

Guidelines on the Management of Sexually-Transmitted Infections (STI) in Pregnancy

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#### **MESSAGE**

Sexually Transmitted Infections (STI) remain to be among the diseases with public health significance especially in the marginalized and poor population, who may avoid or postpone the seeking of health care as the disease is largely associated with stigma and discrimination. Due to this, most STI cases remain undiagnosed and unreported to health authorities which makes scaling up of prevention and control initiatives very difficult. Sequelae of undiagnosed and untreated STI are encompassing. Mental and social (oftentimes violence) issues accompany STI diagnosis on top of equally important medical and physical complications like premature labor, abortion, permanent damage to organs of both mothers and babies born to mothers with STI.

In consonance with the objective of Universal Health Care to achieve better health for all Filipinos, the Department of Health intensifies its efforts for faster and earlier results towards the attainment of the health related MDGs. Focus is given to the reduction of maternal and child mortality and the prevalence of HIV/AIDS. As STI affects the health of the mother and babies and often times are associated with HIV, it is imperative that the DOH provides guidelines on the Management of STI in Pregnancy. This document synchronizes diagnosis and management of STI among frontline health facilities regardless of laboratory capacity. I urge everyone to support the implementation of this operational guide to contribute to better health of our mothers and children.

Mabuhay tayong lahat!

ENRIQUE T. ONA, MD, FPCS, FACS Secretary of Health

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#### **ACRONYMS**

AIDS Acquired Immune - Deficiency Syndrome

ANC Antenatal care
AO Administrative order

BEMONC Basic emergency obstetric and newborn care

CEMONC Comprehensive emergency obstetric and newborn care

DOH Department of Health

EDC Expected date of confinement

FHSIS Field Health Service Information System

HIV Human immunodeficiency virus

MARP Most at-risk populations MCH Maternal and Child health

MCP Maternity Care Package of PhilHealth MDG Millennium Development Goals

NASPCP National AIDS/STI Prevention and Control Program NCDPC National Center for Disease Prevention and Control

NEC National Epidemiology Center NSD Normal Spontaneous Delivery

RA Risk Assessment
RPR Rapid Plasma Reagin

SSESS Sentinel STI Etiologic Surveillance System

SHC Social Hygiene Clinic

STI Sexually Transmitted Infection

TPHA Treponema Pallidum Hemagglutination
TPPA Treponema Pallidum Particle Agglutination
VDRL Venereal Disease Research Laboratory

WHO World Health Organization

#### **BACKGROUND**

Everyday nearly a million people acquire a sexually transmitted infection (STI), including the human immune-deficiency virus (HIV). The infection can cause serious consequences such as infertility, ectopic pregnancy, cervical cancer, and the untimely deaths of infants and adults. The presence in a person of other STI such as syphilis greatly increases the risk of acquiring or transmitting HIV (WHO Global strategy for the prevention and control of sexually transmitted infections 2006–2015).

Pregnant women with STI can transmit the infection to their children, resulting in significant morbidity and mortality. *Chlamydia trachomatis* can cause neonatal pneumonitis and maternal endometritis. *Neisseria gonorrhea* can result in ophthalmia neonatorum, neonatal systemic infection, and maternal endometritis. Syphilis is associated with maternal hydramnios, spontaneous abortion, preterm delivery, fetal hydrops, fetal distress, stillbirth, and neonatal syphilis. *Trichomonas vaginalis* has been linked to preterm delivery, low birth weight, maternal vaginitis, and possible increased risk for HIV transmission.

Syphilis remains a global problem with an estimated 12 million people infected each year, despite the existence of effective prevention measures. Global estimates in 2003 from 215 studies with a total of 431,452 pregnant women show seroprevalence ranging from 0.21% to 7.1%. There are no national figures for syphilis among pregnant women in the Philippines. There is however a local study done in the cities of Baguio, Cebu and Davao in the Philippines by Aplasca-delos Reyes (1998) among 1,000 women seen in antenatal care facilities which reports a seroprevalence for syphilis at 0.3%. Congenital syphilis on the other hand has a global annual incidence estimate ranging from 700,000 to 1.5 million cases (WHO 2007). In Philippines, to date, there is no reliable data on syphilis prevalence and incidence among pregnant women in general.

The Department of Health has been truly serious in its thrust of achieving various Millennium Development Goals (MDG), i.e., reducing child mortality and improving maternal health (MDG 4&5) AND halting or reversing HIV and other infectious diseases (MGD6) in 2015. Related current policies and programmes developed and implemented by DOH includes the policy on *Management of Asymptomatic Women with RTI/STD* (A.O. Number 16, 1997, Annex 1). This policy recognizes that up to 90% of women with STI are asymptomatic with consequent adverse outcomes and complications. To improve case finding and management of asymptomatic women with STI, routine risk assessment (of STI including HIV) and universal syphilis screening of all pregnant women should be done. Provision of routine STI information including HIV will not only prevent occurrence of STI but could also promote recognition of symptoms related to STI and early health seeking behavior.

