Worcestershire Acute Hospitals NHS Trust

Sepsis in Maternity
(Detection, Investigation and Management)

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

Guideline for the management of sepsis in the pregnancy and postnatal period. Antibiotic regime and sepsis six included.

This guideline is for use by the following staff groups:

All staff providing care to pregnant people.

Lead Clinician(s)

Laura Veal	Consultant Obstetrician (Clinical Director
Helen Tipper	Practice Development Midwife
Daisy Austin	Audit, Guideline and Patient Experience Midwife
Approved by *Maternity Governance Meeting* on:	18th October 2024
Approved by Medicines Safety Committee on:	February 2025
Review Date: This is the most current document and should be used until a revised version is in place	18th October 2027

Key amendments to this guideline

Date	Amendment	Approved by:
November 2021	Misoprostol comments added under risk factors.	LWF/ Obstetrics Governance
4th June 2024	Document extended for another 12 months whilst under review	Maternity Governance

February 2025	Full Document Review – In line with PROMPT training materials. No clinical changes to practise. Antibiotics updated to current recommendations.	Maternity Governance

Contents

Introduction:

Maternal sepsis: is a life-threatening condition defined as organ dysfunction resulting from infection during pregnancy, childbirth, post-abortion, or postpartum period. In pregnancy and the puerperium, maternal physiological and immunological adaptations – designed to facilitate development of the fetus – may impair maternal capacity to respond to infection. All healthcare professionals should be aware of the symptoms and signs of maternal sepsis and of the rapid, potentially lethal course of severe sepsis and septic shock.

In the UK, 'all-cause sepsis' ranks as the sixth leading cause of direct and indirect maternal death; genital tract sepsis is the fourth direct cause. Early recognition and timely initiation of sepsis treatment have both been shown to improve outcomes. Use of sepsis screening tools and treatment bundles can reduce time to treatment initiation.

In addition to maternal concerns, the fetus is at increased risk of miscarriage, stillbirth and preterm birth. Infection has been associated with 10–25% of cases of stillbirth in HICs. mortality rate of sepsis is 20 to 40%, which increases to 60% if septic shock develops.

Definitions:

Sepsis - is defined as life-threatening complicated infection where the body's over response to infection leads to organ dysfunction/failure.

Severe sepsis - defined as sepsis plus sepsis-induced organ dysfunction or tissue hypoperfusion.

Septic shock – the persistence of hypoperfusion despite adequate fluid replacement therapy (associated with vasopressor requirements to maintain a mean arterial pressure (MAP) ≥65 mmhg and having a serum lactate level of greater than 2 mmol/l despite adequate volume resuscitation in the context of sepsis).

Features of sepsis:

- Hypotension – systolic blood pressure 90mmHg or below in the absence of other causes e.g. bleeding
- Hypoxemia
- Poor peripheral perfusion, mottled skin
- Oliguria
- Metabolic acidosis.
- Elevated lactate (Serum lactate ≥2 mmol/L is indicative of tissue hypoperfusion)
- Positive blood cultures
- Abnormal coagulation and bleeding
- Abnormal renal and liver function tests
- Plasma glucose >7.7 mmol/l in the absence of diabetes is one of the diagnostic criteria for sepsis.

Risk Factors for Maternal Sepsis:

- Obesity
- Impaired glucose tolerance / diabetes
- Impaired immunity/ immunosuppressant medication
- Anaemia
- Group A Streptococcal infection in close contacts / family members
- History of Group B Streptococcal infection
- Black or other minority ethnic group origin
- Amniocentesis and other invasive procedures
- Cervical cerclage
- Prolonged spontaneous rupture of membranes
- History of pelvic infection
- Vaginal trauma, caesarean section, wound haematoma
- Retained products of conception

N.B. Misoprostol use may be associated with a transient rise in maternal temperature; however, all temperatures must be investigated as per the sepsis pathway. Never assume a temperature is due to misoprostol use and employ the sepsis six pathways as appropriate.

Possible causes of sepsis include (this list is not exhaustive):

Obstetric Causes:

- Chorioamnionitis
- Postpartum endometritis/ infected retained products
- Genital tract infections
- Wound infections (including perineum)
- Intra-abdominal collections
- Mastitis
- UTI
- Infection related to regional anaesthesia (meningitis/ spinal abscess)

Non-Obstetric causes to be considered:

- Skin and soft-tissue infection.
- GI - Acute Appendicitis/Pancreatitis/Cholecystitis/Gastroenteritis
- Respiratory - Pneumonia/Influenza/Pharyngitis

N.B. Mastitis may lead to breast abscesses, necrotising fasciitis and toxic shock syndrome and must never be overlooked

Common Organisms Responsible for Maternal Sepsis

- Group A beta-haemolytic Streptococcus (GAS)
- E. Coli
- Staphylococcus aureus
- Streptococcus pneumoniae
- Methicillin-resistant Staphylococcal aureus (MRSA)
- Clostridium septicum
- Morganella morganii.
- Influenza remains a cause of maternal death and should be considered as a possible source of infection, particularly during peak seasonal periods (usually January).

