



AMY FOWLER/USAID

EXECUTIVE SUMMARY

The U.S. Agency for International Development's (USAID's) 2015 Health Related Research and Development Progress Report provides a final update of a 5-year strategy. In response to Public Law 112-74 in 2011, the USAID Bureau for Global Health introduced its 5-year strategy on health-related research and development and outlined the Bureau's process to support uptake of global health products and interventions. This report is subdivided by operating units and provides progress updates to key health research goals specific to each unit. Highlights of this year's report include advances in the following areas:

Ending Abuse and Disrespect in Health Services: Abuse and disrespect during maternity care has been documented and observed globally. Women who choose to give birth at home without a skilled healthcare provider, as a result of having experienced or heard about abuse and disrespect, are more likely to suffer complications, as are their newborns. A research study in Kenya drawing on host-country leadership and parallel advocacy led to a **35 percent reduction in disrespectful maternity care and the development of a World Health Organization (WHO) statement** on the prevention

and elimination of abuse and disrespect during facility-based childbirth. Evidence gathered from these studies is also driving scale-up efforts in Kenya and Tanzania with active engagement and interest from several other countries.

Treating Newborn Sepsis: Infections in newborns, which can rapidly progress to life threatening conditions, can be effectively managed through timely treatment with antibiotics. Infections are among the leading causes of newborn death in developing countries, accounting for 420,000 annual deaths. Studies in South Asia and Africa document that 68 percent to 98 percent of families do not go or cannot access hospital-based inpatient care. USAID and partners supported research that **demonstrated the safety of a combination of injectable and oral antibiotics delivered by trained health workers in lower level health facilities.** Drawing on this research, a newly released WHO policy recommends hospitalization as best but also advises governments that newborns can be safely treated with antibiotics as outpatients. Ongoing implementation research and evaluation is guiding safe introduction and adaptation in countries such as Bangladesh.



Developing Effective and Affordable Medicines for the Treatment of Malaria:

USAID contributes to the drug development pipeline through its support for the Medicines for Malaria Venture. Two novel classes of malaria drugs (OZ439 and KAE609) that have been shown to be efficacious as single-drug treatments have entered late-stage clinical trials in combination with partner drugs. **These new treatments offer the greatest hope for an alternative to artemisinin-based combination therapies.** MMV048, another novel antimalarial compound and the first antimalarial molecule discovered by an African-led team, entered early-stage clinical trials.



Addressing Behaviors that Affect Family Planning:

To address norms affecting family planning, including child marriage and gender-based violence, community-based interventions showed that girls who were offered conditional livestock transfers were 50 percent and 66 percent less likely to marry before the age of 18 in Ethiopia and Tanzania, respectively. In northern Uganda, community-based interventions tailored to life stages **reduced gender-based violence by 16 percent and in-**

creased use of voluntary family planning by 10 percent. USAID is working with policymakers and program managers to tailor these community-based behavioral interventions to target adolescents.



Advancing Understanding around Malnutrition, Birth, and Growth Outcomes:

Preventing stunting requires a deep understanding of how nutritional supplementation affects the “1,000 days” between pregnancy and a child’s 2nd year. USAID-supported studies in Malawi and Bangladesh are examining the effects of lipid-based nutrient supplements and micronutrient powders alongside other health interventions for pregnant women and children under 2. Initial findings from Malawi have **resulted in five high-impact journal publications this year**, with several more anticipated. These studies are contributing to the global evidence base on the impact of nutrition-specific interventions on birth outcomes and child growth and will shape the direction of programming and investments by USAID and the global community.



Developing New Tools for Women-initiated HIV Prevention:

Given that women and girls account for more than half of the 34 million people living with HIV worldwide, USAID continues to prioritize research toward the long-term goal of developing a range of options for women to protect themselves from HIV. A pivotal USAID-supported **study indicated that the dapiv-**

irine vaginal ring has strong potential as one such tool, while USAID also continues to advance ideas for other prevention products for women, including lower-cost tablets, injectable agents, and biodegradable implants.



Advancing the Foundation for an HIV Vaccine:

USAID continues to support the exploration of genetic, viral, and immunological correlates that may be capable of blocking the virus. Efforts are ongoing to further characterize antibodies isolated from an ongoing research study, which is the largest longitudinal study of HIV infection among Africans. It has **enabled the landmark discoveries of new broadly neutralizing antibodies**. This body of work will lead to an improved understanding of envelope immunogens, which are thought to be critical for an HIV vaccine.



Advancing Rapid Diagnosis of Tuberculosis (TB):

USAID-supported modeling studies provide policymakers with information vital to selecting cost-effective diagnostic tools to improve patient outcomes and limit transmission of TB. Using a novel approach called “virtual implementation,” these studies link transmission modelling with operational modelling. Working in close collaboration with the National TB Program in Tanzania, the modeling study evaluated the impact of alternative diagnostics on patients, health systems, and the population. The study **identified three strategies as cost-effective in Tanzania**, including 1) the full

scale-up of GeneXpert; 2) same-day use of LED fluorescence microscopy; and 3) targeted use of GeneXpert for diagnosis of presumptive TB cases with HIV infection.



Strengthening Health Systems:

Health system failures, especially in low- and middle-income countries with weak economies, contribute to preventable morbidity and mortality. USAID is working with the United Nations Children’s Fund (UNICEF) to address this issue by **developing a tool that estimates the impact of health system strengthening on lives saved** at the country level. These estimates will allow donors and countries to make more evidence-based investments.



Innovation to Respond to the Ebola Crisis:

While personal protective equipment (PPE) offers critical protection, it can also be a great source of discomfort and stress for healthcare workers. In hot climates like the areas stricken by Ebola in West Africa, PPE cannot be worn for more than 40 minutes, severely limiting the amount of time healthcare workers can care for patients. To help workers on the front lines provide better care and stop the spread of Ebola, USAID and partners developed the Fighting Ebola Grand Challenge for Development – a program that **enabled innovators from the global community to quickly identify and deliver practical and cost-effective solutions**, while forging the public-private partnerships necessary to test and scale up these solutions.