharply reduce the 358,000 women who still die each year during pregnancy and childbirth and the 7.6 million children who die before the age of 5, according to a massive, three-year global study. The study, **Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health,** is designed to facilitate decision-making in low- and middle-income countries about how to allocate limited resources for maximum impact on the health of women and children.

The study reviewed more than 50,000 scientific papers to determine the proven effectiveness of interventions and impact on survival, identifying 56 essential interventions that when implemented in "packages" relevant to local settings, are most likely to save lives. The study is released today by the World Health Organization (WHO), the Aga Khan University and The Partnership for Maternal, Newborn & Child Health (PMNCH).

Some of the interventions include:

- Managing maternal anemia with iron;
- Preventing and managing post-partum hemorrhage;
- Immediate thermal care for newborns;
- Extra support for feeding small and preterm babies;
- Antibiotics for the treatment of pneumonia in children.

"What is new," says Dr. Elizabeth Mason, Director of WHO's department of Maternal, Newborn, Child and Adolescent Health, and an author of the study, "is putting together information in a different way and building consensus among physicians, scientists and professional organizations to lay out an evidence-based path to help women before, during and after birth and their children. Everyone now agrees on the 56 essential interventions."

Suitability for low- and middle-income countries

The first step was a global landscape analysis of what countries and the 440 PMNCH partners were doing to reduce maternal and newborn deaths.

"What came back was a hodge-podge," says Dr. Zulfiqar Bhutta, Founding Chair of Women and Child Health at the Aga Khan University, Pakistan, who headed the study team. “PMNCH partners had very different ideas of what should be undertaken.”

In all, 142 interventions were assessed for their effectiveness and impact on survival by addressing the main causes of maternal, newborn, and child mortality. Drs. Bhutta and Mason and their team also studied the intervention suitability for use in low- and middle-income countries.

They asked what health and outreach workers with limited training could handle at the community level where specialized care is not available. They identified what could be handled in community settings by nurses, midwives and workers with more training.

They also identified which patients need to be referred to hospitals where physicians and emergency care are available.

After very extensive consultation and review by a wide group of experts, the list was honed down to 56 essential interventions, accompanied by brief guidelines and reference materials.

"We now have a clear consensus, critical for the survival of women, their infants and children," says Dr. Carole Presern, Director, of The Partnership for Maternal, Newborn & Child Health. "This was a meticulous effort involving many partners. It is truly a landmark moment in advancing the health of women and children."

Maternal and Child Deaths Still a Problem

Though considerable progress has been made toward reducing maternal, infant and child deaths, many countries in Africa and India will fall short of the United Nation's Millennium Development Goals 4 & 5, which aim to reduce child deaths and improve maternal health.

Sub-Saharan Africa and south Asia, which have the highest maternal and child death rates, have made some progress, but not enough to meet the Millennium Development Goals by 2015.

More than half of maternal deaths are caused by excessive bleeding (35%) and hypertension (18%).

A child's greatest risk of dying is during the first 28 days of life, accounting for 40% of all deaths among children under the age of 5. Half of newborn deaths occur during the first 24 hours and 75% during the first week of life, with preterm birth, severe infections and asphyxia being the main causes.

A Guidance Document

The underlying thrust of "Essential Interventions" is to support low- and middle- income countries to meet the Millennium Development Goals 4 & 5. It gives policy makers a way to make informed choices on how to set priorities and where to put their funds and resources, guided by a list of absolutely critical interventions.

“These are not instructions,” says Dr. Mason. “This is a guidance document. The list also gives PMNCH partners, depending on their focus, a way to support country efforts.”

The interventions are classified according to three levels:

1. care that can be provided at the community level by community health workers, outreach

workers, and volunteers with limited training;

2. primary care, also delivered in the community at a clinic by professionals – nurses, midwives, community health workers—with more training;

1. referral care provided by physicians and skilled nurses and midwives in a hospital able to do Caesarean sections and provide emergency care.

The interventions are also classified according to six target groups:

- adolescent and pre-pregnancy
- pregnancy (before birth)
- childbirth
- postnatal (mother)
- postnatal (newborn)
- infancy and childhood.

In addition to identifying the interventions, the document provides clear guidance on what is needed in terms of training and equipment. For example, if newborns are not breathing, resuscitation equipment is needed.

“I’m sure that this research will help to reduce deaths among mothers, newborns and children and will help direct funds and resources to concerted action based on the best evidence for impact,” says Dr. Bhutta.

PMNCH, which has 440 partners, including countries, UN and multilateral agencies, non-governmental organizations, health groups, foundations, academic and research institutions, and the private sector, will distribute this essential list through its global network and actively advocate for its use. A condensed version on a simple, hand-held slide ruler for instant reference is currently under development.