Signs And Symptoms

Red Initiate sepsis 6 if: 1 criteria or more are present	• Responds only to voice or pain/ unresponsive • Systolic B.P ≤ 90 mmHg (or drop >40 from normal) • Heart rate ≥130 per minute • Respiratory rate ≥ 25 per minute • Needs oxygen to keep SpO2 ≥92% • Skin - rash, mottled/ ashen/ cyanotic • Not passed urine in last 18 hours • Urine output low (less than 0.5 ml/kg/hr) • Lactate ≥2 mmol/l • Altered mental state
Amber Initiate sepsis 6 if: 2 criteria or more are present Send bloods (Include lactate through VBG, FBC, U&Es, CRP, LFTs, clotting)	• Respiratory rate 21-24 OR breathing laboured • Heart rate 100-129 OR new arrhythmia • Systolic B.P 91-100 mmHg • Not passed urine in last 12-18 hours • Temperature < 36ºC or > 38ºC • Relatives concerned about mental state • Acute deterioration in functional ability.
	Plus, Ask the following Questions: • Immunosuppressed/ diabetes/ gestational diabetes • Has had invasive procedure in last 6 weeks (e.g. CS, forceps delivery, ERPC, cerclage, CVs, miscarriage, termination) • Prolonged rupture of membranes • Close contact with Group A Strep • Bleeding/ wound infection/ offensive vaginal discharge • Non-reassuring CTG/ fetal tachycardia >160 **Any one of these gives an amber flag.**

Agonising pain out of proportion to the clinical signs may suggest deep infection, and necrotising fasciitis/myositis must be considered.

Management Of Patients with Suspected / Confirmed Sepsis

Management of patients with severe sepsis is aimed at stabilising the patient while diagnosing and treating the underlying cause. Treatment is more likely to be effective, and severe sepsis avoided, if appropriate therapy is started early.

A multidisciplinary team approach is required including obstetricians, midwives, anaesthetists, microbiologists and critical care staff. Inform infection control team if necessary. Critically ill patients should be cared for in level II or intensive care with facilities for invasive techniques and monitoring. Care must be undertaken by experienced nursing/midwifery staff.

<table>
<tr><td colspan="3">Sepsis 6
• Escalate to Senior Team
• Sepsis 6 to be completed within 1 hour (Golden Hour)</td></tr>
<tr><td rowspan="3">3 IN</td><td>Oxygen</td><td>Give Oxygen if SATs ≤ 92%
Aim to keep SATs between 94%-98%</td></tr>
<tr><td>IV Fluids</td><td>IV Access
Fluid Bolus 500mls initially
Lactate guides further fluid, be cautious in severe PET.</td></tr>
<tr><td>IV Antibiotics</td><td>Follow local policy as per page:
Confirm Allergy status
Consider discussion with microbiologist</td></tr>
<tr><td rowspan="3">3 OUT</td><td>Bloods (Inc. Blood Cultures)</td><td>FBC, CRP, U&Es, LFTs, Clotting.
Blood Cultures – consider other cultures e.g. urine, sputum, vaginal swabs, throat swabs, breast milk culture, wound swab.</td></tr>
<tr><td>Lactate</td><td>This should be taken via Venous Blood Gas and if high should be corroborated with an Arterial Blood Gas.
Anaesthetist will dictate the frequency of repeat samples.
If >4mmol/l – Escalate to Anaesthetist and Critical Care.</td></tr>
<tr><td>Urine</td><td>Urine Output should be monitored.
A Catheter with a urometer should be considered to commence hourly urine output monitoring.</td></tr>
<tr><td colspan="3">MONITOR:
• MEOWS Observation chart
• Fluid Balance - Hourly
• Consider appropriate setting of care</td></tr>
</table>

N.B. NSAIDS should be avoided for pain relief in cases of sepsis as they impede the ability of polymorphs to fight GAS infection.

Monitoring

Observations should be recorded on a WOW HDU chart

- Pulse, BP, respiratory rate, oxygen saturations every 15 minutes (frequency may be altered
- depending on maternal condition)
- Temperature hourly (frequency may be altered depending on maternal condition)
- Strict fluid balance – consider urinary catheter/ hourly catheter bag

In antenatal patients:

- if ≥28 weeks, perform CTG (between 26-28 weeks CTG at the discretion of consultant)
- if <28 weeks, auscultate fetal heart intermittently.
- Observe PV loss/amniotic fluid.

