# MANAGEMENT OF INFANTS BORN TO MOTHERS WITH POSITIVE SCREENING FOR SYPHILIS IN PREGNANCY

## Antenatal Screening and Management of Identified cases

Mother EIA positive: Laboratory performs VDRL and TPHA testing

↓

- Lab. informs Antenatal Screening Co-ordinator [ASC] of all EIA screen positive results by automated e-mail link.
- Results documented in hospital notes.
- Document in hand held notes with maternal consent.
- Women's Health Advisor [WHA] contacts the woman to inform her of result, establish if known history of treated syphilis and to arrange an appointment if untreated infection at the Claude Nicol Clinic (CNC).

↓

- Treatment organised by GUM consultant according to local guidelines.
- Note: if > 20 weeks gestation - admission to Antenatal Day Assessment Unit required for first injection. Observe for minimum 6 hours for signs of premature labour. Subsequent treatment at CNC.

↓

- Treatment completed: WHA sends treatment summary letter to Neonatology link consultant to initiate paediatric review after birth.
- Copy of letter to: Consultant Obstetrician [for hospital notes], GP, Antenatal Screening Co-ordinator.

↓

- Paediatric follow- up of newborn after birth unless mother adequately treated prior to this pregnancy: Refer to neonatal algorithm.

Contacts

**Virology**
- Dr Mohammed Hassan Ibrahim

**Link Health Advisors**
- Rosie Jennings, Claude Nicol Centre, Royal Sussex County Hospital,
- Ext 3867or 4716; work mobile 07919627603

**Link GUM Consultant**
- Deborah Williams, Claude Nicol Centre, Royal Sussex County Hospital

**Link Neonatal Consultant**
- Rob Bomont, Trevor Mann Baby Unit, RSCH*

**Antenatal Screening Co-ordinator**
- Karen Creed

**Postnatal Management of the Newborn**

- Congenital syphilis is uncommon in the UK
- 70% of babies are asymptomatic at birth

Signs and Symptoms of Congenital Syphilis

**Early:**

- Skin rash (usually maculopapular, but almost any form of rash is possible); the 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 the perineum)
- Ulceration of nasal mucosa, rhinitis (snuffles – usually after 1st week of life)
- Jaundice, anaemia, generalised lymphadenopathy, hepatosplenomegaly, non-immune hydrops
- Chorioretinitis, meningitis (pathologic CSF 40%)
- Osteochondritis (90%), periostitis (elbows, knees, wrists), failure to move an extremity (pseudoparalysis of Parrot)
- Low birth weight and pyrexia

**Late (usually after 2 years):**

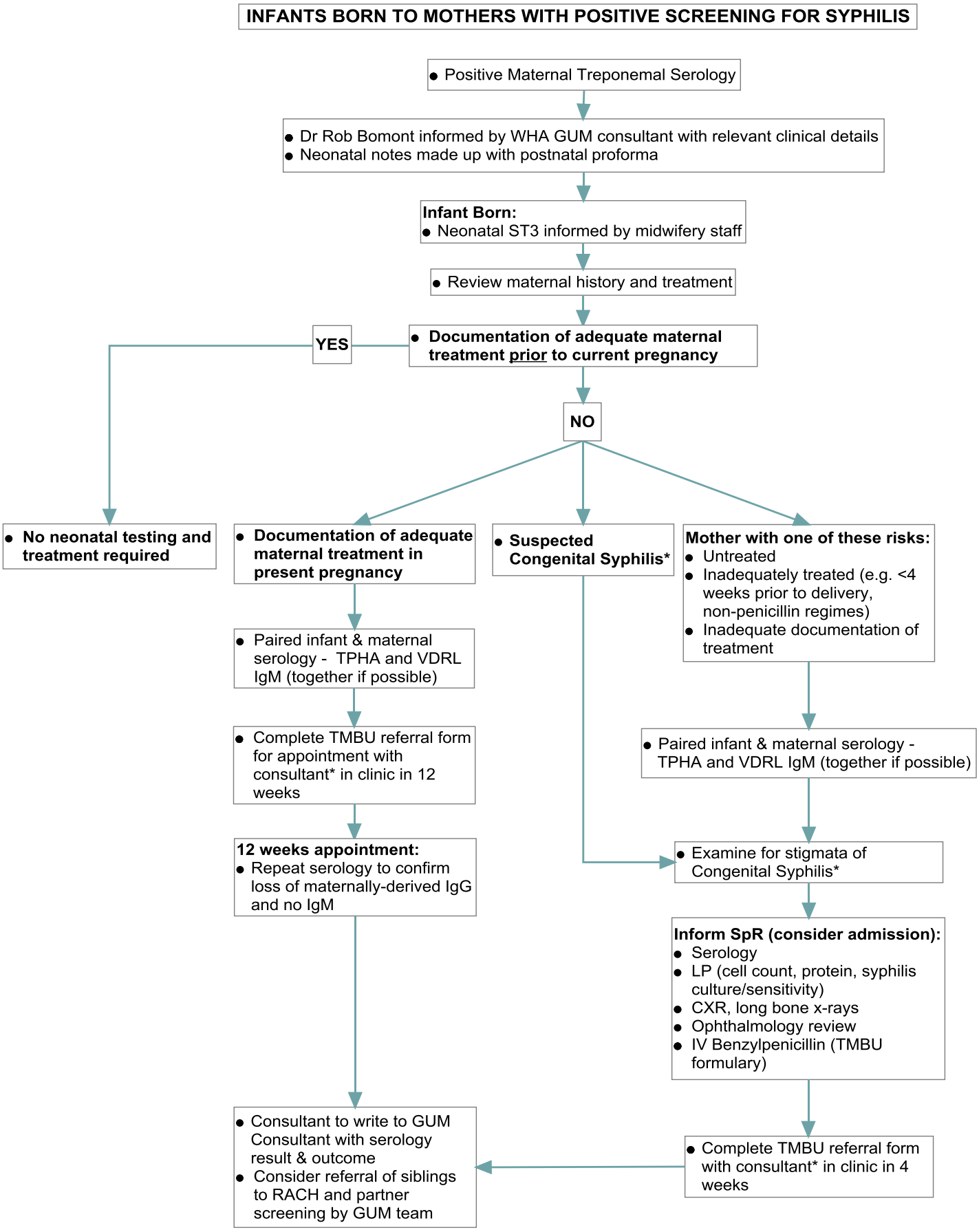
- Frontal bossing, saddle nose, small maxilla/protuberant mandible, high arched palate, Hutchinson's incisors, Mulberry molars
- Keratitis (40 %), deafness, neurological or gummatous involvement
- Clutton's joints

