More than 18 million women are living with HIV worldwide and an estimated 760,000 are infected with HIV each year. Tuberculosis (TB) is the leading cause of death among people living with HIV (PHLV) and poses an especially serious risk to pregnant and breastfeeding women and their children. However, with life-saving antiretroviral treatment (ART) and appropriate TB screening and treatment, women with HIV can live long, healthy lives. In order to ensure that women and their children can routinely access HIV and TB services, it is critical that HIV service-delivery models are tailored to meet the needs of pregnant and breastfeeding women.

As part of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the U.S. Centers for Disease Control and Prevention (CDC) is a leading agency in the care and treatment of HIV-positive pregnant and breastfeeding women, working hard to provide ART and TB services to mothers and their infants through patient-centered models of care that provide quality and respectful holistic care. Below are two projects that highlight this approach to comprehensive patient-centered services.

Adaptation of the Community Score Card Approach in Malawi
Retention in care is critical to the success of programs to prevent mother-to-child transmission (PMTCT) and HIV-related morbidity and mortality. Data from recent studies show that retention of pregnant and breastfeeding women on ART remains low, hovering between 50-73 percent, with retention dropping even further in postnatal care. Originally developed by CARE in Malawi, the Community Score Card (CSC) is a participatory governance approach, which engages community members, service providers, and district officials to improve service delivery. The CSC uses a score-card methodology to facilitate dialogue and identify solutions to the perceived barriers with health service delivery and utilization. In partnership with CARE, CDC and its partner, the Elizabeth Glaser Pediatric AIDS Foundation, have adapted the CSC to PMTCT settings across 11 sites in Malawi. The project will be evaluated on measures of improvement in maternal retention on ART and uptake of early-infant HIV testing. In addition, CDC will measure the cost-effectiveness of using this community engagement approach to achieve patient health outcomes.

Household and Family-Centered Approach to Improve TB and HIV Screening, Diagnosis, and Linkage to Care: CDC experts from TB and PMTCT programs are working together in Uganda to develop family-centered TB contact tracing. The World Health Organization (WHO) recommends contact tracing in order to find, treat, and prevent additional cases of TB; however, it is not routinely done in resource-limited settings. In a country like Uganda that has a substantial burden of undiagnosed TB and a high HIV prevalence among people with TB (45 percent), it is important to find and treat all people co-infected with TB and HIV to prevent morbidity and mortality. This project will identify “index cases,” including pregnant and breastfeeding women with TB disease, who may have family members with TB and/or HIV. Community health workers will be sent to their households to screen, test, and treat all family members, as needed.

Understanding Women’s Preferences for HIV Services
To better understand the needs and preferences of women attending PMTCT clinics in Ethiopia and Mozambique, CDC and its partners conducted implementation research using a novel approach called a discrete choice experiment. These data showed that for HIV-positive women, the two most important aspects of health facilities providing HIV care were (1) respectful care by providers and (2) access to non-HIV health services in the same visit. CDC is now working with country staff in multiple countries to identify strategies for promoting respectful care, improving patient engagement, and providing integrated healthcare services within PMTCT programs.
In a number of countries, CDC and its partners have implemented programs engaging mothers living with HIV (known as “Mentor Mothers”) who understand the needs of HIV-positive people and their families. The Mentor Mothers are trained to encourage, educate, and empower HIV-positive pregnant women and new mothers about their health and their babies’ health, helping to facilitate their retention in the PMTCT program.

**Future Efforts**

CDC is committed to continuously improving the quality of HIV services to ensure the health of mothers and families. Understanding the needs and preferences of women accessing HIV services in antenatal and postpartum care settings is a critical component of improving patient engagement and satisfaction – and, ultimately, for improving retention in lifelong ART services and helping mothers lead healthy and productive lives. CDC will continue to conduct operational research to identify how novel strategies for improving patient satisfaction contributes to improved clinical outcomes.

CDC will strive to provide family-centered HIV care, which is comprehensive and coordinated, addresses the needs of adults and children in a family, and attempts to meet social care needs directly or indirectly through strategic partnerships and linkages.

**Benefits of Our Work**

CDC’s work is built on the backbone of science – relying on scientific evidence to create efficient and effective methods to treat and prevent HIV. By significantly increasing the number of mothers and children on life-saving ART, families are supported to live longer, healthier lives. CDC has been a forerunner in providing life-long ART to pregnant and breastfeeding women and, through PEPFAR, continues to provide care and treatment services to these populations, while increasing the clinical capacity of local health systems around the world.