In postnatal patients:

- Observe lochia/wound or drain sites and perineum.
- In case of severe sepsis observations listed above plus level of consciousness
- 3 Lead ECG
- Consider CVP

Investigations

- Venous blood gas (to assess for hypoxia, glucose and measurement of serum lactate) FBC, Coagulation, Group and Save, U&E's, LFTs and CRP
- Obtain blood cultures prior to antibiotic administration (provided this does not delay antibiotic administration)
- Culture of other sites as guided by clinical suspicion of the focus of infection e.g. MSU, HVS, wound swab, breast milk, stool, respiratory secretions, CSF, placental swabs (send placenta to histology at Birmingham Women's Hospital, if sepsis is suspected) and neonatal swabs
- Throat swab if woman presents with sore throat/ respiratory symptoms
- If MRSA status is unknown, a pre-moistened nose swab may be sent for rapid MRSA screening
- Check previous and recent microbiology results as there may be clues as to the nature of the likely pathogen
- Imaging studies (USS/ CXR, CT scan) to identify/sample any source of infection as appropriate
- Check blood glucose in severe sepsis

Airway And Breathing

Maintain adequate oxygenation i.e. Check patent airway, adequate breathing, use supplemental oxygen. High flow Oxygen therapy (15L/min) via non-re-breathe mask to maintain SpO2 >94%, unless CO2 retainer, in which case, contact medical staff.

Circulation

Hypovolaemia is present in almost all patients with septic shock. Fluid resuscitation is mainstay of management. In the event of hypotension and/or lactate >2mmol/l, 500ml stat (can repeat up to 30ml/kg). Ask doctor regarding fluids, if not hypotensive and lactate normal. Ask Anaesthetist regarding fluids if patient has pre-eclampsia. Use vasopressors for hypotension not responding to initial fluid resuscitation to maintain mean arterial pressure (MAP) > 65mmHg. Invasive monitoring should be considered if not responding to simple resuscitation and will be directed by anaesthetic staff.

Antibiotic Therapy

Intravenous broad-spectrum antibiotics should be started as early as possible, always within the first hour of recognising severe sepsis.

Initial antibiotics (all IV)

Chorioamnionitis		
1st Line	**Non-Severe Penicillin Allergy**	**Severe Penicillin Allergy**
Benzylpenicillin IV 2.4g QDS AND **Metronidazole** 500mg IV 8 hourly AND **Gentamicin** IV	**Cefotaxime** 2grams 6 hourly AND **Metronidazole** 500mg IV 8 hourly	**Vancomycin** IV* AND **Metronidazole** 500mg IV 8 hourly AND **Gentamicin** IV**
Antenatal Sepsis		
1st Line	**If cephalosporin or severe penicillin allergy:**	
Cefotaxime 2 g intravenous infusion in 100 ml sodium chloride 0.9% every 6 hours AND **Metronidazole** 500 mg IV 8 hourly	**Vancomycin** IV* AND **Metronidazole** 500 milligrams intravenous infusion over 20 to 30 minutes three times a day AND **Gentamicin** IV**	
Postnatal Sepsis		
1st Line	**Non-severe penicillin allergy**	**Severe penicillin allergy**
Co-amoxiclav 1.2 grams IV TDS	**Cefotaxime + Metronidazole** as per antenatal guidelines above.	**Vancomycin, Metronidazole and Gentamicin**, as per antenatal guidelines above.
Severe Sepsis		
Add-in: **Clindamycin** IV 1.2 grams QDS to the above regimens		
*Vancomycin prescribing guidelines: https://app.eolasmedical.com/organisation/landing/null?organisationId=ORG%23staging-worcestershire-acute-hospitals-nhs-trust%231f9077df-6392-4e35-8221-c8b0e1f47ee4&fileId=FILE%23d4bb3628-d89c-4822-9d7d-d11a4220bb01&origin=section **Gentamicin prescribing guidelines: https://app.eolasmedical.com/organisation/landing/null?organisationId=ORG%23staging-worcestershire-acute-hospitals-nhs-trust%231f9077df-6392-4e35-8221-c8b0e1f47ee4&fileId=FILE%23ae80b262-eef6-4688-8dd1-8fce7025c32b&origin=section		

In severe sepsis or septic shock, consider seeking urgent consultant microbiologist advice

