HALT HIV:

PREVENTION OF MOTHER TO CHILD TRANSMISSION (PMTCT) OF HIV INFECTION

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ts and children estimated to be living with HIV | 20

3.2 MILLION CHILDREN

WORLDWIDE ARE LIVING WITH HIV. MOST OF THESE CHILDREN WERE INFECTED BY THEIR HIV-POSTIVE MOTHERS DURING PREGNANCY, CHILDBIRTH OR BREASTFEEDING.

Newly Diagnosed HIV Cases in the Philippines

In December 2013, there were 358 new HIV Ab sero-positive individuals confirmed by the STD/AIDS Cooperative Central Laboratory (SACCL) and reported to the HIV and AIDS Registry (Table 1). This is 22% higher compared to the same period last year (n=293 in 2012) [Figure 1] .

Table 1. Quick Facts

Demographic Data	December 2013	Jan-Dec 2013
Total Reported Cases	358	4,814
Asymptomatic Cases	327	4,476
AIDS Cases	31	338
Males	339	4,583
Females	19	231
Youth 15-24yo	125	1,375
Children <15yo	0	3

**Note: No data available on sex for (11) cases.*

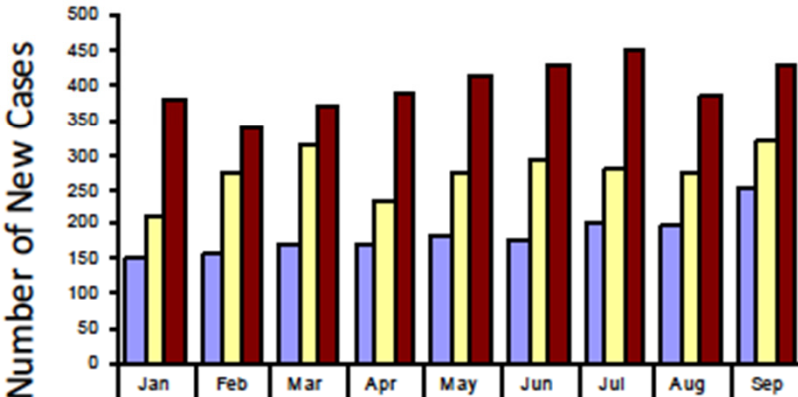
Table 2. Percentage of HIV Cases per Region (December 2013)

Region	% of Cases
I	2%
II	1%
III	9%
IVA	12%
IVB	1%
V	1%

Most of the cases (95%) were male. The median age was 27 years (age range: 17-78 years). The 20-29 year (59%) age group had the most number of cases.

Reported modes of transmission were sexual contact (318) and needle sharing among injecting drug users (40) [Table 3, page 2]. Males having sex with other

Figure 1. Number of New HIV Cases per Month



of Transmission (1984-2013)

ety-four percent (4,540) were infected through sexual contact, rough needle sharing among injecting drug users and <1% (3) ner to child transmission (Table 3). There were 4,326 male and nfected through sexual transmission. The age range of those ough sexual transmission was 15-79 years old (median 27

16 HIV positive cases reported from 1984 to 2013, 93% e infected through sexual contact, 4% (711) through needle ng injecting drug users, <1% (62) through mother-to-child <1% (20) through blood transfusion and needle prick injury ble 3]. No data is available for 2% (375) of the cases.

Table 3. Reported Modes of HIV Transmission

Mode of Transmission	December 2013 n=358	Jan-Dec 2013 n=4,814
Sexual Contact	**318**	**4,540**
Heterosexual contact	*57(18%)*	*717(16%)*
Homosexual contact	*148(47%)*	*2,304(51%)*
Bisexual contact	*113(36%)*	*1,519(33%)*
Blood/Blood Products	**0**	**0**
Injecting Drug Use	**40**	**271**
Needle Prick Injury	**0**	**0**
Mother-to-Child	**0**	**3**
No Data Available	**0**	**0**

Figure 6. HIV Transmission by Age-Group, 2013

MOTHER TO CHILD TRANSMISSION (MTCT)

Vertical Transmission of HIV can occur

1. in utero across placenta or in the amniotic fluid;

2. during BIRTH process via direct contact with blood or infected maternal cervical and vaginal secretions and postnatally,

3. via breast milk.