Syphilis and risk assessment and diagnosis are also integral to the currently implemented Pregnancy, Childbirth, Postpartum and Newborn Care: A Guide for Essential Practice in Philippine Setting and the Mother, Newborn and Child Health AND Nutrition Strategy (2008).

Sexually Transmitted Infections (STI) including syphilis are high risk factors for HIV transmission. **Universal Screening for Syphilis** provides a viable entry point into identifying risks among pregnant women and providing necessary prevention, diagnosis, treatment and care services. Rapid tests are available for syphilis which are relatively inexpensive as compared to other tests for STI including HIV. It is also important to identify concurrent HIV infections among women with syphilis because the former speeds up the damaging effect of the latter (Mishell 1997). Women with syphilis and HIV suffer damages to their brain and heart faster than those with syphilis alone. Further, women identified with HIV need additional interventions for themselves and their families. The HIV epidemic in the country has been characterized by experts as 'hidden and growing". However, only 5% of HIV infections and 40%¹ of AIDS cases find their way into the national registry. It makes practical sense therefore to find a proactive and cost-efficient screening method for risks included in a routine process such as antenatal care.

Economic evaluations of direct medical costs in developed and developing countries have indicated that universal screening of syphilis among women in early pregnancy is highly cost-effective, even at relatively low prevalences, eg 1%.<sup>2</sup>

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<sup>&</sup>lt;sup>1</sup>Enhanced Comprehensive STI Case Management Manual, DOH 2006.

<sup>&</sup>lt;sup>2</sup>The Global Elimination of Congenital Syphilis: Rationale and Strategy for Action. WHO 2007

#### **SCOPE OF THE MANUAL**

#### Intended users of the guidelines:

**Frontline staff** (midwives, nurses and physicians) in rural health units, health centers, lying-in clinics and social hygiene clinics. This guideline operationalises the policy statements described in the manual on *Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice in Philippine setting* and the *Community-Managed Maternal and Newborn Care: A Guide for Primary Health Care Professionals* (DOH 2006.) and the AO 16s-1997 – *Guideline for the Management of Asymptomatic Women with RTI/STD.* 

#### Objectives of the manual:

#### General:

To contribute to the over-all reduction of maternal and child mortality and morbidity, and reverse or halt HIV and STI in 2015.

#### Specific:

- 1. Improve risk assessment for STI
- 2. Support universal risk assessment for STI and screening of pregnant women for syphilis
- 3. Promote evidence-based diagnosis and management of STI including syphilis in pregnancy
- 4. Decrease maternal complications of STI including syphilis
- 5. Decrease the incidence of neonatal complications of STI including congenital syphilis.

#### Linkages with other service areas of the health care facility:

While this manual can stand on its own as a reference guide for management of STI including syphilis in pregnancy, it can and should be integrated into the broader scheme of maternal care as part of the general reproductive health program of the public and private health care delivery systems.

#### **GENERAL APPROACH**

A pregnant woman may come for the first time to the antenatal clinic anytime between the first and last trimester and she may or may not return to the clinic before delivery. It is imperative therefore to make the most of her first visit.

### At first visit, all pregnant women should be provided:

- 1. STI information
- 2. STI risk assessment and appropriate treatment
- 3. Syphilis screening and appropriate treatment
- 4. HIV counseling and testing if positive for STI risk or diagnosed with STI including syphilis.

#### On follow-up visits, all pregnant women should be provided:

- 1. STI risk assessment and treatment
- 2. Syphilis screening and treatment, if not yet done
- 3. HIV counseling and testing if positive for STI risk or diagnosed with STI including syphilis (for those who initially refused).

#### **OPERATIONAL GUIDELINES**

#### I. STI Information –giving

- a. All pregnant women accessing ANC shall be provided with information on STI, including symptoms, means of prevention and protection, and risks of mother to child transmission of STI including syphilis and HIV.
- b. All pregnant women shall be provided with individual STI counseling when appropriate.

