**Communicate**

The Evolution of Botswana’s Approach to the Prevention of Mother-to-child Transmission (PMTCT) of HIV: A Critical Analysis

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**Issues**

- Despite the availability of effective interventions, most childhood HIV infection occurs via vertical transmission.
- Without intervention, 30% of babies born to HIV-positive mothers will be infected.
- In 2003, 1 in 3 pregnant women in Botswana were HIV-positive.
- Nearly 100% of pregnant women in Botswana received antenatal care and deliver in a health facility.
- The government of Botswana introduced PMTCT services in 1999; however, by 2003 the PMTCT program’s uptake was only 30%.
- By 2007, uptake had dramatically increased to 85% and vertical HIV transmission had been reduced to under 4%.

**Description**

- Qualitative analysis of PMTCT service delivery in Botswana using the care delivery value chain (CDVC)
- A CDVC maps the sequence, organization, and interdependence of discrete activities required to deliver care
- The CDVC for PMTCT can be divided into six stages of primary activities
- Three sets of activities (Inform and Communicate, Measure, and Access) integrate the six stages essential for a successful outcome
- The PMTCT CDVC demonstrates the need for integrated health services, from HIV prevention to child development.

**Key Interventions**

- Lay counselor training and pre-test, group counseling eased burden on health workers
- Opt-out HIV testing policy enabled routine HIV testing of pregnant women at ANC which increased uptake
- Rapid HIV testing provided same day results and minimized issues to follow up
- Increased linkage of positive HIV diagnosis with CD4 cell count improved access to timely ART

**Lessons Learned**

- Patterns of Success
  - Strong political leadership and sustained political will underlie the program’s success
  - Integration with reproductive health services encourages participation and adherence, and creates value through shared delivery infrastructure
  - Strategic policy changes should be informed by clinical research and program evaluation
  - Monitoring and testing efficiencies allow for improved data collection and communication

**Next Steps**

- Perform additional case studies examining PMTCT service delivery in resource-limited settings
- Identify key strategic and operational decisions related to infrastructure, financing, and information transfer
- Reveal patterns critical to PMTCT program success
- Create a model of PMTCT service delivery that may serve as a tool for policymakers and practitioners in low and middle-income countries

**Ongoing Challenges**

- Lack of integration with downstream child health services created difficulties
- Incomplete follow up of HIV exposed infants
- High rates of morbidity and mortality from diarrheal disease and malnutrition among HIV-exposed infants receiving replacement feeding were linked to water contamination following flooding and interruptions in the supply chain of infant formula

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**Care Delivery Value Chain of Patient Activities for Prevention of Mother-to-Child Transmission of HIV**

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