General Considerations for Diagnosis and Treatment

- **DO NOT SEND CORD BLOOD**
- Direct demonstration of *T. pallidum by* dark ground microscopy (done by GUM team, if required) and/or PCR (send away, if required) of exudates from suspicious lesions, or body fluids, e.g. nasal discharge.
- If the infant's serum is positive on screening (Treponemal EIA IgG), perform treponemal IgM EIA, quantitative VDRL/RPR and quantitative TPHA tests on the infant and mother in parallel. A positive IgM EIA test and/or a sustained fourfold or greater difference of VDRL/RPR titre or TPHA titre above that of the mother (confirmed on testing a second specimen from the infant) indicates a diagnosis of congenital infection and the need for treatment.
- If the IgM test is negative, the other tests are reactive with titres less than fourfold higher than those of the mother and there are no signs of congenital syphilis, then follow-up without treatment.
- If the infant's serum is negative on screening, and there are no signs of congenital infection, no further testing is necessary.
- Further investigations required: full blood count, liver function, electrolytes and CSF (cells, protein, serological tests).
- Newborns without or with inadequately documented treatment following identification of positive treponemal serology should be treated until full microbiological results are available.
- First-line treatment is Benzyl-Penicillin-Sodium (see TMBU formulary).

Follow-up for confirmed Congenital Syphilis

- Neurodevelopmental, audiological and ophthalmological follow-up.
- Repeat reactive tests at 3, 6 and 12 months or until all tests become negative (usually by 6 months). Repeat IgM at 3 months in case the infant's response is delayed or suppressed, LP after 6 months (if CNS initially involved).
- Repeat treatment, if symptoms persist or recur; if titre not ≤ ¼ of initial value or increases; if abnormal CSF control.


INFANTS BORN TO MOTHERS WITH POSITIVE SCREENING FOR SYPHILIS
Positive Maternal Treponemal Serology
Dr Rob Bomont informed by WHA GUM consultant with relevant clinical details
Neonatal notes made up with postnatal proforma
Infant Born:
Neonatal ST3 informed by midwifery staff
Review maternal history and treatment
Documentation of adequate maternal treatment prior to current pregnancy
YES
NO
No neonatal testing and treatment required
Documentation of adequate maternal treatment in present pregnancy
Suspected Congenital Syphilis*
Mother with one of these risks:
Untreated
Inadequately treated (e.g. <4 weeks prior to delivery, non-penicillin regimes)
Inadequate documentation of treatment
Paired infant & maternal serology - TPHA and VDRL IgM (together if possible)
Complete TMBU referral form for appointment with consultant* in clinic in 12 weeks
Paired infant & maternal serology - TPHA and VDRL IgM (together if possible)
12 weeks appointment:
Repeat serology to confirm loss of maternally-derived IgG and no IgM
Examine for stigmata of Congenital Syphilis*
Inform SpR (consider admission):
Serology
LP (cell count, protein, syphilis culture/sensitivity)
CXR, long bone x-rays
Ophthalmology review
IV Benzylpenicillin (TMBU formulary)
Consultant to write to GUM Consultant with serology result & outcome
Consider referral of siblings to RACH and partner screening by GUM team
Complete TMBU referral form with consultant* in clinic in 4 weeks

**Postnatal Advice for Infant of: _____**

**Hospital No: _____** **EDD: _____**

**Maternal Syphilis Diagnosis**

*Option to be chosen for inclusion in advice letter*

**Treatment Details:** Mother has been adequately treated prior to this pregnancy with no risk of congenital syphilis.

**At Birth**

Infant requires no additional physical examination and does **NOT** require laboratory test for syphilis.

**Follow-Up:** No follow up required for syphilis

***Tick to select*** ☐

---------- **OR** ----------

**Treatment Details:** Mother treated for syphilis during this pregnancy with low risk of congenital syphilis.

**At Birth**

Assess infant for signs of congenital syphilis. If no concerns perform routine syphilis screening bloods (not cord blood) – request "Syphilis screen + VDRL + treponemal IgM".

**Follow-Up:** Refer to outpatients for review and organise pre-clinic bloods, requesting "Syphilis screen + VDRL + treponemal IgM".

***Tick to select*** ☐

---------- **OR** ----------

**Treatment Details:** There is a significant risk of congenital syphilis.

**At Birth**

Assess infant for signs of congenital syphilis (see guideline) Undertake FBC, U+E, LFT's, ALT and request "Syphilis screen + VDRL + Treponemal IgM". Discuss with neonatal SpR and GUM SpR re need for admission, further evaluation including LP and treatment.

***Tick to select*** ☐