



Access to early infant diagnosis and antiretroviral therapy: Barriers and challenges in Abidjan, Côte d'Ivoire in 2011-2013

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General Background

- Since 2010, the World Health Organization (WHO) recommends the routine initiation of early antiretroviral therapy (ART) in all HIV infected children younger than 2 years of age
- What is the current status of the implementation of these recommendations in the context of countries with limited resources?

Pediatric HIV epidemic in Côte d'Ivoire in 2010

- **HIV prevalence** (National HIV program : PNPEC)
 - 3.4% in general population
 - 4.5% in pregnant women
 - 70 000 HIV-infected children
- **Low coverage rates of:**
 - P MTCT interventions : 47%
 - Early Infant Diagnosis (EID) : less than 10%
 - Antiretroviral Treatment (ART): less than 10%
 - < 2% before 12 month of age
 - ART is initiated at around age 5 on average (Anaky, Bull WHO 2010, Ekouevi BMC Public Health 2011, Leroy JAIDS 2013)

Programmatic background of HIV care in Côte d'Ivoire

In 2011, after the post-electoral crisis in Côte d'Ivoire, the National HIV program decided to implement the 2010 WHO guidelines as follows:

- Scaling-up early infant diagnosis of HIV using DNA PCR done on Dried Blood Spot (DBS) in all HIV exposed-children from 6 weeks to 12 months of age
- Treat all HIV infected children younger than 2 years of age

Objective

We described the access to pediatric HIV diagnosis results and antiretroviral treatment initiation before the age of two during the recruitment process in a pediatric study (MONOD ANRS 12206) in 2011-2013 in Abidjan, Côte d'Ivoire.