MATERNAL AND INFANT RISK FACTORS

TABLE 1. Maternal and infant risk factors contributing to HIV transmission to the infant

risk factor	Risk factors (reference[s])
.....	High maternal viral load (24, 35, 42, 64, 71, 88), high vaginal/cervical shedding of HIV (42), low mat count (24, 64, 68, 71, 89), maternal genital ulcer disease (42)
.....	Prematurity (<34 wk) (56, 68)
ntrapartum.....	Vaginal delivery with prolonged rupture of membranes (56, 61), chlorioamnionitis (56, 61), instrume (amniocentesis, invasive monitoring, etc.) (56)
m.....	Breast-feeding, especially nonexclusive or mixed feeding (25, 38, 43, 59); breast disease (mastitis, cracked/bleeding nipples) (42, 43)

CLINICAL MICROBIOLOGY REVIEWS, July 2009, p. 493–5

HIV TESTING FOR PREGNANT WOMEN

he first step to interrupt MTCT of HIV is
lentification of those at risk so that they may b
rovided with therapy and information to
ecrease the risk of infection in their infant

HIV TESTING FOR PREGNANT WOMEN

n 2006, HIV testing a routine component of prena
creening tests

Key element- concept of " OPT-OUT" testing,
whereby testing is performed unless the patient
eclines

eparate written consent for HIV testing should no
e required- should be part of general consent for
nedical care

7. Branson, B. M., H. H. Handsfield, M. A. Lampe, R. S. Janssen, A. W
S. B. Lyss, and J. E. Clark. 2006. Revised recommendations for HI

1.4.2 Pregnant and postpartum women

ackground

ovider-initiated testing and counselling for pregnant women and linkage to prevention a
re are needed to promote the mother's health and prevent new paediatric infections and
ntribute to a strategy for couples testing.

ting recommendations *(2)*

eralized epidemics

Provider-initiated testing and counselling is recommended for women as a routi
component of the package of care in all antenatal, childbirth, postpartum and
paediatric care settings.

Re-testing is recommended in the third trimester, or during labour or shortly aft
delivery, because of the high risk of acquiring HIV infection during pregnancy.

IGHLY ACTIVE ANTI RETROVIRAL TREATMENT HAART)

Recommended for all pregnant women, including women who do not require treatment, in order to optimally prevent perinatal transmission and minimi risk of maternal development of resistance to ARVs

With the goal being for women to have undetectabl levels of HIV-1 RNA

A minimum of three (3) drugs is recommended eve for women who would not otherwise require therapy

First-line ART for pregnant and breastfeeding women and ARV drugs for their infants

w recommendations

NE

A once-daily fixed-dose combination of TDF + 3TC (or FTC) + EFV is recommended as first-line ART in pregnant and breastfeeding women, including pregnant women in the first trimester of pregnancy and women of childbearing age. The recommendation applies both to lifelong treatment and to ART initiated for PMTCT and then stopped *(strong recommendation, low- to moderate-quality evidence: moderate-quality evidence for adults in general but low-quality evidence for the specific population of pregnant and breastfeeding women and infants)*.

Infants of mothers who are receiving ART and are breastfeeding should receive six weeks of infant prophylaxis with daily NVP. If infants are receiving replacement feeding, they should be given four to six weeks of infant prophylaxis with daily NV (or twice-daily AZT). Infant prophylaxis should begin at birth or when HIV exposu is recognized postpartum *(strong recommendation, moderate-quality evidence fo breastfeeding infants; strong recommendation, low-quality evidence for infants receiving only replacement feeding)*.

CESAREAN SECTION DELIVERY

ective cesarean delivery prior to rupture of membranes - duce the risk of HIV transmission by half compared to vag elivery

eta- analysis of 15 prospective cohort studies in US and E ata from >8,000 mother-infant pairs, likelihood of HIV-1 ansmission was lower than with other modes of delivery (7% efficacy)

echanism in risk reduction is thought to be due to a reduct the infant's exposure to contaminated maternal blood and

BREASTFEEDING

Breastfeeding substantially increases the risk
of MTCT of HIV 1.