Liaise with Consultant microbiologist for further advice and therapy, especially in any of the following situations:

a) Patient known to be colonised or infected with antibiotic-resistant bacteria (e.g. MRSA, CPE, ESBL-producing organisms – these are usually RESISTANT to the antibiotic regimens listed above).
b) Patient has a history of an in-patient hospital stay in the past 1 year (other than for straightforward childbirth). There is an increased risk of antibiotic-resistant pathogens)
c) Patient has received antibiotic therapy in the past 4 weeks (other than perioperative prophylaxis).
d) Patient has a vascular catheter that has been in situ for 24 hours or more at the time of onset of infection.
e) The patient does not respond to therapy within 48 hours

The antimicrobial regimen should be reassessed daily to optimise activity, to prevent the development of resistance, to reduce toxicity and to reduce costs. If and when a specific organism is identified, antibiotic therapy can then be modified to the most appropriate regimen. Duration of therapy should be typically 7 –10 days; longer courses may be appropriate in women who have a slow clinical response, non- drainable focus of infection, or immunological deficiencies, including neutropenia.

IV-to oral stepdown

It is usually safe to switch from IV to oral therapy as soon as the following conditions are met:

- Patient is able to swallow safely or enteral feeding tube is available and patient tolerates oral / enteral fluids
- Clinical improvement
- Temperature 36ºC - 38ºC for at least 48 hours
- Heart rate <90 beats per minute for previous 12 hours
- White cell count (WCC) between 4 and 12 x 10^9/L and the CRP is decreasing
- Oral/enteral formulation of prescribed antimicrobial or oral/enteral form of suitable alternative antimicrobial agent available
- No deep focus of infection exists that mandates longer IV therapy (e.g. undrained abscess, infected central line, meningitis, etc.)

IV-to-oral switch has many advantages, including reducing the risk of infected cannulae, decreased risk of IV drug errors, earlier hospital discharge, improved patient satisfaction, decreased cost, and decreased nursing/midwifery time.

Choice of oral stepdown

Depends upon the most likely focus of infection, the response to treatment, and culture results. Follow the organ/system specific guidelines where possible (e.g. for conditions such as UTI or pneumonia). Tailor antibiotic treatment to culture results. Always try to use the narrowest spectrum agent with the best safety profile, where possible.

Duration of therapy
The antimicrobial regimen should be reassessed daily to optimise activity, to prevent the development of resistance, to reduce toxicity and to reduce costs. If and when a specific organism is identified, antibiotic therapy can then be modified to the most appropriate regimen. Duration of therapy should be typically 7–10 days; longer courses may be appropriate in women who have a slow clinical response, non-drainable focus of infection, or immunological deficiencies, including neutropenia.

Identification of infection source

The source of infection should be identified as a priority and treated.
This may be identified through; Uterine evacuation or by drainage of breast, wound or pelvic abscess, haematoma or other treatments.

Blood Products

Red blood cells should be given when the haemoglobin is less than 70g/l with the aim of achieving a target haemoglobin of 70-90g/l This will increase oxygen delivery. A higher Hb may be required in special circumstance e.g. acute haemorrhage or lactic acidosis. It is common for patients with severe sepsis to develop a coagulopathy and thrombocytopaenia. If the patient is not actively bleeding and no invasive procedures are planned it may be possible to manage coagulopathy conservatively.

Do not use FFP to correct laboratory clotting abnormalities unless there is bleeding, or any invasive procedures are planned. Administer platelets only when platelet count is < 5 x 109 regardless of bleeding.
> 5– 30 x109 and there is a significant risk of bleeding.
>50 x 109 are required for surgery or invasive procedures drainage or removal of potentially infected devices such as cannulas.

Thromboprophylaxis

Refer to trust guideline
Measure for and fit TEDs

Fluid Balance

Careful monitoring of fluid balance is important and should be documented on the
WOW HDU chart
Hourly documentation of all input and output (indwelling urinary catheter with hourly urometer). This will allow for significant fluid deficit or excessive input to be detected, to evaluate the woman's response and to help avoid the development of pulmonary oedema. A central line may be required to help monitor fluid balance.

Indications For Transfer To ITU

The overriding principle is that sepsis can be a life-threatening emergency so continued involvement of the consultant obstetrician and consultant anaesthetist is vital. If the woman fails to respond to initial management (the sepsis six) then early involvement of the ICU team is needed.

