

# SYPHILIS BIRTH PLAN

To Midwife / Obstetric Team

No need to contact on-call  
paediatric team from syphilis  
viewpoint..... ☐

Contact on-call  
paediatric team when  
baby is delivered..... ☐

Send placenta for histology  
and PCR if treatment  
indicated for infant..... ☐

Mother's name ..... Mother's DOB .....

Mother's address .....

Mother's hospital number ..... Mother's GUM number .....

Mother's consent to  
record GU number in  
hospital records:..... ☐

Mother's phone numbers: Mobile .....  
Landline .....

Estimated date of delivery .....

## MATERNAL SYPHILIS DIAGNOSIS:

Adequately treated before  
this pregnancy..... ☐

Early  
latent ..... ☐

Late  
latent ..... ☐

Other examples:

.....primary ☐

.....secondary ☐

..... inadequately treated/treatment not documented ☐

..... possibility of re-infection from untreated partner ☐

..... unbooked ☐

## GUM ADVICE TO PAEDIATRICIANS

Infant requires no  
physical examination  
above routine. No  
syphilis serology ..... ☐

OR

Assess infant clinically: if  
no physical signs of syphilis  
check 'initial blood tests'  
(see page 2) ..... ☐

OR

Treat infant at birth after  
clinical assessment, 'initial  
blood tests' and 'further  
tests' (see page 2) ..... ☐

**Please discuss all infant blood test results with GUM & Paediatric infectious diseases team.**

Out of hours, contact the GUM or infectious diseases registrar on call via switchboard

Signed..... (GUM Consultant) ..... Date .....

**COPIES** (of pages 1–4 only) **TO CONTACTS:**  
GP gets copy of page 1 only

Matron, Delivery Suite; ..... Neonatal consultant,  
Paediatric ID Consultant ..... Obstetric Consultant,  
Screening Midwife

## PHYSICAL SIGNS OF EARLY CONGENITAL SYPHILIS

- Jaundice, anaemia, generalised lymphadenopathy, hepatosplenomegaly, non-immune hydrops, pyrexia, failure to move an extremity (pseudoparalysis of Parrot), low birth weight.
- Skin rash (usually maculo-papular but almost any form of rash is possible); palms and soles may be red, mottled and swollen. Vesicles or bullae may be present.
- Condylomata lata (flat, wart-like plaques in moist areas such as perineum)
- Osteochondritis, periosteitis (elbows, knees, wrists)
- Ulceration of nasal mucosa, rhinitis ('snuffles' usually after the first week of life)

**Approximately half of all neonates with congenital syphilis are normal on initial examination**

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## INITIAL BLOOD TESTS

Send a venous blood sample for serum RPR and treponemal IgM (take blood from the neonate, not the umbilical cord).

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## ADDITIONAL TESTS ON INFANT IF LESIONS PRESENT (see page 4)

- 1 T pallidum polymerase chain reaction (PCR) test
  - 2 Dark ground microscopy (DGM)
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## FURTHER TESTS IF TREATMENT INDICATED (see below)

- 1 FBC, U+E, LFT, ALT/AST
  - 2 HIV antibody
  - 3 Lumbar puncture for CSF WCC, VDRL or RPR, TPPA, protein
  - 4 Long bone X-rays for osteochondritis and periostitis
  - 5 Chest X-ray for cardiomegaly
  - 6 Cranial U/S scan
  - 7 Ophthalmology assessment for interstitial keratitis
  - 8 Audiology for 8th nerve deafness
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## INDICATIONS FOR FURTHER TESTS AND TREATMENT

- 1 Mother inadequately treated (GUM consultant will advise, see above)
  - 2 Infant has clinical signs consistent with syphilis
  - 3 Infant's RPR/VDRL titre 4x mother's on two occasions (e.g mother's RPR 1:4, infant's RPR 1:16). Sample from mother to be taken no greater than 4 weeks before that of infant.
  - 4 Infant has positive treponemal IgM test together with corroborative history, clinical signs. GUM consultant will advise.
  - 5 Infant has positive dark ground microscopy
  - 6 Infant has positive T pallidum PCR test together with corroborative history, clinical signs. GUM consultant will advise.
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## TREATMENT OF NEWBORN

Benzylpenicillin 25 mg/kg 12hrly IV for 7 days, then 8 hrly on days 8, 9 and 10 (total of 10 days)

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## INFANT FOLLOW-UP

Ideally, this should be done in liaison with consultant colleague in genitourinary medicine.