In settings where avoidance of breastfeeding
feasible, affordable, and culturally acceptable,
its utility is obvious

EXCLUSIVE BREASTFEEDING OR MIXED

xclusive breastfeeding has been found to have significantly
wer transmission risk than mixed feeding

udy in Zimbabwe- introduction of animal milk or solid foods
efore the age of 3 months is associated with 4-fold greater ris
perinatal transmission at 6 months

outh Africa study- mixed fed infants also receiving solids (
rridge or cereal) were more than 10 times as likely to acquir
V infection

his is thought to be due to a disruption in the integrity of the
testinal mucosa, which is normally protected by breast milk,

The key principles and recommendations established in 2010 i
including:

National or subnational health authorities should decide whet
health services will mainly counsel and support mothers know
infected with HIV to either breastfeed and receive ARV interve
or avoid all breastfeeding given their particular context.

In settings where national authorities have decided that matern
child health services will mainly promote and support breastfe
and ARV interventions as the strategy that will most likely giv
infants born to mothers known to be infected with HIV the gr
chance of HIV-free survival:

- Mothers known to be infected with HIV (and whose infants
HIV uninfected or of unknown HIV status) should exclusivel
breastfeed their infants for the first 6 months of life, introd
appropriate complementary foods thereafter, and continue
breastfeeding for the first 12 months of life. Breastfeeding
then only stop once a nutritionally adequate and safe diet w
breast-milk can be provided *(strong recommendation, high
quality evidence for the first 6 months; low-quality evide
the recommendation of 12 months)*

women and ARV drugs for their infants

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ARV PROPHYLAXIS IN INFANTS

The landmark study by the Pediatric AIDS Clinical Trials Group Protocol 076 (PACTG 076) -showed that MTCT HIV could be reduce by as much as two-thirds with a regimen of Zidovudine prior to and during delivery and to the infant after delivery for 6 weeks.

TRODUCTION OF SINGLE-DOSE NEVIRAPINE FO PMTCT IN RESOURCE-POOR SETTINGS

Based on HIVNET 012 study in Kampala, Uganda: The single -dose nevirapine regimen as it results in therapeutic levels in an infant fo at least 10 days, **could provide protection t breast-fed infants in the first week or two o ife,** as breastfeeding is the nutritional norm in most of Africa and other less developed countries.

36. Guay, L. A., P. Musoke, T. Fleming, D. Bagenda, M. Allen, C. Nakabiito, J. Sherman, P. Bakaki, C. Ducar, M. Deseyve, L. Emel, M. Mirochnick, M. G. Fowler, L. Mofenson, P. Miotti, K. Dransfield, D. Bray, F. Mmiro, and J. B. Jackson. 1999. Intrapartum and neonatal single-dose nevirapine compared

7.7 Simplified infant prophylaxis dosing recommendations ted from *(82)*)

fied infant prophylaxis dosing recommendations: NVP

t age	Daily dosing
to 6 weeks[b]	
weight 2000–2499 g	10 mg once daily
weight ≥2500 g	15 mg once daily
eeks to 6 months[c]	20 mg once daily
onths to 9 months	30 mg once daily
onths until breastfeeding ends	40 mg once daily

weighing <2000 g should receive mg/kg dosing; the suggested starting dose is 2 mg/kg once daily.

nended for 6 weeks, but 4 weeks may be considered in settings with replacement feeding.

beyond 6 weeks of age, with prolonged dosing of up to 12 weeks should be considered in special tances. These include the mother having had limited ART and not being likely to be virally suppressed, e the infant is identified as HIV exposed after birth and is breastfeeding (Table 7.8). This is based on ng required to sustain exposure among infants of >100 ng/ml with the least dose changes.

ferent clinical scenarios

enario	Maternal ARV prophylaxis[a]	Infant ARV prophylaxis[b]	Duration of infant ARV prophylaxis
ther diagnosed with HIV ring pregnancy[c,d]	Initiate maternal ART	NVP[c]	6 weeks[c]
ther diagnosed with V during labour or mediately postpartum d plans to breastfeed	Initiate maternal ART	NVP	6 weeks; consider extending this to 12 weeks
ther diagnosed with V during labour or mediately postpartum d plans replacement ding	Refer mother for HIV care and evaluation for treatment	NVP[c]	6 weeks[c]
ant identified as HIV posed after birth rough infant or maternal V antibody testing) and	Initiate maternal ART	NVP	Perform infant PCR e infant diagnosis test and then immediatel initiate 6 weeks of NVP – strongly consi

t identified as HIV ed after birth ugh infant or maternal ntibody testing) and is reastfeeding	Refer mother for HIV care and evaluation for treatment	No drug	Do HIV PCR test in accordance with national recommendations early infant diagno no infant ARV prophylaxis; initiat treatment if the in infected
er receiving ART but upts ART regimen breastfeeding (such icity, stock-outs or al to continue)	Determine an alternative ARV regimen or solution; counsel regarding continuing ART without interruption	NVP	Until 6 weeks after maternal ART is restarted or until 1 week after breastfeeding has ended

HIV TESTING OF INFANTS

V -exposed infants and children younger than 18 months
ould be tested 4-6 weeks of birth.