SYSTEM	INDICATION
• Cardiovascular:	Hypotension or raised serum lactate persisting despite fluid resuscitation, suggesting the need for inotrope support
• Respiratory :	Pulmonary oedema Mechanical ventilation Airway protection
• Renal :	Renal dialysis
• Neurological :	Significantly decreased conscious level
• Miscellaneous:	Multi-organ failure Uncorrected acidosis Hypothermia

Fetal Monitoring and Delivery

Involve the woman with sepsis or suspected sepsis and her birth companion(s) in shared decision making about her care.

women in labour with suspected sepsis are transferred from home birth and midwifery-led units to an acute setting for assessment and to start antibiotic treatment.

Clinicians grade ST3 or above needs to assess pregnant women in labour with suspected sepsis immediately. They decide whether to give antibiotics based on this assessment, and administer the first dose of antibiotics, if indicated, within the 1-hour timeframe. They also document the rationale for the decision to start antibiotics.

In a critically ill pregnant woman, birth of the baby may be considered if it would be beneficial to the mother or the baby or to both. Decision on the timing, place and mode of birth should be made by a consultant obstetrician following discussion with the woman if her condition allows. If preterm delivery is anticipated, cautious consideration should be given to the use of antenatal corticosteroids for fetal lung maturity in the woman with sepsis.

During the intrapartum period, continuous cardiotocograph (CTG) is recommended and changes in the CTG, such as changes in baseline rate, variability or new onset decelerations, must prompt reassessment of maternal mean arterial pressure, hypoxia and acidaemia. Fetal blood sampling has uncertainty of the significance of the results in cases of sepsis, may be falsely reassuring.

For women in labour with sepsis and any signs of organ dysfunction, regional anaesthesia should only be used with caution and advice from a consultant obstetric anaesthetist, and with a senior anaesthetist present. Antibiotic is needed to be start before inserting the needle for regional analgesia. Carry out multidisciplinary review of options for pain relief at least every 4 hours in labour.

Post-natal Care for women with sepsis:
Multidisciplinary review in the first 24 hours after the birth, and robust care plan for ongoing treatment should be documented.

Support should be provided to enable the woman to feed her baby as she chooses.

Prophylaxis For the Neonate, Other Family Members and Health Care Workers
When a mother has been found to have invasive group A streptococcal infection in the peripartum period, the neonatologist should be informed, and prophylactic antibiotics administered to the baby.

Close household contacts of women should be warned to seek medical attention if symptoms develop, +/- antibiotic prophylaxis.

Healthcare workers who have been exposed to respiratory secretions of women with group A streptococcal infection should be considered for antibiotic prophylaxis.

Infection Control Issues

Group A Streptococcus and MRSA are easily transmitted via the hands of healthcare workers and via close contact in households. Local infection control guidelines should be followed for hospital specific isolation and contact precautions.

Women with previously documented carriage of or infection with multi-resistant organisms (e.g. Extended Spectrum Beta-Lactamase (ESBL) producing organisms, MRSA, GAS or Panton-Valentine Leukocidin producing staphylococci (PVL) should prompt notification of the infection control team.

Invasive group A streptococcal infections are notifiable and the infection control team and the consultant for communicable diseases should be informed.

Women suspected of or diagnosed with group A Streptococcus sepsis should be isolated in a single room with en suite facilities to minimise the risk of spread to other women. Local advice from infectious control colleagues should always be sought.

Debrief

Women whose pregnancies have been complicated by severe sepsis should be reviewed and debriefed by consultant prior to discharge and if needed, a formal review should be arranged to discuss the events and provide information regarding the management of their definitive condition (if identified) and warning signs for sepsis

References

Maternal sepsis update: current management and controversies Orene Greer BMBS BSc MRCOG, Nishel Mohan Shah MBBS MRCOG PhD, Mark R Johnson MBBS MRCP (UK) MRCOG PhD First published: 12 November 2019

Knight M, Bunch K, Tuffnell D, Jaya-kody H, Shakespeare J, Kotnis R, et al. Saving Lives, Improving Mothers' Care. Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2014–16. Oxford: National Perinatal Epidemiology Unit, University of Oxford; 2018.

