

# The Road to Melbourne

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## **Nutrition as entry point to identify HIV infected children**

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# Background

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- Difference in height and weight of HIV infected and uninfected children increases with age
- Infected children are significantly shorter and lighter than their uninfected counterparts
- Infected children with mild or serious symptoms lagged behind those who are asymptomatic
- Severely ill children had poorer growth at all ages
- Patterns of uninfected children suggest that exposure to maternal HIV does not affect growth

Source: The European Collaborative Study. Height, Weight, and Growth in Children Born to Mothers with HIV-1 Infection in Europe. Pediatrics 2003; 111:e52

# Care and survival of HIV-exposed infants

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- Need to know or identify HIV serostatus early on
- Ensure a holistic follow-up and care of the infant until end of exposure, i.e. end of breastfeeding
- Nutritional status of the child can be an indicator of illness in children
- Map every opportunity that the mother and infant come in contact with the health system to screen

We have the technological know-how and the drugs to treat - so why are we waiting?

# Objectives of a CIDA funded UNICEF project

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- ▶ Optimizing community support for infant and young child feeding (IYCF) and PMTCT follow up for mothers and their infants
- ▶ Improving integration of IYCF and PMTCT interventions including early infant diagnosis within routine facility based maternal and child health services to strengthen postnatal care of mothers and infants
- ▶ Increasing access to HIV testing for children with severe acute malnutrition (SAM) and ensuring ART initiation and referral for those testing positive
- ▶ Integrating screening for malnutrition into paediatric HIV and PMTCT services and ensuring initiation of treatment for SAM or referral to CMAM for children in need