Serological tests (not recommended) due to the presence
persisting maternal HIV antibody in the child up to 15-18
months of age

Mortality is very high among untreated infants infected with
HIV in the 1st year of life

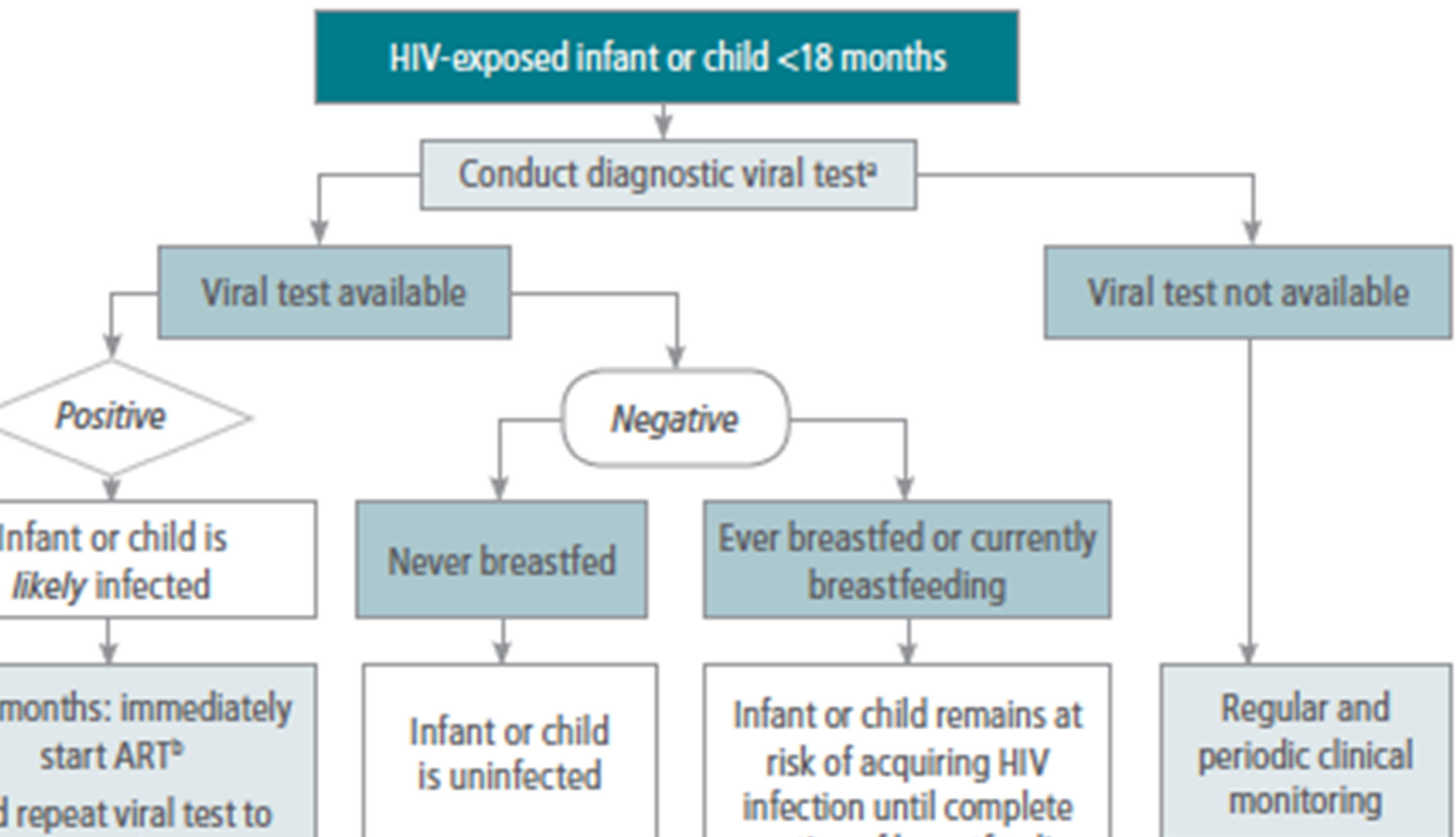
efinite confirmation- **virological tests:** assays to detect viral
cleic acid (HIV DNA RNA or total nucleic acid) or p24 antig