## II. STI Risk Assessment (RA) and treatment

Risk assessment (RA) shall be done to ALL pregnant women. This will be composed of asking 3 questions reflected in the table below:

Element	Rationale/ Basis	Resp	onse
Self or partner has more than 1 partner in past 3 months?	More sexual partners carry higher risk that one of them may have an STI.	Yes	No
Self or partner uses illicit/unprescribed Injections?	Unsafe injection can transmit infections, including HIV	Yes	No
Self or partner has or in the past suffered from symptoms of STI (genital tract symptoms such as dysuria, discharge or sores)	Exposure to sexually transmitted infections increase risk for HIV	Yes	No

Table 1. Elements of the Verbal Risk Screening Tool

These questions assess the risk of acquiring STIs and/or HIV. A "Yes" to any of the questions above is interpreted as a positive risk for STI including HIV.

The health care provider will explore the risks by asking the 3 questions listed. In asking the questions relating to the risks above, keep it mind the basis for the question in case the patient requests a clarification.

In order to have an effective encounter with the patient, it is important that the health care provider demonstrates good counseling skills particularly for sensitive issues such as sexually transmitted infections. Specific behaviors that improve communication and/or make the client feel comfortable include:

- Introducing oneself before proceeding with the interview
- Asking permission to talk about personal or sensitive issues
- Asking open-ended questions using simple words
- Encouraging clients to ask questions
- Treating clients with respect
- Seeing clients in private
- Assuring the client's confidentiality.

In asking permission to talk about personal or sensitive issues, keep the patient comfortable and maintain rapport. After she agrees, ask the following questions:

- 1. Have you or your sex partner had more than one partner in the past three months?
- 2. Did you or your partner ever inject illicit/unprescribed drugs?
- 3. Did you or your partner have or in the past suffered from symptoms of STI (genital tract symptoms such as dysuria, discharge or sores)?

In asking for the presence of **STI symptoms**, the following are considered as suggestive of STI:

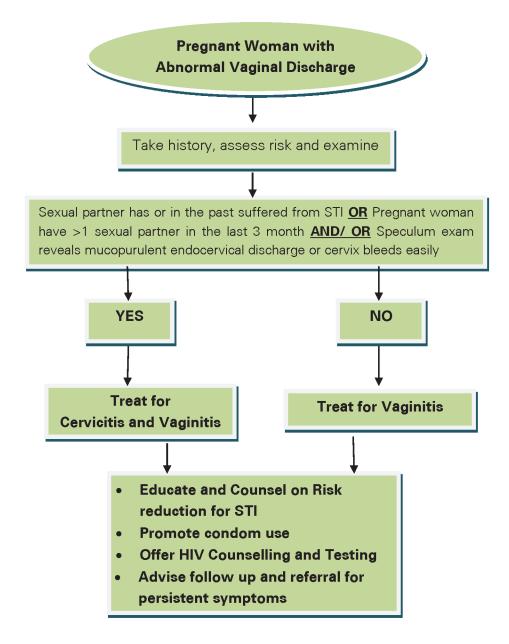
- a. Abnormal urethral/vaginal discharge characterised with one or more of the following:
  - 1. presence of foul odor
  - 2. concomitant pruritus (persistent)
  - 3. presence of burning sensation on urination
  - 4. greenish (pus-like) appearance
  - 5. Dyspareunia
  - 6. Post-coital bleeding
- b. Genital sores which could be painful or not

Sexually-Transmitted Infections (STI) can have many of the same consequences for pregnant women as women who are not pregnant. It can also be passed from a pregnant woman to the baby and may result to adverse pregnancy outcome such as early onset of labor, premature rupture of the membranes surrounding the baby in the uterus, and uterine infection after delivery. It is but imperative that any STI diagnosed in a pregnant woman should be treated the soonest.

# Management of Pregnant Women with symptoms of STI

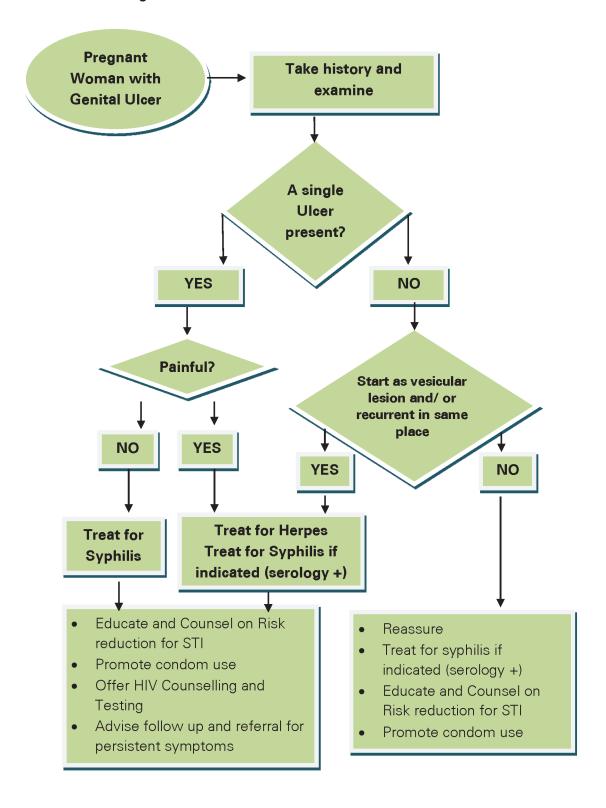
- 1. All pregnant women seen on prenatal check up with symptoms of STI shall be evaluated and treated immediately. If laboratory testing in the facility or appropriate referral is not feasible, then the pregnant woman should be provided treatment based on STI syndromic case management.
  - NB: Pregnant women with no symptoms suggestive of STI but positive for risk (ie. Client or partner with history of multiple partners) should be screened for STI or be referred to a facility with laboratory capabilities and treated appropriately based on the Comprehensive STI Case Management treatment guideline.
- 2. Assessment of all pregnant women with symptoms of STI through the syndromic approach shall be based on the following algorithm:

# I. Algorithm on the Syndromic Approach in the management of Abnormal Vaginal Discharge in Pregnant Women



It is highly recommended that pregnant women with history of spontaneous abortion or preterm delivery should be screened for Bacterial Vaginosis and Trichomoniasis with explicit referral to capable facility if not available.

# II. Algorithm on the Syndromic Approach in the management of Genital Ulcers in Pregnant Women



3. All STI symptomatic pregnant women should receive treatment as indicated below.

Table 2. Treatment regimens for Pregnant Women with STI/ RTI

Coverage	Possible Etiologies	Treatment	Remarks
	Trichomoniasis	Metronidazole 500mg	Multiple studies
3	Bacterial Vaginosis	2x daily for 7days	have not demonstrated an association between Metronidazole use during pregnancy and teratogenic or mutagenic effects in newborns (CDC STD Treatment Guidelines 2006)
Cervicitis	Gonorrhea	Cefixime 400mg SD	
Conitol	Non-gonococcal infections	orally OR Cefriaxone 250mg IM plus Amoxicillin 500mg 3x daily orally OR Azythromycin 1 gram SD orally OR Erythromycin 500 mg 4x daily orally Pencillin 2.4 MU IM SD	
Genital Ulcers	Syphilis	Pencillin 2.4 IVIU IIVI SD	
	Herpes	Acyclovir 200mg 5x/day for 7-10days	Use only when benefits outweighs risk although available data do not indicate an increased risk for major birth defects compared with the general population in women treated with acyclovir during the first trimester. (CDC STD Treatment Guidelines 2006)*

#### 4. Partner management

It is also imperative for partners of pregnant woman diagnosed and treated for STI to be evaluated and treated as well.

## 5. Prevention and Management of STI in Newborn

All newborn of pregnant woman diagnosed with STI should also be evaluated for the risk/s of any adverse outcome or complications of STI transmitted maternally and includes routine Neonatal eye prophylaxis and assessment for congenital syphilis (refer further to writings on syphilis in this guideline).

### III. Routine Syphilis Screening and Treatment

All pregnant women should be routinely screened for syphilis.

## Syphilis in Pregnancy

Syphilis is a systemic, sexually transmitted infection caused by the bacteria, *Treponema pallidum*. For purposes of treatment, it is classified as early (less than one year<sup>2</sup>) and late syphilis. Syphilis, if left untreated, becomes a chronic disease.

Syphilis is a moderately contagious infection. Approximately 3-10% of patients contract the disease with a single sexual encounter. Clinically, the stages are divided into primary, secondary and tertiary syphilis. The signs and symptoms and relative duration of which are summarized in Table 3.

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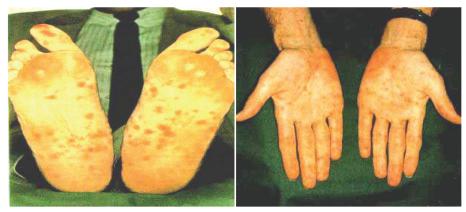
<sup>&</sup>lt;sup>2</sup>CDC Syphilis Fact Sheet, December 2007.

Table 3. Stages of Syphilis Infection

Stage	Onset of infection	Signs and symptoms	Duration of symptoms
Primary	21 days (range 10-90 days)	Painless genital ulcer	2-6 weeks
Secondary	3 weeks – 3 month	Skin rash Fever Muscle pain Latent phase: no symptoms	2-6 weeks
Tertiary	Several years to several decades after infection	Neurosyphilis (brain and spinal cord) Cardiosyphilis (heart) Late benign syphilis (skin)	Years



Primary syphilis: painless ulcers on the penis (L) and vulva (R)3.



