Trust Guideline for the Management of Herpes Simplex Virus (HSV) in Pregnancy

Document Control:

For Use In:	NNUH/iCash		
Search Keywords	Herpes simplex virus, pregnancy, maternal management, neonatal treatment		
Document Author:	Lauren McQuillan, ST3 O&G Trainee Victoria Maxey Consultant Obstetrician		
Document Owner:	Victoria Maxey Consultant Obstetrician		
Approved By:	Maternity Guidelines Committee CGAP		
Ratified By:	Clinical Safety and Effectiveness Sub-Board		
Approval Date:	19th October 2024	**Date to be reviewed by:** 23/08/2027 This document remains current after this date but will be under review	19th October 2027
Implementation Date:	N/A		
Reference Number:	5669		

Version History:

Version	Date	Author	Reason/Change
V4.1	09/08/2021	Dr Asma Naqi	Reviewed and amended
V5.0	18/08/2024	Dr Lauren McQuillan	Clarify role of prophylaxis in recurrent herpes, pathway for Aciclovir prescription in recurrent herpes

Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:

- Maternity Guidelines Committee
- Community Midwifery Matron
- Antenatal Clinic Team Leader
- Antenatal Service Direction, Consultant Obstetrician

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to NNUH and iCash; please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

Inclusivity

Within this document we use the terms pregnant women, her/she. However, It is important to acknowledge that it is not only people who identify as women for whom it is necessary to access care. Maternity services and delivery of care must therefore be appropriate, inclusive and sensitive to the needs of those individuals whose gender does not identity does not align with the sex they were assigned at birth.

Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

Contents Page

Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

1: Management Pathways

Identification of women with herpes in pregnancy

Pathway for provision of Prophylactic Aciclovir for patients with recurrent herpes

Trust Guideline for the Management of Herpes Simplex Virus (HSV) Infection in Pregnancy

1. Introduction

1.1. Rationale

Neonatal Herpes is a rare but serious infection with a high morbidity and mortality. Neonatal infection occurs due to infection at the time of birth, whereas congenital herpes is extremely rare and occurs by transfer of infection whilst in utero.

It is caused by transmission of herpes simplex virus type-1 (HSV-1) or herpes simplex virus type-2 (HSV-2), most commonly due to contact with infected maternal secretions but up to 25% of cases are linked to postnatal infection.

Transmission from the mother to fetus is dependent on:

- *the type of maternal infection (primary or secondary)*
- *transplacental maternal neutralising antibodies*
- *duration of ruptured membranes before delivery*
- *use of fetal scalp electrode*
- *mode of delivery*

1.1.1. Risks to mother:

Disseminated herpes is a rare condition in adults but more commonly reported in pregnancy, particularly in the immunocompromised. It may present with encephalitis, hepatitis, disseminated skin lesions or a combination of these conditions. The maternal mortality associated with this condition is high.

Immunocompromised women are at increased risk of more severe and frequent symptomatic recurrent episodes of genital herpes during pregnancy and of asymptomatic shedding of HSV at term. The frequency of transmission in such cases is higher (30%-50%) than amongst those who reactivate HSV-2 at delivery (<1%).

1.1.2. Risks to fetus:

Risk of neonatal transmission to the fetus is greatest when there is primary infection in the third trimester, particularly when primary infection occurs within 6 weeks of delivery, as viral shedding may persist and the baby is likely to be born before the development of protective maternal antibodies.

Neonatal herpes is classified into 3 groups: localised to skin, eyes or mouth; local central nervous system; and disseminated infection. Disseminated herpes is more common in preterm infants and occurs almost exclusively as a result of primary infection in the mother.

1.2. Objective

This document will cover only herpes simplex virus (HSV).

1.3. Scope

The scope of this guideline is the inpatient and outpatient management of genital herpes simplex virus infection in the antenatal, intrapartum and postnatal periods. This document was produced in accordance with the guidance set out in a joint BASHH and RCOG guideline on the management of herpes in pregnancy issued in October 2014. This national guideline elaborates on the risks to mothers and babies that are touched on in this guideline.