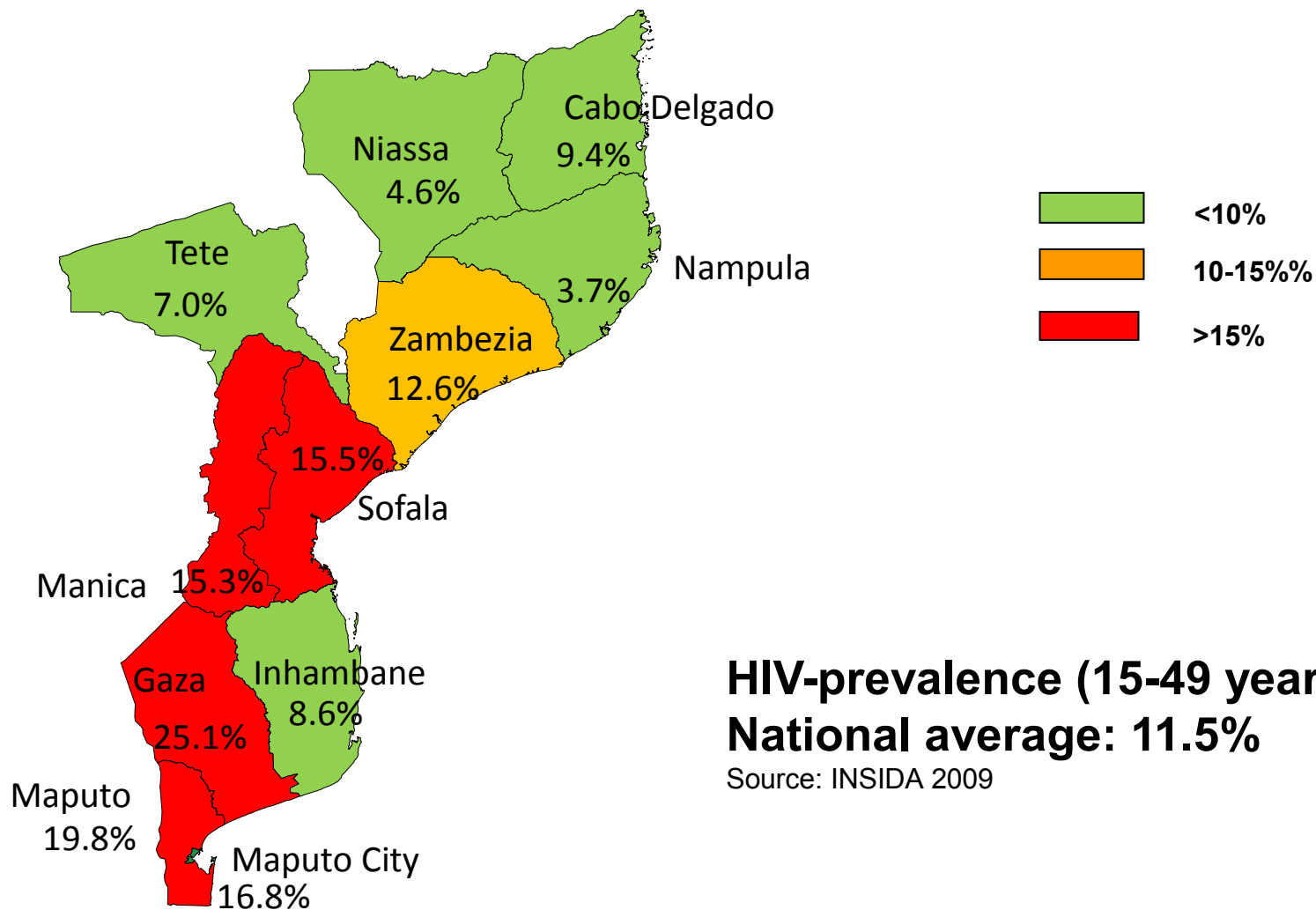
# Example from Mozambique

# Country profile

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Indicator	Value	Source
Population 2013	24 million	Census 2007 (projected)
Poverty rate	55%	Household Budget Survey (IOF) 2008-9
Under 5 Mortality Rate	141/1,000 live births (97/1,000)	MICS 2008 (DHS 2011)
HIV prevalence (15-49 yrs)	11.5%	INSIDA 2009 (household survey)
Stunting (under fives)	44% (43%)	MICS 2008 (DHS 2011)
Wasting (under fives)	4% (6%)	MICS 2008 (DHS 2011)
Exclusive breastfeeding <6m	37% (41%)	MICS 2008 (DHS 2011)

# HIV prevalence



# Screening pilot in routine GMP/EPI services

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**Objective:** Create additional entry-points into HIV treatment and care programmes by proactively identify children that may be exposed to HIV during EPI and routine growth monitoring visits



**HIV Screening Concept:**  
Application of specific criteria identifiable in infants and children for nurse-initiated testing and counseling at routine child growth monitoring and vaccination services





# Screening criteria

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1. Low weight for age – under 3<sup>rd</sup> percentile
2. Oral thrush – observable oral candidiasis
3. Recent history of persistent diarrhea or fever
4. Delays in key psycho-motor developmental phases
5. Visible skin lesions
6. Malnutrition – MUAC < 12.5 cm
7. Swollen lymph nodes – focus on cervical nodes
8. Incomplete data card or non-institutional birth – HIV or PMTCT status of mother not documents or unclear
9. Other: HIV+ in sibling, absent biological mother, other signs and symptoms

# Routine visit

New testing area

Routine growth monitoring



Evaluation of children against criteria while updating child card with growth/vaccination information

Covered waiting area

# Rapid testing

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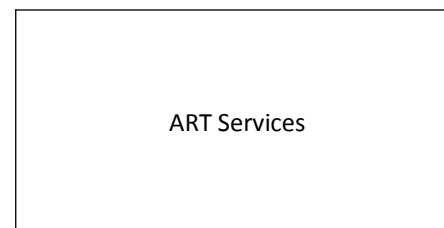
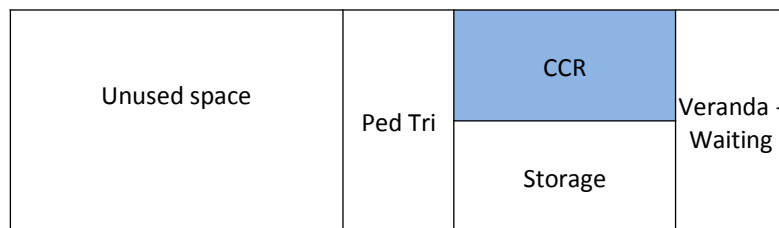
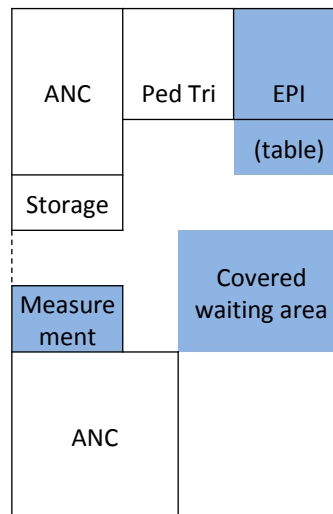


This space was repurposed to serve as an HIV testing and counselling room, as well as DBS collection as part of the one-stop solution at a screening pilot site.