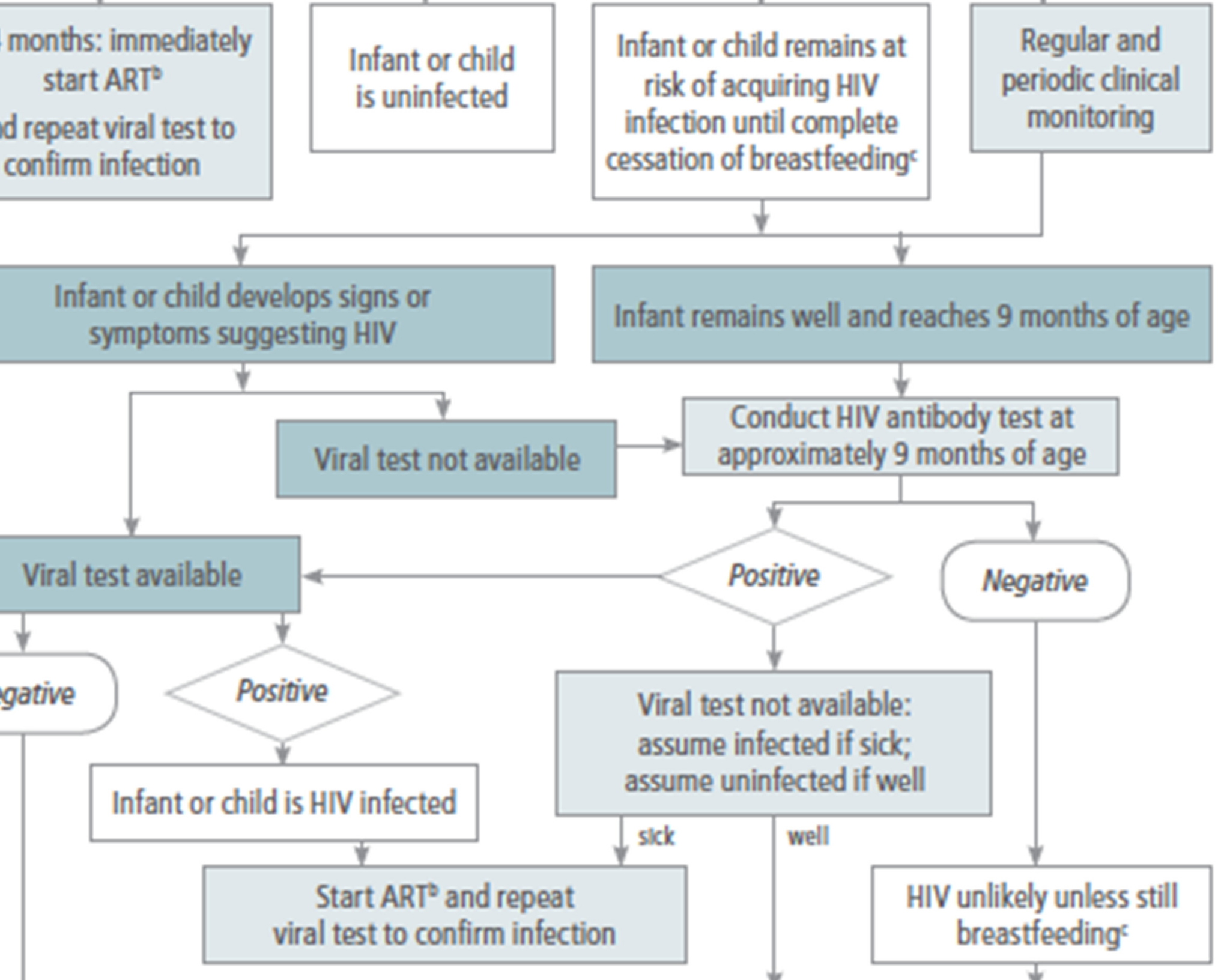
HIV TESTING OF INFANTS

Existing recommendations *(27)*

- It is strongly recommended that all infants with unknown or uncertain HIV exposure being seen in health care facilities at or around birth or at the first postnatal visit (usually 4–6 weeks), or other child health visit, have their HIV exposure status ascertained *(strong recommendation, high-quality evidence)*.
- It is strongly recommended that all HIV-exposed infants have HIV virological testing at four to six weeks of age or at the earliest opportunity thereafter *(strong recommendation, high-quality evidence)*.
- For infants with an initial positive virological test result, it is strongly recommended that ART be started without delay and, at the same time, a second specimen be collected to confirm the initial positive virological test result. Do not delay ART. Immediate initiation of ART saves lives and should not be delayed while waiting for the results of the confirmatory test *(strong recommendation, high-quality evidence)*.
- It is strongly recommended that infants with signs or symptoms suggestive of HIV infection undergo HIV serological testing and, if positive (reactive), virological testing *(strong recommendation, low-quality evidence)*.
- It is strongly recommended that well, HIV-exposed infants undergo HIV serological testing at around nine months of age (or at the time of the last immunization visit). Infants who have reactive serological assays at nine months should have a virological test to identify HIV-infected infants who need ART *(strong recommendation, low-quality evidence)*.
- It is strongly recommended that children 18 months of age or older with suspected HIV infection or HIV exposure, have HIV serological testing performed according to the standard diagnostic HIV serological testing algorithm used in adults *(strong recommendation, high-quality evidence)*.

lishing the presence of HIV infection in HIV-exposed infants and children less than 18 hs of age in resource-limited settings. Source: Adapted from *Antiretroviral therapy for HIV ion in infants and children: towards universal access. Recommendations for a public health ach*. 2010 revision. Geneva, World Health Organization, 2010 (http://whqlibdoc.who.int/ cations/2010/9789241599801_eng.pdf).




months: immediately start ART[b]