Secondary syphilis: skin rashes on soles of feet (L) and palms (R).

<sup>&</sup>lt;sup>3</sup>Enhanced Comprehensive STI Case Management, 2006 DOH-NASPCP

The most devastating effect of untreated syphilis happens on the central nervous system and later the heart several years after infection. It develops in approximately 33% of untreated patients. The manifestations include deterioration of the nerves that control eye movement and function; slow degeneration of the nerves that control sensation (tabes dorsalis); generalized loss of movement or impaired movement; ballooning of a portion of the aorta; obliteration of the small blood vessels because of cold abscesses (gummas).

Pregnant women who are infected with syphilis can transmit the infection to their fetus, causing congenital syphilis with serious adverse effects on pregnancy in up to 80% of cases. The likelihood of transmission is directly related to the stage of maternal syphilis during pregnancy, or the stage of pregnancy when infection is acquired. In early maternal syphilis the maternal–fetal transmission rate can be up to 80%, whereas in late syphilis infectivity decreases. (WHO 2007)

### **Congenital Syphilis**

Congenital syphilis is one of the two most common perinatally acquired STIs in most countries, the second being ophthalmia (WHO 2000). Diagnosis neonatorum congenital syphilis is problematic because it is not mandatory to screen all babies of syphilispositive mothers since not all babies will become infected even if the mother is untreated or inadequately treated. Even more problematic is that it is often difficult to determine whether a mother who has a reactive syphilis serological test has untreated syphilis, or has received adequate treatment. Syphilis in the mother cannot be confirmed without the use of treponemal tests (TPPA or TPHA), and these tests are not routinely available in many frontline facilities in the country.

## Case Definition of Congenital Syphilis

**Probable**: (1) an infant whose mother had untreated or inadequately treated syphilis during pregnancy (regardless of signs in the infant), or (2) an infant or child with a reactive treponemal test and any one of the following: evidence of congenital syphilis on physical examination, long bone x-rays compatible with congenital syphilis, a reactive VDRL-CSF, an elevated CSF cell count or protein (without other cause), a reactive FTA-ABS 19S-IgM antibody test, or a reactive IgM ELISA.

**Confirmed**: Demonstration of T. pallidum by darkfield microscopy, fluorescent, antibody, or other specimen stains in specimens from lesions, placenta, umbilical cord, or autopsy material.

Symptoms (Mishell 1997) may appear either before 2 years of age (early) or after 2 years old (late). In early stages, the infant or child can have a simple rash, anemia or hepatitis. In the late stage, symptoms include nerve defects and severe bone deformities such as bony prominence on the forehead in 87% of children with congenital syphilis.

The severity of congenital syphilis depends on the gestational age when the infection was transmitted to the fetus (Arias 1993). It is most severe if the fetus is infected on the first and second trimester, with high likelihood of stillbirth or preterm delivery and being born with congenital syphilis. If infection is transmitted on the third trimester, approximately  $^2/_3$  of these

babies born with congenital syphilis will have no symptoms and will have negative serology. In babies born with congenital syphilis the earliest manifestation is "snuffles" with purulent nasal discharge, sometimes with blood. This discharge is highly infectious (Singh 1999) and syphilis infection can be transmitted to another person through breaks in the skin or mucosal surfaces. Babies who have no symptoms at birth manifest the effects of syphilis at a later age. Neurosyphilis and paralysis sets in as early as 2 years old. Hearing loss begins between 8-10 years of age. Bony deformities start showing between 8-15 years of age. How infectious the child is at this stage depends on whether treatment was initiated early after confirmation of diagnosis and on the level of titers.

## A. Diagnosis of Syphilis in Pregnancy

Frontline use in the Philippine setting would favor the use of Rapid Plasma Reagin (RPR) test primarily because it is easy to use, can be used on-site (see Annex 6) and is relatively inexpensive as illustrated in Table 4 below.

**Table 4: Tests for Syphilis** 

	For Screening		For patient with an ulcer or other lesion	
	RPR	FTA-ABS or TPHA	Dark-field microscopy	
Sensitivity	86-100%	70-100%	74-86%	
Specificity	93-98%	94-100%	85-97%	
Ease of Use	Easy	Complex	easy	
Level of Use	Examination room, On site laboratory	Referral laboratory	Examination room, On site laboratory	
Equipment	rotator	Fluorescent microscope	Light microscope with dark-field condenser	
Specimen	serum	red blood cells	clear serum exudate from the lesion	
Cost of actual (average Php)	100	135	100	

Since the specificity of RPR ranges from 93-98%, there is a possibility of false positives. False positives may occur in autosomal diseases, any febrile illness, intravenous drug use, immunization or laboratory error.