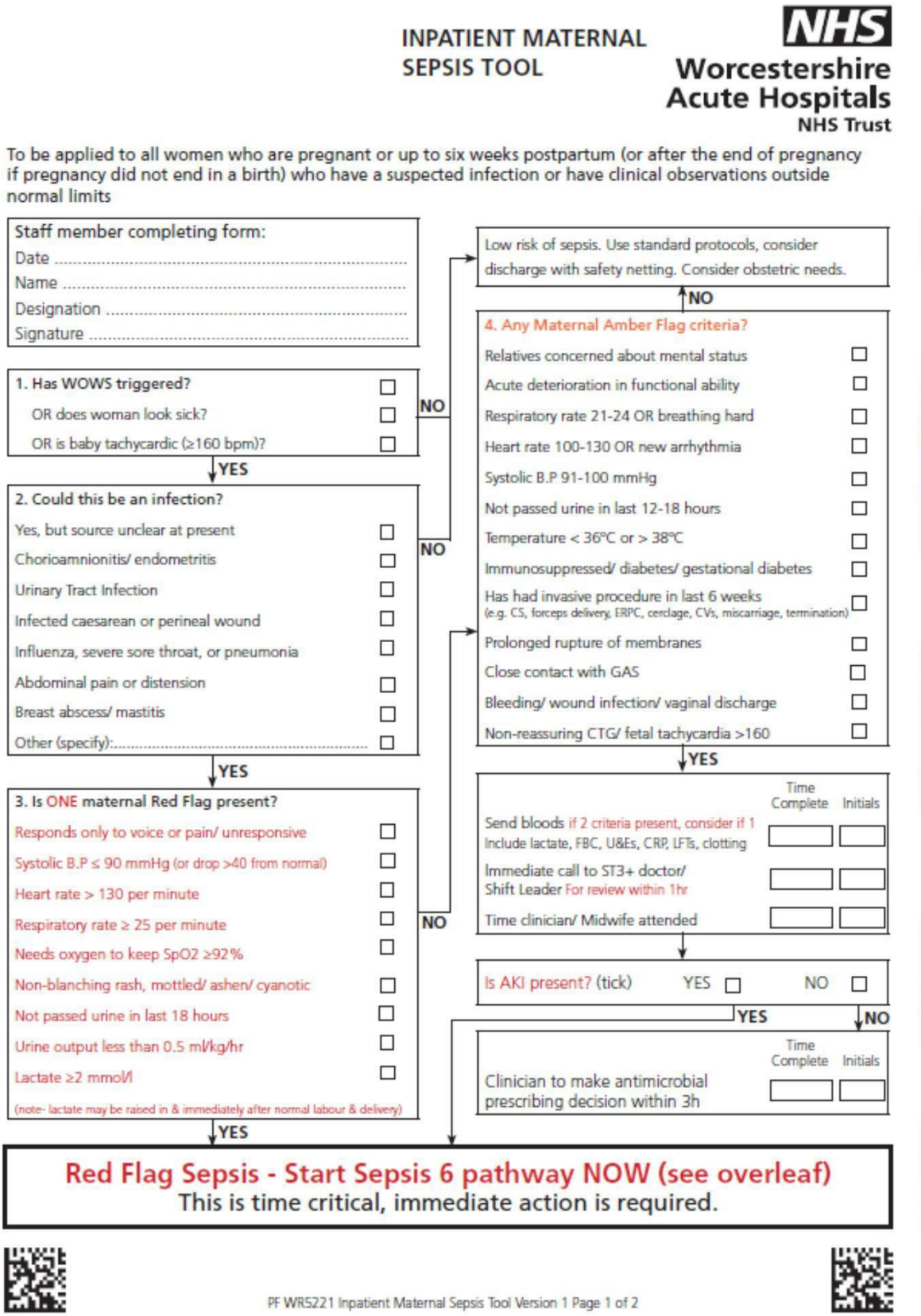
Bacterial Sepsis in Pregnancy Bacterial Sepsis in Pregnancy. Green–top Guideline No. 64aApril 2012 Intrapartum care: existing medical conditions and obstetric complications .Quality standard Published: 28 February 2020 ww.nice.org.uk/guidance/qs192

Intrapartum care for women with existing medical conditions or obstetric complications and their babies

NICE guideline [NG121] Published: 06 March 2019 Last updated: 25 April 2019

Suspected sepsis: recognition, diagnosis and early management NICE guideline [NG51] Published: 13 July 2016 Last updated: 19 March 2024

Appendix 1 – Inpatient Maternal Sepsis Tool



SEPSIS SIX PATHWAY

To be applied to all women who are pregnant or up to six weeks postpartum (or after the end of pregnancy if pregnancy did not end in a birth) who have a suspected infection or have clinical observations outside normal limits

	TIME ZERO	CONSULTANT INFORMED?	INITIALS
Inform Consultant Obstetrician & Obstetric Anaesthetist; OR consider transfer to Obstetric Unit. State patient has Red Flag Sepsis			

