

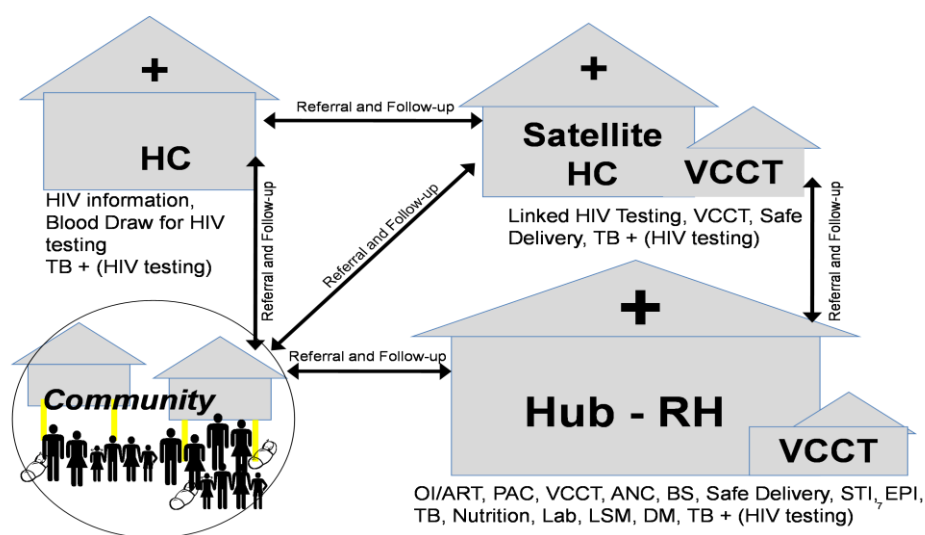
Scale up the provision of comprehensive PMTCT services, using the Linked Response approach in Cambodia

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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 other ODs nationwide. However, up to present, there has been no evaluation of the scaling up of LR in Cambodia.

Figure 1: Illustrates patient flow through local health facilities



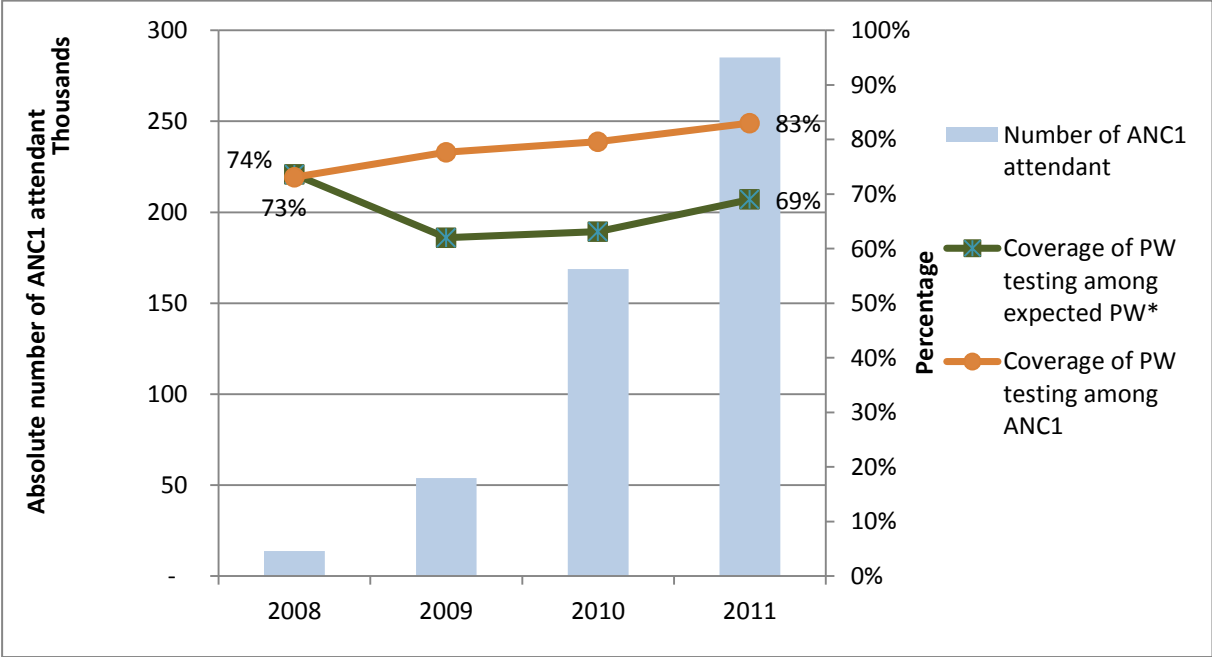
Source: Standard operational procedures of Linked response. NCHADS. MoH.

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 evolutions; 3) to analyze HIV prevention of mother to child transmission (PMTCT) data at national level from 2008 to 2011 and evaluate the contribution of the LR.

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, a review of the literature was conducted from PubMed, MEDLINE. The 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.

Results: The number of sites where the LR was scaled up increased very fast by collaboration of NCHADS and 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 increased from 62% to 69% between 2009 and 2011.