1.4. Glossary

The following terms and abbreviations have been used within this document:

Term	Definition
BASHH	British Association for Sexual Health and HIV
RCOG	Royal College of Obstetricians and Gynaecology
HSV	Herpes Simplex Virus
HSV-1	Herpes Simplex Virus 1
HSV-2	Herpes Simplex Virus 2
PCR	Polymerase chain reaction
NICU	Neonatal intensive care unit
PPROM	Pre-term, pre-labour rupture of membranes
NNUH	Norfolk and Norwich University Hospital
HIV	Human Immunodeficiency Virus
BHIVA	British HIV Association
E3	EuroKing 3 (maternity digital health record)
ANC	Antenatal Clinic

2. Responsibilities

All maternity staff who provide counselling or manage HSV in pregnancy should ensure they remain up to date with this clinical guidance.

3. Policy Principles

The key concern involving HSV is that neonatal transmission. This is influenced by primary vs secondary infection and this guideline sets of ways of minimising risks in both cases.

3.1. Primary Herpes

3.1.1. First or second trimester acquisition (until 27+6 weeks of gestation) – Antenatal Care

Antenatal women with suspected first genital HSV infection should be referred to a genitourinary medicine clinic:

iCash 1A Oak Street, Norwich, Norfolk, NR3 3AE
Tel: 0300 300 3030

Appointments can be made by completing the online booking form or calling the clinic on the number above.

The reviewing iCash clinicians should send swab samples to Virology to confirm the diagnosis by polymerase chain reaction (PCR), advise on management and arrange a screen for other sexually transmitted infections. The swabs are the green and white virology swabs.

However, treatment should not be delayed. Management of the woman should be in line with her clinical condition and will involve:

- *Oral (or intravenous for disseminated HSV infection) Aciclovir in standard doses of 400 mg three times daily, usually for 5 days. Aciclovir is not licensed for use in pregnancy but is considered safe and has not been associated with an increased incidence of birth defects.*
- *Paracetamol and topical lidocaine 2% gel can be offered as symptomatic relief.*
- *Any women who had first or second trimester infection should be offered daily suppressive Aciclovir 400 mg three times daily from 36 weeks of gestation to reduce HSV lesions at term.*

Women with suspected primary genital HSV infection who are having midwifery-led care should be referred for review by an obstetrician, ideally after review by a genitourinary medicine physician to plan ongoing care.

Providing that labour does not ensue within the next 6 weeks, the pregnancy should be managed expectantly and vaginal delivery anticipated.

3.1.2. Third trimester acquisition (from 28 weeks of gestation) – Antenatal Care

Treatment for antenatal women with primary herpes infection should not be delayed. Management of the woman should be in line with her clinical condition and will involve:

- *Use of oral (or intravenous for disseminated HSV infection) Aciclovir in standard doses (400 mg three times daily, usually for 5 days).*

- *In the third trimester, treatment will usually continue with daily suppressive Aciclovir 400 mg three times daily until delivery.*

Caesarean section should be the recommended mode of delivery for all antenatal women developing first (primary) episode of genital herpes in the third trimester. This is particularly applicable to those developing symptoms within 6 weeks of expected delivery, as the risk of neonatal transmission of HSV is very high at 41%.

It can be difficult to distinguish clinically between primary and recurrent genital HSV infections, as in up to 15% of cases where a woman presents with a first episode of clinical HSV infection, it will be a recurrent infection.

Antenatal women presenting with their first episode genital herpes in the third trimester, particularly within 6 weeks of expected delivery should have type-specific HSV antibody testing (IgG antibodies to HSV-1 and HSV-2) at presentation. For these women, characterising the infection will influence the advice given regarding mode of delivery and risk of neonatal herpes infection. The presence of antibodies of the same type as the HSV detected by PCR from genital swabs would confirm this episode to be a recurrence rather than a primary infection and a caesarean section would not be indicated to prevent neonatal transmission unless requested by the woman.

It may take more than a week for the results of HSV serology to become available. Therefore, an initial plan of delivery should be based on the assumption that all first episode lesions are primary genital herpes. This plan can then be modified if HSV antibody test results subsequently confirm a recurrent, rather than primary, infection. Interpretation of HSV serology can be complicated, for this reason the results should be discussed with a virologist.

*Referral to antenatal clinic should also be undertaken with planned review within a week for **primary** herpes presenting within the third trimester. Individual cases may require more rapid escalation, particularly when close to estimate due date.*

3.1.3. Management of primary episode at the onset of labour

Caesarean section is recommended to all women presenting with primary episode genital herpes lesions at the time of delivery, or within 6 weeks of the expected date of delivery, in order to reduce exposure of

the fetus to HSV (unless this is clinically inappropriate such as in advanced labour or the patient declines).