It is recommended to request for RPR-quantitative when an RPR-qualitative test is reactive. Ideally the RPR test result must be released on the same day when the test was done; or as soon as possible to avoid delayed treatment and consequently prevent the transmission of the infection to the child.

A confirmatory treponemal test (TPHA or TPPA) is RECOMMENDED whenever the RPR-qualitative is reactive since false positive results in can occur >50% in low-risk populations<sup>4</sup> and up to 28% in pregnant women<sup>5</sup>.

Most SHCs are referral sites for this confirmatory test. Other possible testing sites for TPHA are central laboratories of the various CHOs, CHDs and hospitals.

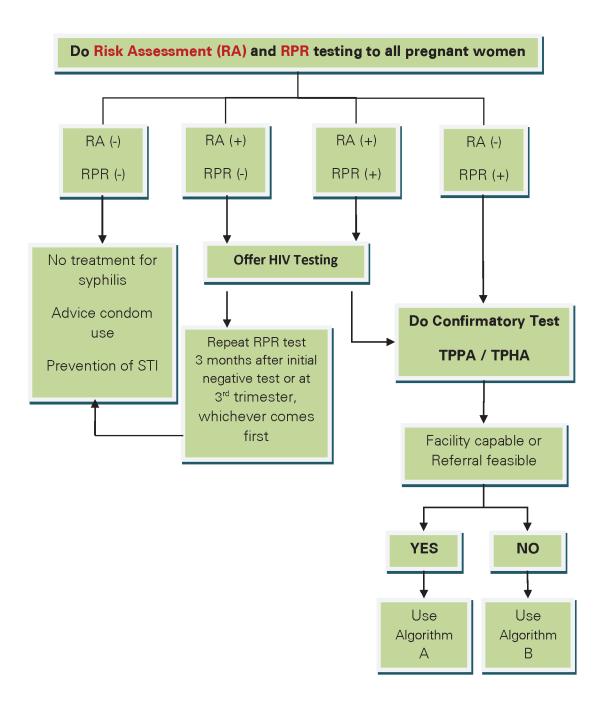
Treatment utilizing the quantitative RPR titer without the confirmatory treponemal test (TPHA or TPPA) can only be done in remote areas where testing or referral for confirmatory test is not possible. In general, 90% of the false-positive titers are less than 1:8.4

<sup>&</sup>lt;sup>4</sup> Sexually Transmitted Disease. Companion Handbook. 2- Edition

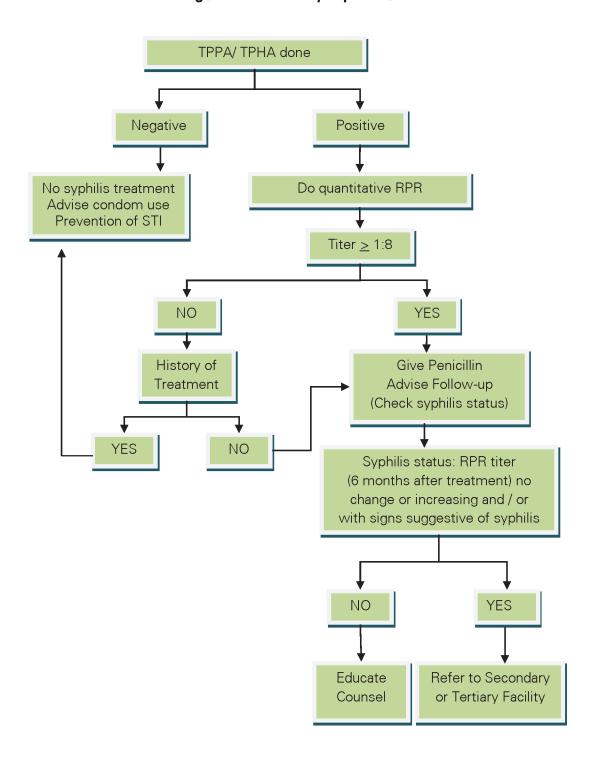
<sup>&</sup>lt;sup>5</sup> Regional Strategy for the Elimination of Congenital Syphilis. WHO 2009