Action (complete ALL within 1 hour)			
	TIME COMPLETE	INITIALS	REASON NOT DONE / VARIANCE
1. Administer oxygen Aim to keep saturations > 94%			
2. Take blood cultures At least a peripheral set. Consider e.g. urine, sputum, vaginal swabs, breast milk culture, throat swabs Think source control & timing of delivery of baby- start CTG			
3. Give IV antibiotics According to Trust protocol Consider allergies prior to administration			
4. Give IV fluids If hypotensive/lactate >2mmol/l, 500ml stat (can repeat up to 30ml/kg). Ask doctor regarding fluids if not hypotensive and lactate normal. Ask Anaesthetist regarding fluids if patient has pre-eclampsia			
5. Check serial lactates Corroborate high VBG lactate with arterial sample If lactate >4mmol/l, call Critical Care and recheck after each 10ml/kg challenge			Not applicable- initial lactate ☐
6. Measure urine output May require urinary catheter Ensure fluid balance chart commenced & completed hourly			

If after delivering the Sepsis Six, patient still has:

- systolic B.P <90 mmHg
- reduced level of consciousness despite resuscitation
- respiratory rate over 25 breaths per minute
- lactate not reducing

Or if patient is clearly critically ill at any time then call Critical Care Outreach immediately and Contact Obs Consultant Immediately

INITIAL ANTIBIOTICS (all IV)

Antenatal:Cefotaxine 2g QDS+Metronidazole 500mg TDS

Postnatal: Co-amoxiclav Dose 1.2g TDS

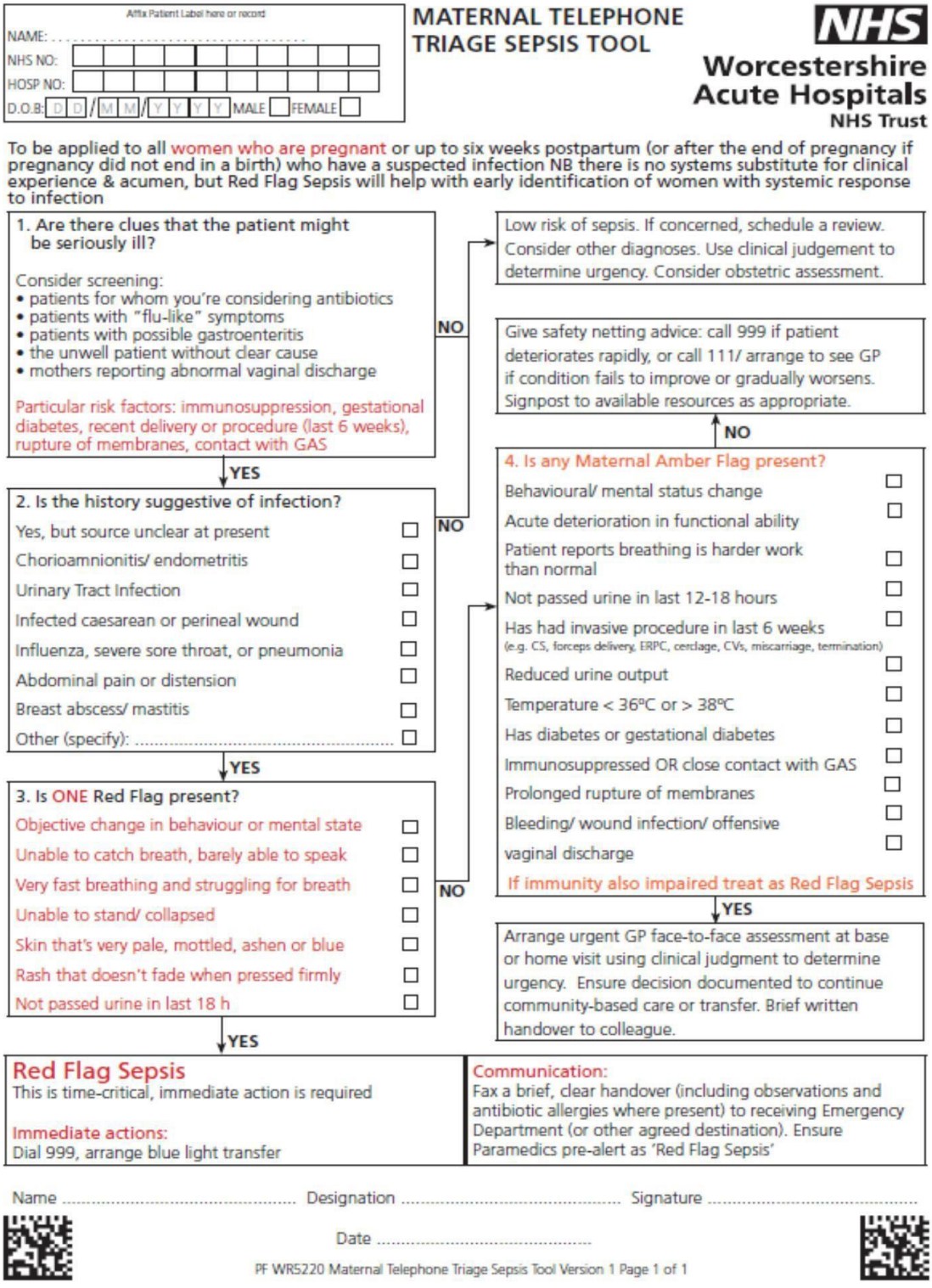
If severe infection ADD clindamycin 900mg QDS to above

