1. **Assessment**
At each point of contact i.e. antenatal appointment within community or the hospital setting, blood pressure and a urinalysis must be undertaken and documented accordingly. Referral must be made to the most appropriate place – Antenatal Clinic, Triage or Day Assessment Unit for assessment and diagnosis which should include sequential blood pressure recordings, CTG assessment and bloods.

2. **Diagnosis**

2.1. **Pregnancy induced hypertension** presenting after 20 weeks without significant proteinuria
- Two consecutive BP readings of >140/90 mmHg four or more hours apart.
- Mild gestation hypertension 140/90 to 149/99 mmHg.
- Moderate gestational hypertension 150/100 to 159/109 mmHg.

2.2. **Severe pregnancy induced hypertension**
- Diastolic BP >110 mmHg on two occasions or more
- Systolic BP >160 mmHg on two occasions or more
- Mean arterial pressure (MAP) >125 mmHg

2.3. **Pre eclampsia hypertension** presenting after 20 weeks with significant proteinuria.
Raised BP as above AND
- Significant proteinuria – determined by urinary Protein:Creatinine ratio (this test has replaced the 24 hour urine collection for protein). A Protein:Creatinine ratio of 30 is equivalent to 0.3g protein in 24 hours.

2.4. **Severe pre eclampsia**
All of the above AND
- Rapidly changing biochemical / haematological changes.
- Presence of maternal symptoms such as headache, visual disturbances, nausea, vomiting, epigastric pain, peripheral or pulmonary oedema, hyperreflexia - impending eclampsia.

2.5. **Eclampsia**
Tonic / clonic seizures superimposed on pre-eclampsia. Beware of women with developing ‘HELLP’ syndrome (Haemolysis, Elevated Liver enzymes, Low Platelets) who may present without high levels of proteinuria or diastolic BP. However, they are usually symptomatic, often with nausea, vomiting and abdominal pain and may have severely deranged coagulation.
3. Roles and Responsibilities
Gestational hypertension cases, particularly severe gestational hypertension and eclampsia, are very complex. There is a need for regular discussion between consultant obstetricians, CDS coordinator and staff, consultant haematologist and laboratory team, anaesthetic team, neonatal team and other teams as necessary, i.e. renal consultant. All decisions should be made in partnership with the patient.

Case Midwife
Is responsible for ensuring timely and appropriate referral to the obstetric team and ensuring the co-ordinating Midwife is aware of any such decisions, undertaking timely observations and investigations

Co-ordinating Midwife
Is responsible for ensuring that urgent referral to the obstetric team is initiated and that the neonatal unit/neonatologists are aware, where gestation or other factors indicate potential fetal compromise.
In the event of an eclamptic seizure, the co-ordinating midwife is responsible for ensuring emergency procedures are activated in a timely manner and appropriate treatment commenced.

Obstetric team
Is responsible for management of care of the patient and hold ultimate responsibility for safe and appropriate treatment. The obstetric team is responsible for requesting assistance from other members of the multidisciplinary team as appropriate. The obstetric consultant holds ultimate responsibility for these patients unless they have been formally handed over to a medical / ITU colleague.

Anaesthetist
Is responsible for respiratory and circulatory management and assistance as required.

Neonatologist
Is responsible for the management of the neonate, as appropriate, discussing this plan with the parents and for ensuring that the Neonatal Unit is aware of the need for potential admission. The neonatologists (SHO / ANNP / registrar) must be called for delivery and will be responsible for resuscitation and on-going care of the newborn in partnership with midwifery staff.

4. Management

4.1 Mild and Moderate gestational hypertension can be managed as an outpatient or through Day Assessment. However, if the diastolic BP is >100 mmHg or there is significant proteinuria (greater than or equal 1+ / 0.3 g) this is not mild and the patient should be admitted for assessment.

On admission, the following observations should be recorded:
• Four blood pressure measurements daily, documented on MEOWS chart.
• Strict fluid input/output and balance chart, if requested by obstetrician.
• Daily urinalysis.
• PCR, as requested by obstetrician.

Daily or alternate day measurement of the following:
• FBC, platelets
• LFTs (alkaline phosphatase may slightly increase in a normal pregnancy).
• Uric acid (a one off measurement will suffice).

The following investigations may be considered if proteinuria is present depending on the severity of the condition:
- 24 hour urinary protein estimation, if requested by obstetrician.
- Clotting status, particularly if platelets <100 or if invasive procedures are planned.