There is some evidence to suggest that the benefit of caesarean section is reduced if the membranes have been ruptured for greater than 4 hours. However, there may be some benefit in performing a caesarean section even after this time interval. Therefore any woman with primary herpes with ruptured membranes needs to present to the maternity assessment unit urgently.

Consider giving intravenous Aciclovir to the mother (5 mg/kg every 8 hours) and subsequently to the neonate (intravenous Aciclovir 20 mg/kg every 8 hours) for those mothers opting for vaginal delivery, in contrast to the recommendation of a caesarean section. It is unknown whether intrapartum Aciclovir reduces the risk of neonatal HSV infection. Where primary episode genital herpes lesions are present at the time of delivery and the baby is delivered vaginally, the risk of neonatal herpes is estimated to be 41%.

Although vaginal delivery should be avoided if possible, in women who deliver vaginally in the presence of primary genital herpes lesions, invasive procedures, such as application of foetal scalp electrodes, foetal blood sampling, artificial rupture of membranes and/or instrumental deliveries should be avoided.

3.1.4. Primary genital HSV infection in PPROM

There is limited evidence to inform best obstetric practice when PPROM is complicated by primary HSV infection. Management should be guided by multidisciplinary team discussion involving the obstetricians, neonatologists and genitourinary medicine physicians and will depend on the gestation that PPROM occurred.
If the decision is made for immediate delivery then the anticipated benefits of caesarean section will remain. If there is initial conservative management, the mother should be recommended to receive intravenous Aciclovir 5 mg/kg every 8 hours.

Prophylactic corticosteroids should be considered to reduce the implications of preterm delivery upon the infant. If delivery is indicated within 6 weeks of the primary infection, delivery by caesarean section may still offer some benefit despite the prolonged rupture of membranes.

3.2. Recurrent Herpes

Recurrent episodes may be more frequent in pregnancy, however are associated with low risk to the fetus. Recurrent herpes at the time of delivery can be asymptomatic or unrecognised but may cause the localised forms of neonatal herpes: both local CNS disease and skin, eye and mouth infection. Transplacentally acquired HSV antibodies do not prevent herpes virus spreading to the brain of the neonate.

3.2.1. Antenatal care for patients with a history of recurrent herpes at booking

The majority of recurrent episodes of genital herpes are short-lasting and resolve within 7–10 days without antiviral treatment. Supportive treatment measures using saline bathing and analgesia with standard doses of paracetamol alone will usually suffice.

Women with recurrent genital herpes should be informed that the risk of neonatal herpes is low, even if lesions are present at the time of delivery (0-3% for vaginal delivery). Vaginal delivery should be anticipated in the absence of other obstetric indications for caesarean section or maternal request.

<u>Community Midwife Counselling at booking appointment</u>

At booking, community midwives should discuss the risk of recurrence in pregnancy with patients identified to have a history of herpes. Suggested wording below can be used to facilitate this.

"Genital herpes is a common sexually transmitted infection caused by the herpes simplex virus (HSV) causing ulcers in the genital and anal area. Herpes simplex can also occur around the mouth and nose (cold sores) and fingers and hand (herpetic whitlows). In women, genital herpes can occur on the skin in and around the vagina, the vulva (lips around the opening of the vagina), the urethra (tube through which urine empties out of the bladder) and the anus (back passage).

If you have been affected by genital herpes before you became pregnant, your immune system will provide protection to your baby in pregnancy. Recurrent episodes of genital herpes during pregnancy do not affect your baby.

If you have a recurrent episode when you go into labour and deliver you baby vaginally, the risk to your baby is low (0-3% risk of neonatal transmission of herpes). Most women who have recurrent genital herpes can have a vaginal birth.

We routinely offer prophylactic (preventative) antiviral treatment to reduce the chance of herpes lesions being present at delivery to minimise the small risk of transmission to baby". If lesions are present the neonatal team are likely to recommend treatment with intravenous Aciclovir (via a drip into their arm/hand) for baby, to reduce the small risk of transmission.

To aid your decision making for birth, if you experience herpes lesions beyond 36 weeks of pregnancy let your community midwife know. Your midwife will arrange an appointment with an obstetrician in the antenatal clinic to discuss and confirm your planned mode of birth in the event that lesions remain present at the time labour starts. There is no national recommendation against vaginal delivery."

The RCOG information leaflet 'Genital herpes and pregnancy' should be given to patients at the booking appointment, which can be found here (TrustDocs ID 23262).