<p><b>1</b> <b>Infants treated for syphilis at birth</b> <i>Months 1 and 3:</i> check RPR and treponemal IgM.</p> <p><i>Month 6:</i> check RPR</p> <p><i>Month 12:</i> check RPR. Discharge if RPR has achieved sustained 4x drop from peak level.</p>	<p><b>2</b> <b>Infant not treated for syphilis</b> RPR &lt;4 x mother's, IgM negative at birth</p> <p><i>Month 3:</i> check RPR and treponemal IgM.</p> <p><i>Month 6:</i> check RPR- if negative discharge, if positive repeat at 12 months.</p> <p><i>Month 12:</i> RPR negative, no further follow-up.</p> <p><i>Month 12:</i> RPR still positive, discuss with GUM colleague.</p> <p><i>(Note: the RPR is usually negative by six months).</i></p>	<p><b>3</b> <b>Infant not treated for syphilis and RPR and IgM negative at birth</b> <i>Month 3:</i> repeat RPR and IgM and discharge if still negative.</p> <p><i>Month 3:</i> RPR and/or IgM positive- discuss with GUM colleague.</p>
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Neonatal RPR should be negative by 6 months of age and the TPPA by 18 months of age when they are reactive as a result of passive transfer of maternal antibodies.

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## SIBLINGS FOR SCREENING

None:..... ☐

Name(s): .....	DOB:.....	Sex:.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

## GUIDE TO INFANT LABORATORY TESTS

### **Treponemal IgM**

A positive treponemal IgM test is supportive of a diagnosis of congenital syphilis, but must be interpreted in conjunction with the history, clinical signs and results of other syphilis blood tests. A negative IgM test does not exclude infection as the IgM response may be delayed or suppressed.

### **Rapid plasma reagin (RPR) or Venereal disease research laboratory (VDRL) test**

The RPR and VDRL are different versions of the same test and availability will vary between laboratories. Passive trans-placental transfer of maternal IgG antibodies may cause a false positive RPR/VDRL test in the newborn but these usually revert to negative by 6 months. A positive RPR/VDRL test at a titre four-fold or more that of the mother (e.g. mother 1:4, infant 1:16) supports a diagnosis of congenital syphilis, and should be repeated. Ideally, maternal and infant tests should be timed as closely as possible and no greater than one month apart.

**A neonatal RPR/VDRL titre less than four-fold that of the mother's (e.g. mother 1:16, infant 1:8) does not exclude congenital syphilis. Please discuss all neonatal test results with GUM and Paediatric ID consultant.**

### **Full blood count**

May show non-haemolytic anaemia, leucocytosis or leucopenia, thrombocytopenia, polychromasia, or erythroblastaemia.

### **Liver function tests/transaminases**

Syphilitic hepatitis may cause elevated levels of alkaline phosphatase, AST/ALT, bilirubin.

### **U+E, creatinine**

Syphilis can cause glomerulonephritis resulting in uraemia.

### **Polymerase chain reaction (PCR) testing**

Ulcers, nasal discharge, mucous membrane lesions or moist skin rashes can be swabbed and the sample sent in viral transport medium (to Clinical Virology, Manchester Royal Infirmary) for T pallidum PCR testing.

### **Dark ground microscopy (DGM)**

Ulcers, nasal discharge, mucous membrane lesions or moist skin rashes can be sampled and used to directly visualise T pallidum. However, specimen collection and microscopy require prior training. Microscopy should take place as soon as possible after the specimen is obtained. Call GU Medicine if you wish to perform DGM.

### **Placenta**

The syphilitic placenta may appear macroscopically normal. If the fetus is severely affected by syphilis the placenta may appear paler, larger and thicker than normal. Histology of the placenta and cord (with special staining) may provide evidence of congenital infection.

### **Radiology**

Most bone lesions in congenital syphilis are not clinically apparent. However, osteochondritis, periostitis and osteomyelitis are frequently present, most often in the long bones and ribs. Periostitis of the skull can produce frontal bossing on x-ray.

## FOR GU MEDICINE USE

### MATERNAL FACTORS

#### DECREASING NEONATAL RISK

Treatment completed .....	<input type="checkbox"/>
Treated with penicillin .....	<input type="checkbox"/>
Treatment completed >30 days pre-delivery .....	<input type="checkbox"/>
Late syphilis .....	<input type="checkbox"/>
4x drop in RPR achieved .....	<input type="checkbox"/>
Final RPR titre <1 in 2 (VDRL in 1) .....	<input type="checkbox"/>
HIV negative .....	<input type="checkbox"/>

#### INCREASING NEONATAL RISK

<b>Partial or no treatment*</b> .....	<input type="checkbox"/>
<b>Treated with non-penicillin*</b> .....	<input type="checkbox"/>
<b>Treatment &lt;30 days before delivery*</b> .....	<input type="checkbox"/>
Early syphilis .....	<input type="checkbox"/>
4x drop in RPR not achieved .....	<input type="checkbox"/>
Final RPR titre >1 in 4 (VDRL >1 in 2) .....	<input type="checkbox"/>
HIV positive .....	<input type="checkbox"/>

**\*The presence of any one of the 'bold' (asterisk) factors above constitutes inadequate maternal treatment and requires treatment of the infant at birth.**

**Congenital syphilis can still occur despite the absence of any of the three 'bold' factors.**

Copy pages 1–4 to those on circulation list. Copy pages 1–5 to be retained in GUM notes