

## Scale up the provision of comprehensive PMTCT services, using the Linked Response approach in Cambodia

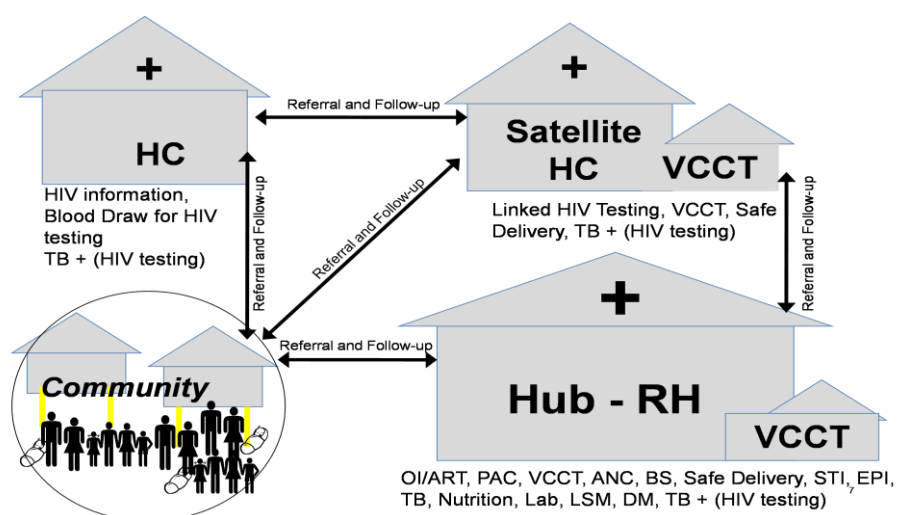
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### Introduction

In 2010, only 35% of pregnant women were tested for HIV and 48% of HIV pregnant women received antiretroviral drugs to prevent mother-to-child HIV transmission (PMTCT) worldwide. In Cambodia, HIV was first found in 1991. The HIV prevalence was 2.4% in 1999 and it decreased to 1.1% in 2006. Overall access to and uptake of HIV testing for PMTCT was low and access to ARV for PMTCT very limited for most pregnant women (PW) at that time. The Linked Response (LR) approach was then launched to integrate PMTCT into maternal and child health services. A pilot or demonstration project of LR was conducted in 5 operational districts (OD) in 2008-2009. Following the successful results from the demonstration project, the Ministry of Health (MoH) decided to scale up this approach to the other ODs nationwide. However, up to present, there has been no evaluation of the scaling up of LR in Cambodia.

Figure 1: Patient flow through local health facilities in the LR approach



Source: Standard operational procedures of Linked response. NCHADS. MoH. 2007

## **Objectives**

The specific objectives of this paper are the following: 1) to describe the scaling up process; 2) to analyze routine data collected from LR sites from 2008 to 2011, and show its evolution; 3) to analyze HIV prevention of mother to child transmission (PMTCT) data at national level from 2008 to 2011.

## **Methods**

A descriptive analysis of routine data collected at LR sites from 2008 to 2011 was conducted to show the evolution between data from the LR demonstration (2008-2009) and data from 2009 to 2011 after the LR was scaled up. Then, a descriptive analysis of PMTCT program data including all PMTCT sites at national level between 2008 and 2011 was conducted. Finally, existing document from National Centre for HIV/AIDS Dermatology and STDs (NCHADS), Ministry of Health and other relevant national documents were also reviewed in order to describe the LR. Estimates of target populations were those used by the national maternal and child health program: The number of expected pregnant women was calculated for each operational district using estimated provincial crude birth rate provided by the National Health Statistics and extrapolated from the last Demographic Health survey (2005 multiplied by estimated district population (from the last census). This estimation was used as a denominator to calculate the coverage of HIV testing among pregnant women. The number of expected HIV positive pregnant women was estimated at national level, using the total number of expected pregnant women multiplied by the HIV prevalence for each year. HIV prevalence was at revised on a continuous process. This estimation is used as denominator for calculations of HIV positive pregnant women and exposed infants receiving anti-retrovirals.

