Development of Obstetric Ultrasound Service Delivery Assessment Tools in the Context of the Zika Virus Epidemic in Five USAID Priority Countries

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Background

Maternal and Child Survival Program. The Maternal and Child Survival Program (MCSP) is a global U.S. Agency for International Development (USAID) cooperative agreement to introduce and support high-impact health interventions in 24 priority countries. MCSP engages governments, policymakers, private sector leaders, health care providers, civil society, faith-based organizations and communities to adopt and accelerate proven approaches to reduce major preventable causes of maternal, newborn and child mortality by improving coverage and quality of health services along the household to hospital continuum.

USAID Applying Science to Strengthen and Improve Systems (ASSIST). The objective of the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project is to improve the quality and outcomes of health care and other services by enabling host country providers and managers to apply the science of improvement. As part of the Zika virus epidemic emergency response, ASSIST is providing intensive assistance to the Ministry of Health in five countries – the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Activities supported include: conducting a baseline assessment of the quality of Zika-related care, revising Zika-related clinical guidelines, training health care providers on counseling skills, and improving Zika-related clinical processes.

Zika Virus and Obstetric Ultrasound. The most recent outbreak of Zika Virus (ZIKV) began April 2015 in Brazil and has spread to the majority of countries in Latin America and the Caribbean (LAC). Emerging in vertebrate and epidemiologic evidence has indicated a strong link between ZIKV infection in pregnancy and severe adverse effects on fetal development, some of which may be detected during obstetric ultrasound. However, it is unknown whether obstetric ultrasound services and referral networks have adequate capacity to detect and appropriately refer suspected cases of Congenital Zika Syndrome (CZS) in LAC.

Assessment Rationale. As part of ongoing quality improvement (QI) activities undertaken by USAID ASSIST (Guatemala, El Salvador, Dominican Republic, Honduras) and Haiti SSQH, we aimed to develop tools to assess capacity of obstetric ultrasound service delivery settings to detect features of CZS, with the ultimate goal of improving care and referral pathways in-country.

Methods

A multi-disciplinary group of maternal-fetal medicine specialists, ultrasonographers, and global health technical and program advisors met in September 2016 to design content for a mobile assessment tool.

The tool was translated into Spanish and French and adapted to a mobile-based system using SurveyCTO, which allows collection of answers to closed end questions, free text responses, and photos.

The tool was piloted in Haiti in December 2016 and revised in January 2017 based on pilot team experience.

Results

Four surveys were developed for the assessment:

- Ultrasound equipment/environment of care;
- Ultrasound provider capacity;
- Service delivery observation; and
- Client volume/referral patterns.

Content includes ultrasound equipment, infection control, capacity for fetal biometry/anatomic survey (including features associated with CZS), provider training/certification, obstetric ultrasound referral pathways, and other assessments to better understand care and referral of pregnant women with suspected and confirmed ZIKV infection.

Conclusions

- Tools are currently in use in five countries and results will inform recommended referral pathways for pregnant women with suspected and confirmed cases of ZIKV infection.
- Surveys will continue to be updated based on user experience as part of ongoing QI programs.
- Ultimately, these tools will be available in a variety of settings for use by Ministries of Health and/or Social/Welfare for adaptation as a supervision checklist and use outside of this program.

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