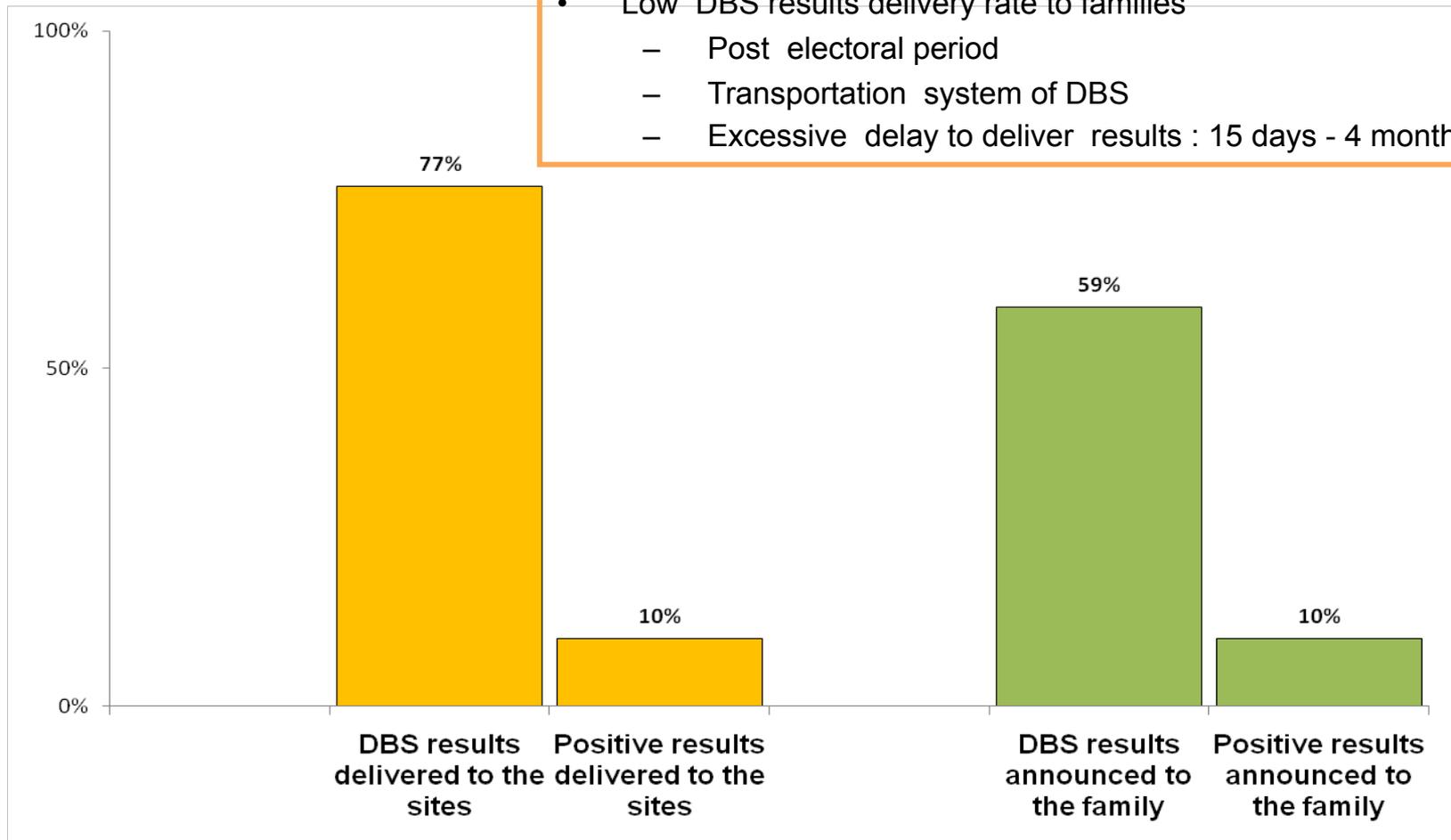
Methods

- We conducted a survey of the tools and timing used for early infant diagnosis and access to ART for HIV infected children before the age of two, in 29 health centers
- Families were interviewed during a medical follow-up or a phone call.
- Announcement of early infant diagnosis results and access to early ART were studied
- Barriers were described
- Correlates of early initiation on ART were analyzed using a logistic regression model.

centers (n= 2397), Abidjan 2011-13

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- No existing linkage between PMTCT services and pediatric care.
- Low DBS results delivery rate to families
 - Post electoral period
 - Transportation system of DBS
 - Excessive delay to deliver results : 15 days - 4 months.



Access to pediatric HIV diagnosis before the age of two

Age (months)	method	Total (%)
0-12	strategy)	184 (80.3)
12-18	RNA PCR on plasma	11 (4.8)
18-24	test	34 (14.9)
identified		229 (100.0)

Access to early ART before the age of two

Among the 229 children initially HIV-diagnosed:

- 3 not confirmed: false positive (2), label error (1)
- 226 HIV-infected cases confirmed:
 - 148 (65.5%) initiated on ART (95% Confidence Interval: 59.3%-71.7%)
 - 78 (35.5%) missed opportunities for ART initiation
 - 45 (20%) died
 - 24 (11%) parent's refusal
 - 9 (4%) lost to follow-up

Factors associated with early ART initiation: adjusted regression analysis (n=217)

Variables	ART initiated	Final adjusted model	
	N = 148 (%)	Adjusted Odds Ratio	IC95%
Child's age at time of diagnosis (months) > 12 versus < 12 months	58 (39.2)	4.0	1.5 -10.5
Father informed of his child's HIV status versus not informed	109 (73.6)	5.4	2.6 – 11.2
Child's sex girl versus boy	73 (49.3)	1.1	0.5 – 2.3
Child's caregiver on ART versus not on ART	75 (50.7)	2.8	1.3 – 6.1

Conclusion

- Despite an acceptable ART coverage before the age of 2 in this study (65%), too many missed opportunities for access to ART before 2 years remain
- One must improve early identification of HIV-infected infants and promote a continuum of care for them before they die, by:
 - Organizing and strengthening linkages between PMTCT and pediatric HIV services
 - Mobilizing the community and health care staff to reduce stigma regarding EID and pediatric ART
 - Approaching and involving fathers to prepare HIV post-test counseling and access to ART
- With the commitment of the National Program, it is crucial to promote an early access to infant HIV care services within a family approach in Côte d'Ivoire.



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