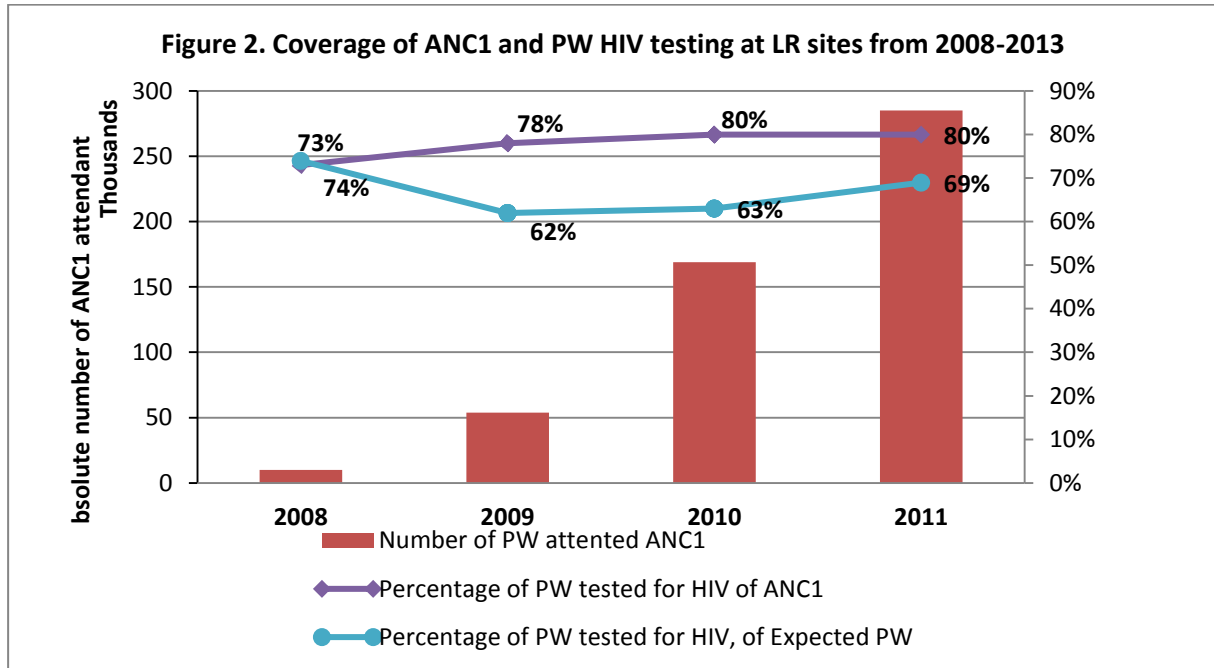
## **Results**

### **1. Scaling up the Linked Response approach**

The number of sites where the LR was scaled up increased very fast by collaboration of NCHADS with National Center for Mother and Child Health (NMCHC) of MoH. Starting from 5 ODs in 2008, it was scaled up to 71 among of 77 ODs in 2011. The number of PW who attended the antenatal care service in LR ODs increased from 53,935 in 2009 to 285,121 in 2011; the coverage of HIV testing among expected PW which was 74% during the pilot phase, increased from 62% to 69% between 2009 and 2011, during the scaling-up phase.

The coverage of HIV testing among ANC1 attended increased from 74% in 2008 to 80% in 2011.

**Figure 2. Coverage of ANC1 and PW HIV testing at LR sites from 2008-2011**



Source: Quarterly and yearly report. NCHADS. MoH

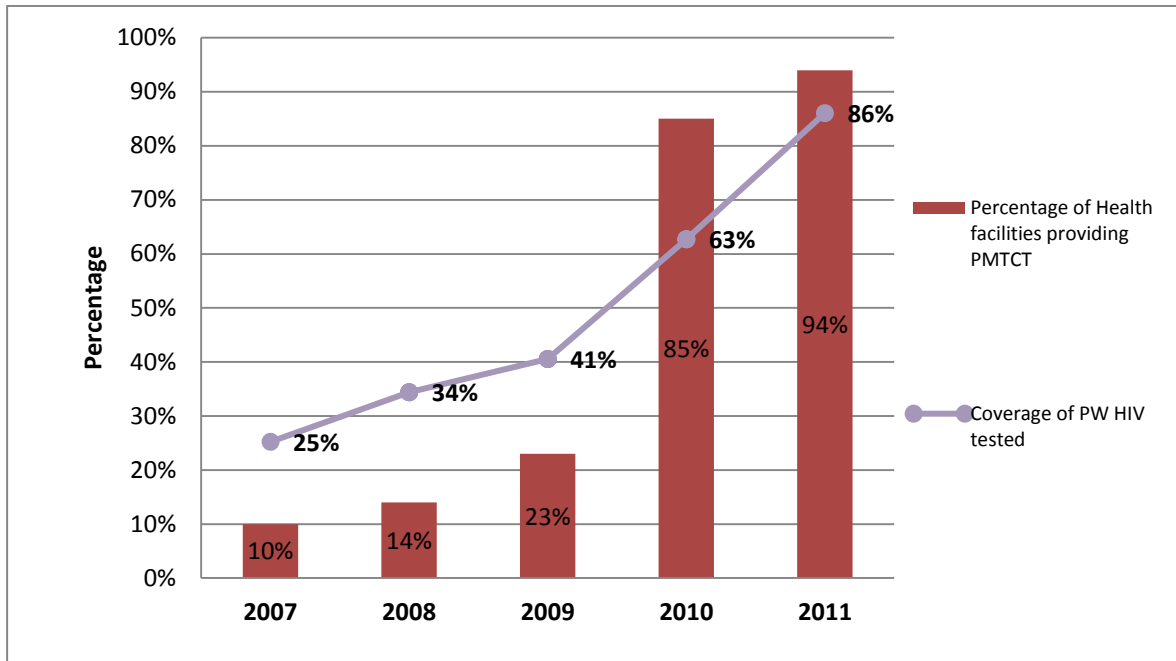
Note: \* Health facilities where LR was implemented