I. Algorithm for Management of a Pregnant Woman following an RPR Test for Syphilis

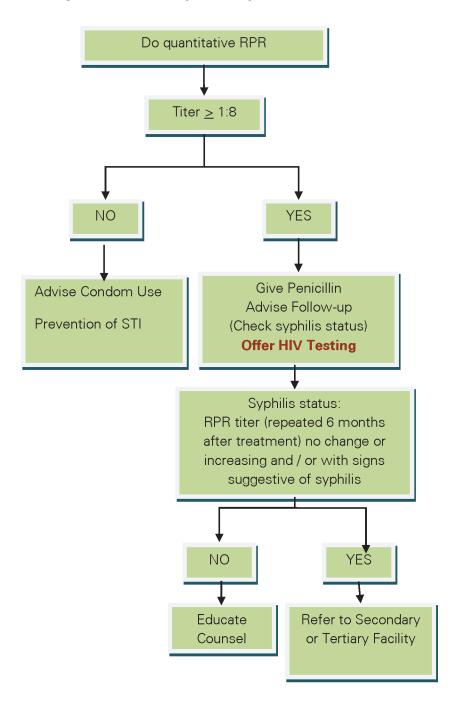
1st Pre-natal Visit



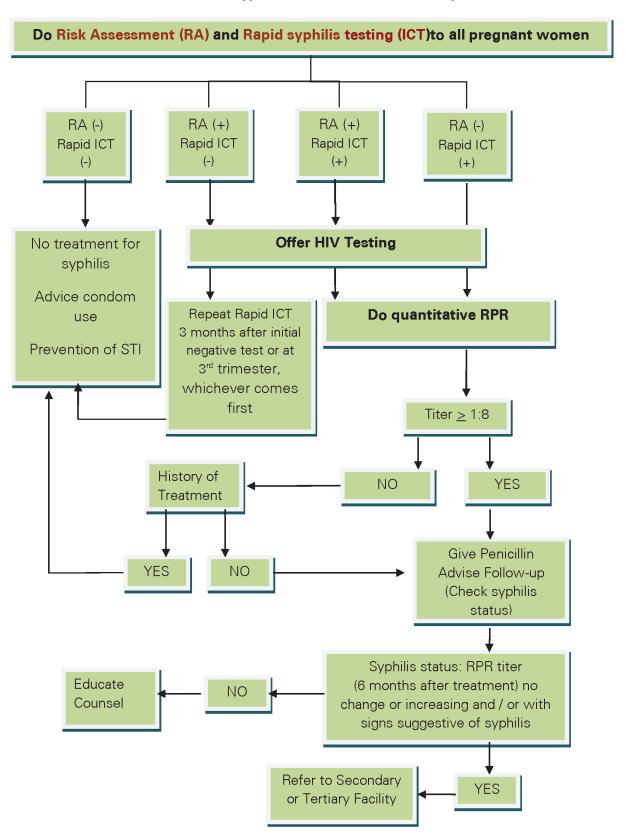
# Algorithm A: Facility capable of TPHA



Algorithm B: Facility NOT capable of TPHA



# II. Algorithm for Management of a Pregnant Woman following a Rapid Test (ICT) for Syphilis on 1st Prenatal Check-up



## Rapid Test for Syphilis (ICT)

In some areas, BFAD-approved rapid syphilis test utilizing the methodology of Immunochromatography with comparable sensitivity and specificity with other treponemal test (TPPA/ TPHA) can be used instead of RPR as initial test for syphilis. With rapid treponemal test (ICT), there is no need to perform TPPA/ TPHA as confirmatory test. A reactive result however, should be followed by a quantitative RPR before therapy to determine and monitor response to treatment (see Algorithm following a Rapid Test (ICT) for Syphilis).

In some scenarios, where performance or referral for quantitative RPR is not available and poor follow-up visits are expected, treatment can be provided immediately to pregnant women who turned out to be reactive to rapid ICT for syphilis.

HIV testing should still be offered to pregnant women who were positive for risks and/ or tested positive for ICT.

## B. Management of pregnant woman with syphilis

 Immediate treatment is provided to a pregnant woman who tests positive on RPR (titers of ≥1:8) or who tests positive on TPHA (without history of previous treatment).

**Treat the mother with Benzathine penicillin**, 2.4 million units, intramuscular, single dose

Adequate penicillin treatment usually ends infectivity within 24-48 hours (WHO 2007). Whatever the stage of infection, even a single dose of penicillin will prevent infection in the fetus. (WHO 2009)

Always do skin test for Penicillin before injection to avoid allergic reaction or anaphylactic shock. After giving the injection, keep the woman for a few minutes and observe for signs of allergy.

If the skin test is positive, desensitization in an appropriate center is recommended.

If the women has allergy to penicillin and desensitization cannot be done, alternate treatment is **Erythromycin 500 mg, 1 tablet 4 times a day for 15 days** for early syphilis. Give the medicine for 30 days for latent syphilis.

Inform the mother that erythromycin does not cross the placenta. Therefore, the baby may still be born with congenital syphilis even if the mother completes her treatment.

