

# Technical Reference Team

## Commodity: Magnesium Sulfate

### Background

The UN Commission on Life-Saving Commodities for Women and Children (the Commission) was formed in 2012 by the UN Secretary-General as part of the global Every Woman, Every Child (EWEC) movement. EWEC challenges the global community to increase access to and appropriate use of essential medicines, medical devices, and health supplies that effectively address the leading preventable causes of death during pregnancy, childbirth, and childhood.

Led by a wide range of high-level leaders from around the world, the Commission developed a framework for action on Reproductive, Maternal, Newborn, and Child Health (RMNCH) products that can be applied nationally and utilized in global RMNCH initiatives. The framework outlines a priority list of 13 commodities, key barriers to access and use, and 10 cross-cutting recommendations to rapidly increase both access and use. By increasing access to and use of these 13 commodities, it is estimated that 6 million women and children can be saved by 2017.

### Moving forward

To help carry forward the Commission's recommendations at the global and national levels, Global Technical Reference Teams (TRT) were established. One group was formed for each of the 13 commodities and 10 recommendations, and an advocacy working group is dedicated to advancing cross-cutting goals. The groups carry out their work through a variety of mechanisms, including guidance documents and tools to support countries in their efforts to implement recommendations and address global and regional bottlenecks. The TRTs are coordinated by a Strategy and Coordination Team hosted by the United Nations Children's Fund (UNICEF).

### Spotlight on Magnesium Sulfate

Preeclampsia/eclampsia is the second leading cause of maternal death. Pre-eclampsia is usually characterized by elevated blood pressure accompanied by the presence of protein in urine, and usually occurs during the second half of pregnancy. The condition can lead to



PATH/Evelyn Hockstein

A pregnant woman visits an antenatal clinic in Nigeria, where her blood pressure is monitored by a nurse. High blood pressure is a common way to detect pre-eclampsia and eclampsia, the second-leading causes of maternal deaths globally.

seizures (eclampsia), kidney, liver and brain damage, and death if left untreated. Harm or death to the baby is also common. Delivered through an injection into the vein or muscle, magnesium sulfate is the most effective, safe, and affordable medicine to prevent and treat eclampsia. Despite its low cost and minimal side effects, barriers to access and appropriate use exist, including: fears about drug safety, uncertainty about dilution and dosing, a lack of skilled providers to administer, and the availability of multiple presentations.

The Maternal Health Technical Reference Team (MH TRT) works to increase the appropriate use of quality oxytocin, misoprostol and magnesium sulfate, as well as to improve access and use by reducing key barriers in EWEC countries. The MH TRT's objectives are to:

- Improve forecasting and quantification;
- Achieve an adequate supply of quality commodities available where needed;
- Improve and adopt practices and policies for safe use; and
- Advance innovations such as simplified packaging and presentation, as well as heat-stable formulations and easier to use modalities.

The MH TRT's seven subgroups offer expertise to advance specific work streams related to one of the three maternal health commodities or cross-cutting issues.

### Group membership

The lead conveners of the MH TRT are the US Agency for International Development (USAID) and the United Nations Population Fund (UNFPA). The subgroup conveners include: Tools-Systems for Improved Access to Pharmaceuticals and Services program led by Management Sciences for Health; Mapping of manufacturers-Concept Foundation; Increasing use of magnesium sulfate-Accelovate and MCHIP/Jhpiego; Oxytocin in the cold chain-USAID; Improved uptake and use of WHO guidelines and recommendations-PATH; Misoprostol on Essential Medicines Lists (EML)-Venture Strategies Innovation; and Commodity Security- John Snow, Inc.

### Progress to date

The MH TRT has developed numerous tools and resources that can be used to address issues relating to the three commodities. These include fact sheets on quantification, forecasting, product use, demand, and quality tools. The fact sheets describe key characteristics of each tool and include the purpose, expected outcome, type, and format of the tool. The fact sheets also outline the resources required to use the tools and the tools' available languages.

Additionally, the MH TRT produced a literature review, "Barriers to Use of Magnesium Sulfate for Pre-eclampsia and Eclampsia Management in Low-and Middle-Income Countries," and a supporting presentation. It also released results of an informal survey outlining barriers to the availability and appropriate use of magnesium sulfate. In addition, the group is leading efforts to focus on production and use of a standard presentation of magnesium sulfate, 5 g in 10 mL (50% solution).

### Upcoming activities

During the next two years, the MH TRT will:

- Develop a knowledge translation methodology that will be used in three pathfinder countries to increase the safe and appropriate use of magnesium sulfate, misoprostol, and oxytocin;
- Assist with the development of a cross-cutting, multi-level implementation strategy for improving adherence to World Health Organization (WHO) guidelines related to maternal health commodities;
- Work with the WHO, UNFPA, UN Children's Fund, Concept Foundation, and (Partnership for Supply Chain Management (PFSCM) to align manufacturers, producers, and donors on a standard presentation for quality magnesium sulfate products;
- Develop quality assurance tools; and
- Collaborate with Recommendation 10 TRT on simplified packaging and presentation for magnesium sulfate.

### Available resources

The MH TRT offers the following technical assistance to pathfinder countries, including:

- Assisting countries to adapt tools that facilitate quantification, forecasting, use, demand, and quality of maternal health commodities;
- Reviewing the current procurement practices for magnesium sulfate with the goal of ensuring that only one presentation is used in each country;
- Identifying barriers to—and enablers of—implementing WHO guidelines;
- Assisting countries with developing implementation plans to address issues highlighted through evaluation efforts; and
- Establishing commodity security committees related to reproductive, maternal, newborn and child health.

### Contact us

For more information or to request tools and technical assistance, please contact Deborah Armbruster, USAID ([darmbruster@usaid.gov](mailto:darmbruster@usaid.gov)), or Jagdish Upadhyay, UNFPA ([upadhyay@unfpa.org](mailto:upadhyay@unfpa.org)).