d repeat viral test to confirm infection
Infant or child is uninfected
Infant or child remains at risk of acquiring HIV infection until complete cessation of breastfeeding[c]
Regular and periodic clinical monitoring
Infant or child develops signs or symptoms suggesting HIV
Infant remains well and reaches 9 months of age
Viral test not available
Conduct HIV antibody test at approximately 9 months of age
Viral test available
Positive
Negative
gative
Positive
Viral test not available: assume infected if sick; assume uninfected if well
Infant or child is HIV infected
sick
well
Start ART[b] and repeat viral test to confirm infection
HIV unlikely unless still breastfeeding[c]

Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

SEP 2 3 2014

ADMINISTRATIVE ORDER
No. 2014- 0031

SUBJECT: **Policies and Guidelines on the Use of Antiretroviral Therapy (ART) Among People Living with Human Immunodeficiency Virus (HIV) and HIV-exposed Infants**

tment Hubs through its HIV AIDS Core Team (HACT) shall:

onduct adherence counseling to PLHIV prior to and while on ART;
ovide treatment and clinical monitoring of patients under ART;
ovide technical assistance to other health facilities and community-b
ganizations in need of professional trainings on the clinical management of
fection;
espond accordingly to referrals from various health facilities;
bmit monthly reports to DPCB and EB.

.	Region	Treatment Hub	Address	Contact Numb
	CAR	Baguio General Hospital and Medical Center	Gov. Pack Rd., Baguio City	(074) 442-4216 loc 381
	I	Ilocos Training and Regional Medical Center	San Fernando City, La Union	(072) 6076418 loc 153
	II	Cagayan Valley Medical Center	Carig, Tuguegarao, Cagayan	(078) 304-1410
	III	Jose B. Lingad Memorial Regional Hospital	Brgy. San Dolores, San Fernando, Pampanga	(045) 961-3989 (Medicine Dept)
	NCR	San Lazaro Hospital	Quiricada St., Sta. Cruz, Manila	(02) 732-3777 loc218 (H4OPD) loc212 (H4 ward)
	NCR	Philippine General Hospital	Taft Ave., Manila	(02) 554-8400 loc 3249
	NCR	Research Institute for Tropical Medicine	Filinvest Corporate City, Alabang, Muntinlupa City	(02) 807-2628 loc 332
	NCR	Makati Medical Center	#2 Amorsolo St., Legaspi Village, Makati City	(02) 888-8999 loc 2336 loc 2134 (CTTM
	NCR	The Medical City	Ortigas Ave., Pasig City	(02) 988-1000 loc 6765
)	V	Bicol Regional Training and	Rizal St., Legazpi City	(052) 4830016