# Existing services for Pediatrics

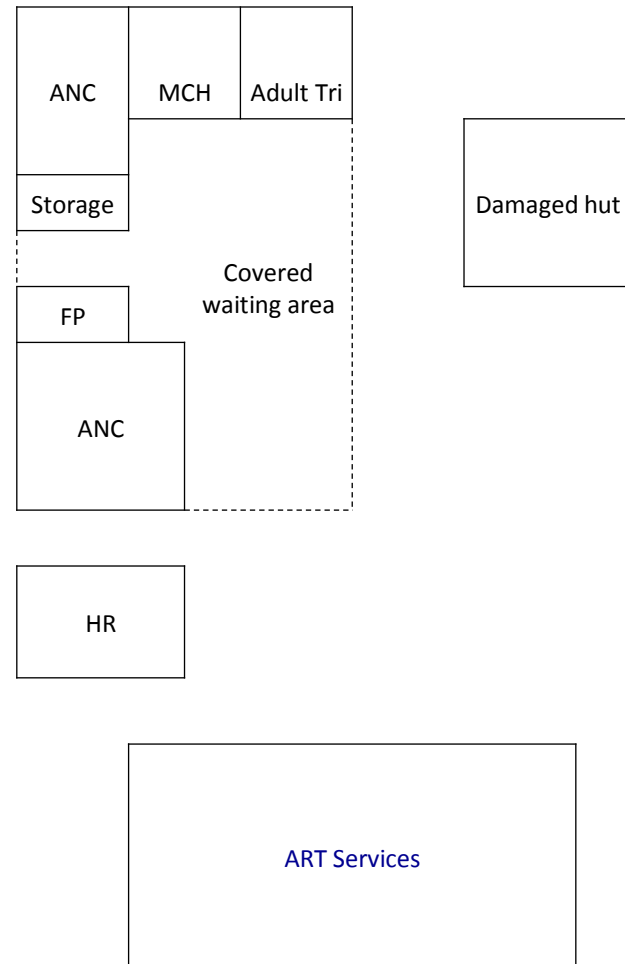
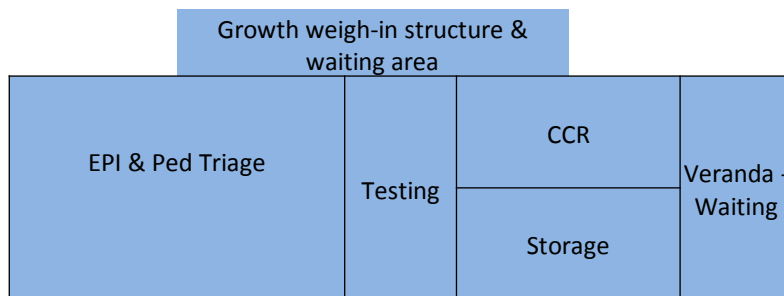
Current situation:  
multiple and scattered  
locations for routine  
pediatric services

(weigh-in tree)



# Revised integrated services

Proposed solution:  
consolidate and  
integrate services to  
achieve a “one-stop”  
experience



# Results from 3 sites in Sofala district

## (as of April 2013)

	Low weight	MUAC	Development delays	Oral thrush	Skin lesions	Lymph nodes	Diarrhea/fever	Incomplete data	Other	Total
<b>Total tested</b>	397 (41%)	89 (9.2%)	26 (2.7%)	34 (3.5%)	186 (19.2%)	15 (1.5%)	2 (0.2%)	72 (7.4%)	147 (15.2%)	<b>968</b>
<b>(+)ve with rapid test</b>	52 (13.1%)	7 (7.9%)	9 (34.6%)	5 (14.7%)	5 (2.7%)	5 (33.3%)	1 (50%)	2 (2.8%)	19 (12.9%)	105 (10.8%)
<b>Confirmed (+)ve</b>	44 (11.1%)	6 (6.7%)	5 (19.2%)	4 (11.8%)	4 (2.2%)	4 (26.7%)	0 (0%)	2 (2.8%)	14 (9.5%)	<b>83 (8.6%)</b>
<b>Proportion +ve tests</b>	53%	7.2%	6.0%	4.8%	4.8%	4.8%	0%	2.4%	16.9%	
<b>Percent of tests in the category</b>	41%	9.2%	2.7%	19.2%	19.2%	1.5%	0.2%	7.4%	15.2%	
<b>Age range (months)</b>	10-156	4-28	21-144	18-132	21-60	6-60	N/A	18-24	18-168	
<b>Median age (months)</b>	24	21	84	58	42	24	N/A	21	41	

# Using the GM routine visit as entry point

	Malnutrition	Signs and symptoms	Other (incl. patient information)	Total
<b>Total tested</b>	486 (50.2%)	263 (27.2%)	219 (22.6%)	968
<b>(+)ve with rapid test</b>	59 (12.1%)	25 (9.5%)	21 (9.6%)	105
<b>Confirmed (+)ve</b>	50 (10.3%)	17 (6.5%)	16 (7.3%)	83
<b>Proportion of total (+)ve</b>	60.2%	20.5%	19.3%	

# Conclusion

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- Ability to capture a large group of children coming in for growth monitoring and vaccination services
- Mentoring by Pediatrician: to improve capacity to identify cases through other criteria outside of low weight
- Government has begun an initiative to integrate Pediatric services and physical location

Using simple screening for HIV at growth monitoring and EPI routine visit may be a good entry point in countries where there is high attendance



## Acknowledgements:

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