\* Quarterly Expected PW (EPW) was calculated per quarter and per number of LR sites

## 2. PMTCT services at national level

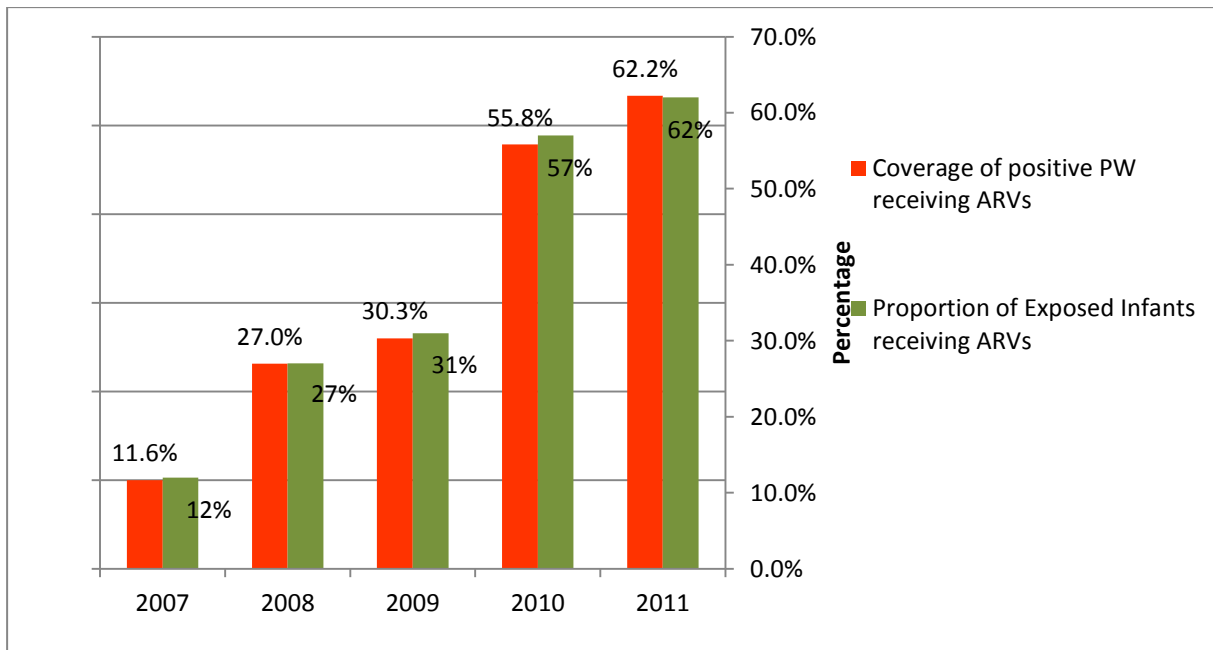
Countrywide, the proportion of PW who attended ANC increased from 79% in 2007 to 98% in 2011. The coverage of (total expected) PW tested for HIV at ANC augmented from 25% in 2007 to 86% in 2011. In 2011, 62% of eligible PW received ARV prophylaxis for PMTCT. The proportion of exposed infants who received the ARVs strongly augmented from 12% in 2007 to 27% in 2008 and reach 62% in 2011.

**Figure 3. ANC1 and HIV testing at PMTCT at national level from 2007 to 2011**



Source: \* Health system information. MoH.  
 \*\* NMCHC. MoH. & PMTCT manager

**Figure 4; ARVs Uptake among HIV Positive PW and Exposed Infants at national level from 2007-2011**



Source: \*Report NMCHC. MoH.

## **Discussion**

The LR was scaled up to cover the whole country. During the implementation of the LR, ANC coverage increased at national level. The LR strongly increased HIV testing, ARV uptake and follow-up among pregnant women and exposed infants. The LR strongly boosted the integration and collaboration between NCHADS and NMCHC through ANC and PMTCT services. Unfortunately, routine data collection on ARV uptake and follow-up among HIV positive PW and exposed infants remains a challenge and sharing data between both HIV and Maternal and Child Centers (NCHADS and NMCHC) can be further improved.

## **Conclusion**

The LR contributed to improve PMTCT results and coverage by bringing together district HIV/AIDS and maternal and child health coordinators and health facility staff, through planning, implementation and monitoring of coordinated services. This approach upgraded Cambodia's public health system. The effectiveness of the LR approach has been used to expand the provision of comprehensive PMTCT services nationwide. But mothers and exposed infants who received the complete intervention services is still low. So the follow up system should be reinforced and data management should be taken into account. The financial budget should be sustainable for being achievement to eliminate HIV infections among children and United Nations Millennium Development goals.