Coverage of ANC1 and PW HIV testing at LR from 2008-2011



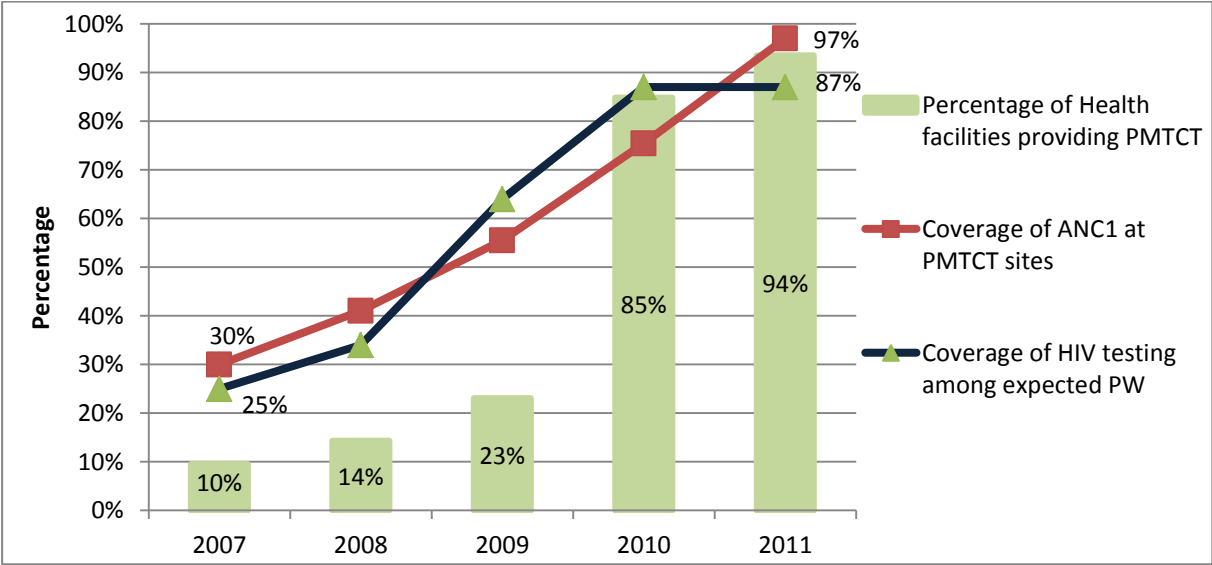
Source: Quarterly and yearly report. NCHADS. MoH

Note:* Health facilities where LR was implemented

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

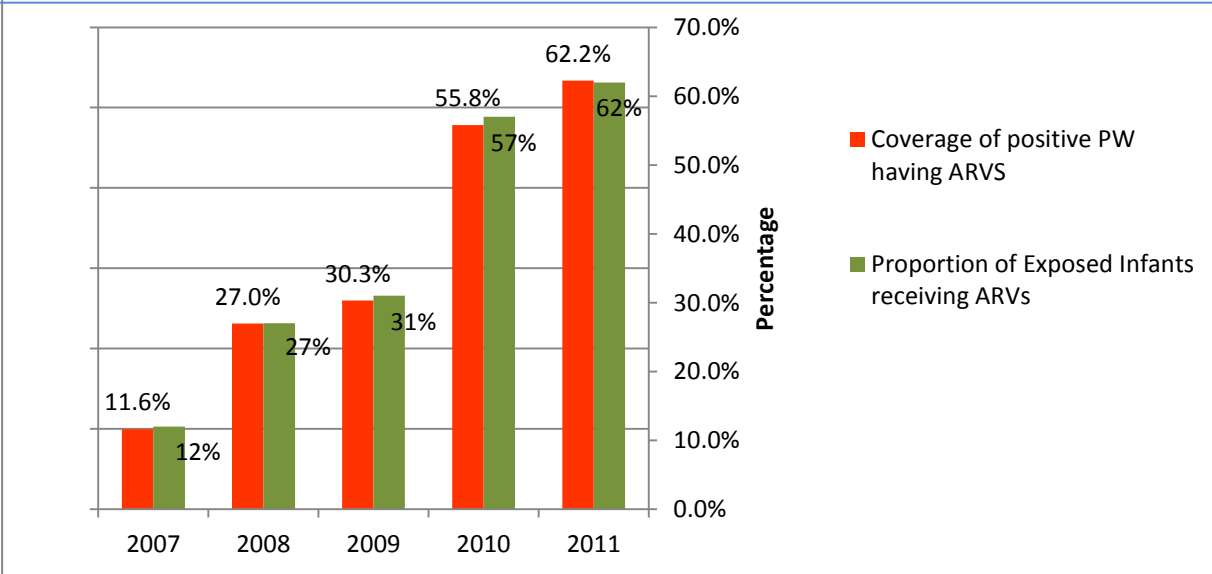
Countrywide, the proportion of PW who attended ANC increased from 79% in 2007 to 98% in 2011. The coverage of PW tested for HIV at ANC augmented from 12% in 2007 to 30% in 2010 and 62% in 2011. In 2011, 62% of eligible PW received ARV prophylaxis for PMTCT. The proportion of exposed infants who received the ARVs strongly augmented from 27% in 2008 to 62% in 2011 if compared to the coverage of expose infant receiving ARV in 2007 was only 12%. Only 61.1 % of infants born received PCR1 and 16 (6.4 %) tested HIV-positive of the 249 new born infants.

2)- Enrolment of ANC1 and HIV testing at PMTCT (National level) from 2007-2011



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

Uptake ARVs among Positive PW and Exposed Infants at national level from 2007-2011



Source: *Report NCHADS, NMCHC. MoH.

3)- Contribution of LR to PMTCT by year

	2008	2009	2010	2011
Proportion of PW HIV testing at LR to PMTCT	9%	19%	43%	71%
Proportion of PW(+) received ARVs at LR to PMTCT			16%	70%
Proportion of exposed infants received ARVs at LR to PMTCT (national level)			25%	48%

Source: *NMCHC and NCHADS. MoH

Discussion: The LR was scaled up to cover the whole country. During the implement of the LR, ANC coverage increased. 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 on ARV uptake and follow-up among HIV positive PW and exposed infants is still limited and sharing data between the both Centers (NCHADS and NMCHC) can be further improved.

Conclusion: The LR contributed to the results of PMTCT 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.