Neonatal Alert

An NICU alert should be completed and an alert added to E3 by the community midwife at the booking appointment

Contacting Antenatal Clinic to initiate Aciclovir prescription

In anyone with a history of herpes infection, daily suppressive Aciclovir 400 mg three times daily should be offered from 36 weeks of gestation. The risks, benefits and alternatives to daily suppressive therapy should be discussed with women who have a history and prophylaxis initiated for women who desire intervention. There are no known risks of use in pregnancy.

Community midwives should contact the antenatal clinic via email to facilitate prescription of Aciclovir from 36 weeks:

(ANCMidwives@nnuh.nhs.uk)

This will be prescribed by an ANC doctor working in the clinic during office hours. Once prescribed by the doctor, a signed and dated letter will be sent from antenatal clinic advising the patient to collect the Aciclovir from the hospital pharmacy (see appendix 1). This letter

contains more specific information regarding the use of Aciclovir in pregnancy.

<u>Recurrent Herpes Lesions beyond 36 weeks (Community Midwife)</u>

From 36 weeks gestation patients reporting a new episode of recurrent herpes should inform their community midwife who will refer them to ANC for an Obstetric review within a week. This review will enable the discussion of the risks of vaginal birth with recurrent lesions present and the patients planned mode of delivery preference. Women may choose a maternal request caesarean section to minimise the small but existing risk of birthing with recurrent herpes lesions present (0-3% neonatal transmission). There is no national recommendation to recommend a caesarean birth. The formulated birth plan would then be reviewed on admission in labour depending on the ongoing presence of lesions and the patient's wishes.

Sequential PCR testing during late gestation to predict viral shedding at term or at delivery to identify women who are asymptomatically shedding HSV, is not indicated.

3.2.2. Management of recurrent genital HSV infection at the onset of labour

Women with recurrent genital herpes lesions at the onset of labour should be offered vaginal delivery. A caesarean section delivery can be considered, but the risk to the mother and future pregnancies should be set against the small risk of neonatal transmission of HSV with recurrent disease (0–3% for vaginal delivery).

To aid decision making in this situation women who have experienced lesions >36 weeks should have been referred to ANC to discuss birth options and the small but not absent risk of neonatal transmission. This ANC review should be taken into account to inform staff of existing patient wishes with the birth plan further revised depending on the current clinical situation and patients wishes.

It has been reported that invasive procedures increase the risk of neonatal HSV infection. However, given the small background risk (0–3%) of transmission in this group, the increased risk associated with invasive procedures is unlikely to be clinically significant so they are not contraindicated and may be used if absolutely required.

3.2.3. Prelabour Rupture of membranes at term

There is no evidence to guide the management of women with spontaneous rupture of membranes at term, but many clinicians will advise expediting delivery in an attempt to minimise the duration of potential exposure of the fetus to HSV.

The remainder of intrapartum care should be offered in accordance with NICE guidelines on intrapartum care (TrustDocs ID 850).

3.2.4. Premature prelabour rupture of membranes (PPROM)

If PPROM is encountered in the presence of recurrent genital herpes lesions, the risk of neonatal transmission is very small and may be outweighed by the morbidity and mortality associated with premature delivery.

In the case of PPROM before 34 weeks of gestation, there is evidence to suggest that expectant management is appropriate, including oral Aciclovir 400 mg three times daily for the mother.

After this gestation, it is recommended that management is undertaken in accordance with NNUH guidelines regarding PPROM (TrustDocs ID 873). Antenatal corticosteroid can be considered to reduce neonatal morbidity and mortality and is not materially influenced by the presence of recurrent genital herpes lesions.

3.3. Management of antenatal women with HIV co-infection with HSV

3.3.1. Primary HSV infection

HIV-positive women with primary genital HSV infection in the last trimester of pregnancy should be managed according to the recommendations for all women with primary genital HSV infection.

3.3.2. Recurrent HSV infection

There is some evidence that HIV antibody positive women with genital HSV ulceration in pregnancy are more likely to transmit HIV infection independent of other factors.

Women who are HIV antibody positive and have a history of genital herpes should be offered daily suppressive Aciclovir 400 mg three times daily from 32 weeks of gestation to reduce the risk of transmission of HIV infection, especially in women where a vaginal delivery is planned. Starting therapy at this earlier gestation should be considered in view of the increased possibility of preterm labour in HIV-positive women.

The mode of delivery should be in line with the BHIVA HIV in pregnancy guideline (TrustDocs ID 1185) recommendations.