V	Bicol Regional Training and Teaching Hospital	Rizal St., Legazpi City	(052) 4830016 Loc 4277 (PH
VI	Western Visayas Medical Center	Q. Abeto St., Mandurriao, Iloilo City	(033) 321284 321-0552
VI	Corazon Locsin Montelibano Memorial Regional Hospital	Dept. of Internal Medicine, 3rd Flr. OPD Bldg., CLMMRH, Lacson St., Bacolod City	(034) 709-024
VII	Vicente Sotto Sr. Memorial Medical Center	B. Rodriguez, Sambag II, Cebu City	(032) 2539891 loc 102
VII	Gov. Celestino Gallares Memorial Hospital	M. Parras St., Tagbilaran City	(038) 4114868
VIII	Eastern Visayas Regional Medical Center	Magsaysay Boulevard, Tacloban City	(053) 3213121 (053) 3213363
IX	Zamboanga City Medical Center	Dr. Evangelista St., Sta. Catalina, Zamboanga City	(062) 991-293
X	Northern Mindanao Medical Center	Provincial Capitol Compound Cagayan de Oro City	(08822)72-75- 37-35; 72-63-62 (088) 856-414
XI	Southern Philippines Medical Center	J. P. Laurel St., Bajada, Davao City	(082) 2272731 loc 4205

PMTCT

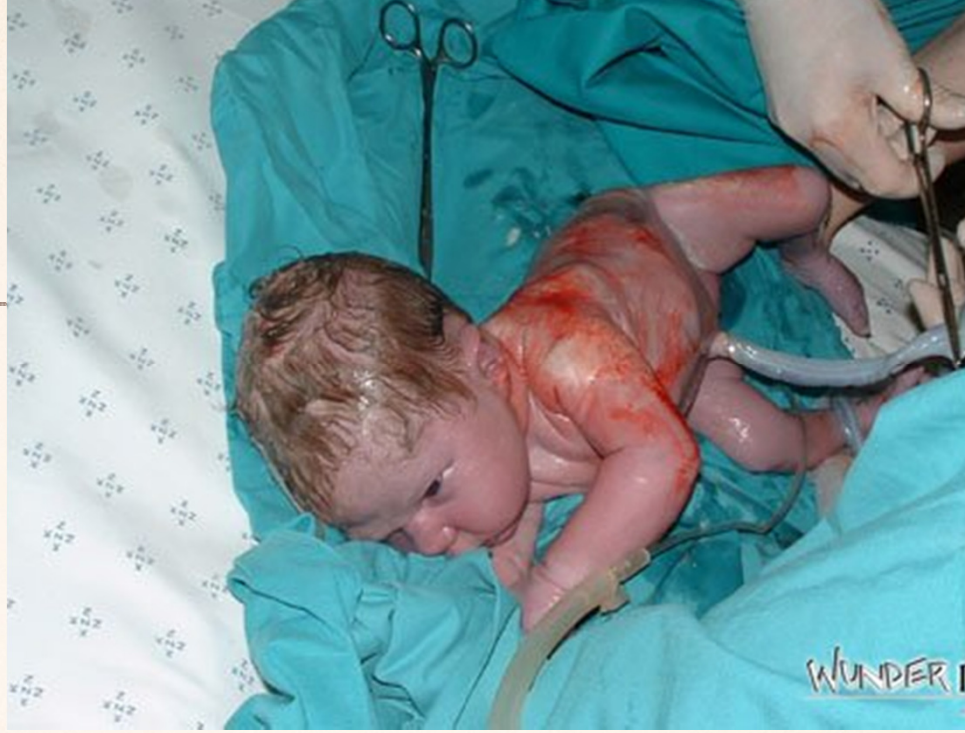
ading risk factor for MTCT is maternal plasma HIV RNA load

ority is decreasing the viral load to undetectable levels with ARVs b
e time of delivery

- Universal provision of testing, ARV prophylaxis during pregnancy
- Option of cesarean section delivery prior to labor and rupture of membranes
- Safe replacement feeding/exclusive breastfeeding
- ARVs for the infant in the neonatal period

V transmission can be reduced to less than 2%

Baby A



Baby B

Baby C

PREVENTION OF HIV: IT BEGINS WITH ME