#### 2. Advise the woman about implications for the child.

Mothers with syphilis are advised to deliver in a hospital facility. All babies born to mothers with syphilis (treated or not) should be referred to a hospital for assessment and subsequent management.

If the baby cannot be referred to a hospital for any reason, give **Benzathine penicillin** 50,000 units/kg, intramuscular, single dose.

### 3. Advise the woman that her partner has to receive treatment as well.

Treat the partner after a positive serology (same algorithm in diagnosing syphilis) with Benzathine penicillin 2.4 million units, intramuscular injection, single dose.

Advise the woman and partner to use condoms until both have completed the treatment.

#### 4. Follow – up testing

RPR titer decreases fourfold six months after treatment (WHO 2009). The rate of seroconversion depends on the pretreatment titer and stage of disease. If titers do not decrease on re-testing, both mother and her partner should be referred to a tertiary center for further management.

Remind the mother that an RPR may remain reactive for life even after she completes treatment.

# IV. HIV counseling and testing to pregnant woman positive for risk/s or diagnosed with STI including syphilis

All pregnant women found to be positive for risk factors including the diagnosis of STI (including syphilis), should be encouraged to undergo testing for HIV as well, because not only are the risk factors the same for HIV and STI, the risk of acquiring and transmitting HIV especially to the baby is also significantly increased.

Women with syphilis and concurrent HIV infections suffer damages to their brain and heart faster than those with syphilis alone. It is therefore important to identify possible HIV among

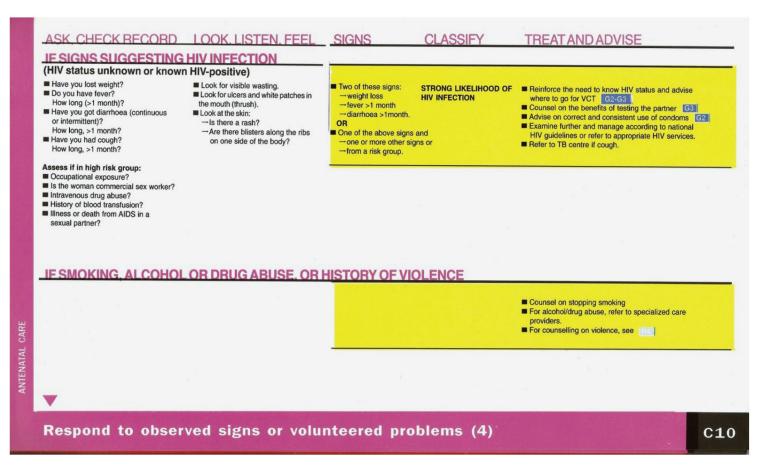
those who have risks. It is also possible that a mother may not have syphilis, but if she has other sexual risks, she can still transmit HIV to her child.

Referral to a HCT (HIV Counseling and Testing) center like SHC or HIV treatment hub should be done if HCT services are not available in the facility.

The PCPNC (see below) provides a section for assessing HIV status.

All HIV positive pregnant women should then be referred to the nearest HIV treatment hubs for other PMTCT services. The Center for Health Development can provide updated list of HIV treatment hubs in their respective region.

From the Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice in Philippine setting. DOH 2003.



From the Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice in Philippine setting. DOH 2003.

#### MONITORING AND EVALUATION

#### Indicators set for monitoring:

Indicator 1: Proportion of pregnant women attending antenatal clinics tested for syphilis.

**Numerator**: Number of pregnant women attending antenatal clinics, whose blood has been screened for syphilis during a specified period x 100

**Denominator:** Total number of pregnant women attending antenatal clinics during the specified period

**Indicator 2:** Proportion of pregnant women attending antenatal clinics with positive serology for syphilis.

**Numerator:** Number of pregnant women attending antenatal clinics, whose blood has been screened and diagnosed\* with syphilis during a specified period x 100

**Denominator:** Total number of pregnant women whose blood has been screened for syphilis during the specified period

\*Confirmed by TPHA or RPR Quantitative titer at ≥1:8 dilution if TPHA not available

Indicator 3: Proportion of seropositive pregnant women who are treated with benzylpenicillin

**Numerator:** Number of pregnant women attending antenatal clinics diagnosed with syphilis and treated with benzylpenicillin x 100

**Denominator:** Total number of pregnant women who tested positive for syphilis during the specified period

Indicator 4: Percent of Pregnant Women Referred for HIV Testing (District Health Facility)

**Numerator**: No. of pregnant women positive for Syphilis and/or Risk Assessment referred for HIV testing at SHC or CHO

**Denominator:** No. of pregnant women positive for Syphilis and/or Risk Assessment

# The flow of reports is illustrated below.