There is currently no evidence to recommend daily suppressive treatment of HSV for HIV antibody positive women who are HSV-1 or -2 seropositive but have no history of genital herpes.

3.4. Management of the neonate

Refer to Neonatal Herpes guideline (TrustDocs ID 16741).

Any active lesions at time of delivery, or primary infection within 6 weeks of delivery, if delivered by any means other than elective caesarean section would initiate treatment for the neonate with IV Aciclovir as per neonatal guideline. It is noted that maternal IV Aciclovir reduces the risk of vertical transmission, but does not mitigate need for neonatal treatment after delivery.

4. References

1. *BASH and Royal College of Obstetricians and Gynaecologists. Management of Genital Herpes in Pregnancy. October 2014.*
2. *RCOG patient information leaflet: Genital herpes in pregnancy. October 2014.*

5. Appendices

5.1. Appendix 1: STANDARD letter TEMPLATE to patient (recurrent genital herpes)

Our Vision
The best care for every patient

NHS
Norfolk and Norwich University Hospitals
NHS Foundation Trust
Antenatal clinic
Department of Obstetrics and Gynaecology
Colney Lane
NORWICH NR4 7UY
Tel: (Antenatal Clinic Midwives): 01603 286975

Dear Date:

Your midwife has informed us that you have previously experienced one or more episodes of genital herpes (recurrent herpes).

What is genital herpes?

Genital herpes is a sexually transmitted infection caused by the herpes simplex virus (HSV) causing ulcers in the genital and anal area. Herpes simplex can also occur around the mouth and nose (cold sores) and fingers and hand (herpetic whitlows). In women, genital herpes can occur on the skin in and around the vagina, the vulva (lips around the opening of the vagina), the urethra (tube through which urine empties out of the bladder) and the anus (back passage).

What is the risk to my baby?

If you have been affected by genital herpes before you became pregnant, your immune system will provide protection to your baby in pregnancy. Recurrent episodes of genital herpes during the antenatal period do not affect your baby.

We routinely offer prophylactic (preventative) antiviral treatment with a tablet called Aciclovir to reduce the chance of herpes lesions being present at the time of labour. If you have a recurrent episode of herpes when you go into labour, the risk to your baby is low (0-3% risk of neonatal transmission at a vaginal birth). Most women who have recurrent genital herpes can have a vaginal birth. If you have lesions at the time of delivery, the neonatal team are likely to recommended

treatment with intravenous Aciclovir (via a drip into their arm/hand) for baby, to reduce the small risk of transmission.

To aid your decision making for birth, if you experience herpes lesions beyond 36 weeks of pregnancy let your community midwife know. Your midwife will arrange an appointment with an obstetrician to discuss and confirm your planned mode of birth in the event that lesions remain present at the time labour starts.

Is Aciclovir safe in pregnancy?

Oral Aciclovir is not licensed for use in pregnancy but is considered safe and has not been associated with birth defects. It should be taken 3 times a day from 36 weeks of pregnancy until delivery.

This has been prescribed for you by the Obstetric team within the NNUH Antenatal Clinic and can be collected from the NNUH hospital pharmacy, level 1, Centre block at your earliest convenience. It is an electronic prescription so it is not necessary to take any paperwork with you, instead present to pharmacy, offering your name and date of birth. A family member can collect it for you where necessary. Opening hours are Mon-Fri 08:30-17:30, Sat 09:00-13:00 and Sun 10:00-12:00.

Further questions?

If you have any further questions please let your Community Midwife know who can ensure they are answered and where necessary arrange an obstetric review.

Signed:

Name:

Role:

6. Equality Impact Assessment (EIA)

Type of function or policy	Existing

Division	Women's and Children's	**Department**	O&G
Name of person completing form	Lauren McQuillan	**Date**	19/08/24

Equality Area	Potential Negative Impact	Impact Positive Impact	Which groups are affected	Full Impact Assessment Required YES/NO
Race	NO	NO	NO	NO
Pregnancy & Maternity	NO	Consistent management for all pregnant patients	NO	NO
Disability	NO	NO	NO	NO
Religion and beliefs	NO	NO	NO	NO
Sex	NO	NO	NO	NO
Gender reassignment	NO	NO	NO	NO
Sexual Orientation	NO	NO	NO	NO
Age	NO	NO	NO	NO
Marriage & Civil Partnership	NO	NO	NO	NO
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?		Does not change		

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.