SEVERE PENICILLIN ALLERGY (antenatal and postnatal)

Clindamycin 900mg QDS AND Gentamicin Dose 5mg/kg ideal body weight (3mg/kg if renal dysfunction) OD

IF FAILURE TO RESPOND CONTACT MICROBIOLOGIST

Appendix 2- Maternal Telephone Triage Sepsis Tool



Affix Patient Label here or record

NAME: . . . . . .

NHS NO:

HOSP NO:

D.O.B: D D / M M / Y Y Y Y MALE ☐ FEMALE ☐

MATERNAL TELEPHONE TRIAGE SEPSIS TOOL

NHS Worcestershire Acute Hospitals NHS Trust

To be applied to all women who are pregnant or up to six weeks postpartum (or after the end of pregnancy if pregnancy did not end in a birth) who have a suspected infection NB there is no systems substitute for clinical experience & acumen, but Red Flag Sepsis will help with early identification of women with systemic response to infection

1. Are there clues that the patient might be seriously ill?

Consider screening:
- patients for whom you're considering antibiotics
- patients with "flu-like" symptoms
- patients with possible gastroenteritis
- the unwell patient without clear cause
- mothers reporting abnormal vaginal discharge

Particular risk factors: immunosuppression, gestational diabetes, recent delivery or procedure (last 6 weeks), rupture of membranes, contact with GAS

NO → Low risk of sepsis. If concerned, schedule a review. Consider other diagnoses. Use clinical judgement to determine urgency. Consider obstetric assessment.

YES ↓

2. Is the history suggestive of infection?

- Yes, but source unclear at present ☐
- Chorioamnionitis/ endometritis ☐
- Urinary Tract Infection ☐
- Infected caesarean or perineal wound ☐
- Influenza, severe sore throat, or pneumonia ☐
- Abdominal pain or distension ☐
- Breast abscess/ mastitis ☐
- Other (specify): ..... ☐

NO → Give safety netting advice: call 999 if patient deteriorates rapidly, or call 111/ arrange to see GP if condition fails to improve or gradually worsens. Signpost to available resources as appropriate.

YES ↓

3. Is ONE Red Flag present?

- Objective change in behaviour or mental state ☐
- Unable to catch breath, barely able to speak ☐
- Very fast breathing and struggling for breath ☐
- Unable to stand/ collapsed ☐
- Skin that's very pale, mottled, ashen or blue ☐
- Rash that doesn't fade when pressed firmly ☐
- Not passed urine in last 18 h ☐

NO ↑

4. Is any Maternal Amber Flag present?

- Behavioural/ mental status change ☐
- Acute deterioration in functional ability ☐
- Patient reports breathing is harder work than normal ☐
- Not passed urine in last 12-18 hours ☐
- Has had invasive procedure in last 6 weeks (e.g. CS, forceps delivery, ERPC, cerclage, CVs, miscarriage, termination) ☐
- Reduced urine output ☐
- Temperature < 36ºC or > 38ºC ☐
- Has diabetes or gestational diabetes ☐
- Immunosuppressed OR close contact with GAS ☐
- Prolonged rupture of membranes ☐
- Bleeding/ wound infection/ offensive vaginal discharge ☐

If immunity also impaired treat as Red Flag Sepsis

YES ↓

Arrange urgent GP face-to-face assessment at base or home visit using clinical judgment to determine urgency. Ensure decision documented to continue community-based care or transfer. Brief written handover to colleague.

YES ↓

Red Flag Sepsis
This is time-critical, immediate action is required

Immediate actions:
Dial 999, arrange blue light transfer

Communication:
Fax a brief, clear handover (including observations and antibiotic allergies where present) to receiving Emergency Department (or other agreed destination). Ensure Paramedics pre-alert as 'Red Flag Sepsis'

Name ..... Designation ..... Signature .....

Date .....

PF WRS220 Maternal Telephone Triage Sepsis Tool Version 1 Page 1 of 1

Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	Sepsis Audits	Badgernet Notes Review	Quarterly	Senior Midwife	LW Forum	

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Maternity Quality Governance Meeting