Regular assessment of fetal well-being:
- CTG (once daily or more frequently if requested), to be considered from 26 weeks and to be recorded after 28 weeks.
- Ultrasound scan for growth and liquor.
- Doppler studies if growth or liquor abnormal.

4.2 Severe gestational hypertension/PIH – As for section 4.1, and see treatment algorithms throughout guideline.

Women should be transferred to an area/room with suitable monitoring facilities for high risk care and one-to-one midwifery care.

Medical staff input should involve as a minimum:
- Physical review by obstetric registrar after handover and as needed based on clinical condition.
- On-call consultant obstetrician must be informed of admission, for plan of care and at any subsequent deterioration. Review at formal handover. The consultant would be expected to attend for eclampsia or if a woman’s condition necessitates admission to ITU.
- Anaesthetic staff should be involved early and the on-call consultant anaesthetist should be informed of admission and involved in subsequent care.
Gestational hypertension (GH) and pre-eclampsia including the use of magnesium sulphate

Treatment Guidelines for severe Hypertension

Severe pre-eclampsia
Alert medical staff, senior midwife

STABILISE

Control blood pressure
See treatment guideline

Prevent seizures
Use magnesium sulphate, see eclampsia guideline

MONITOR

Vital signs
Respiratory rate, pulse, BP, oxygen saturation, reflexes and urine output every hour as a minimum

Fetal condition
Check fetal heart/CTG

Strict fluid balance
1 ml/kg/hour – total intake
Consider CVP line. Monitor urine output hourly. Checking for proteinuria

4-6 hourly bloods (Magnesium levels if any concerns about toxicity)

DELIVER

First stage
EFM, consider epidural

Second stage
Shorten if symptomatic or BP 160/110

Third stage
Give syntocinon NOT ergometrine/syntometrine

Post – Delivery
Avoid non-steroidals
Consider thromboprophylaxis

Vital signs
AVPU
Systolic BP ≥ 160mmHg and/or diastolic BP ≥ 110mmHG  
(Check cuff size and repeat immediately)

No

Asthmatic

Yes

Labetalol 200mg orally

Recheck BP in 30 minutes Is BP below threshold?

Yes

No

Labetalol 200mg orally

Recheck BP in 30 minutes Is BP below threshold?

Yes

No

Maintenance dose labetalol 200mg 3 x day

Nifedipine capsule 10mg SR orally (not sublingual)

Recheck BP in 30 minutes Is BP below threshold?

Yes

No

Labetalol 200mg orally

Recheck BP in 30 minutes Is BP below threshold?

Yes

No

IV labetalol (5mg/ml)  
Loading: 10ml (50mg) over 2 minutes.  
Repeat every 5-15 minutes (max. 4 doses) until BP controlled.  
Maintenance:  
Start infusion at 4ml (20 mg)/hour  
Double infusion rate every 30 minutes until BP controlled.  
Aim for Systolic under 150mmHG and  
diastolic between 80-100mmHG  
Max. infusion rate 32ml (160 mg)/hour

Maintenance dose nifedipine SR BD  
(max 90mg in 24hrs)

Yes

No

Nifedipine 10mg orally

Recheck BP in 30 minutes Is BP below threshold?

Yes

No

IV hydralazine (1mg/ml)  
Loading: 5ml (5mg) over 15 minutes  
If diastolic > 100 after 20 minutes give further 5ml over 15 minutes  
Maintenance:  
Start infusion at 5ml/hour  
Titrated to diastolic 90 – 100  
Usual rate 2-3ml/hour  
Max. infusion rate 18ml/hour  
Reduce rate if significant adverse effect or maternal pulse >120 beats/minutes

Asthmatic No

Yes

CLI.MAT.GUI.704.11 Gestational hypertension (GH) and pre-eclampsia including the magnesium sulphate
Consider fetal wellbeing when using antihypertensives – be aware of effects on fetus if BP is reduced significantly.

**FIRST LINE AGENT – LABETALOL**

Ensure no contraindications
- Asthma of any severity
- Evidence of cardiac dysfunction (e.g. pulmonary oedema)
- Can be used with moderate liver dysfunction associated with HELLP
- Avoid if strong suspicion of phaeochromocytoma

**SECOND LINE AGENT – NIFEDIPINE SR**

Indicated if labetalol is contraindicated or fails to control B/P. Also:
- May cause thrombocytopenia
- Increase blood loss at surgery
- May have an effect on uterine contractility
- **DO NOT USE IN PRESENCE OF AORTIC STENOSIS**

**THIRD LINE AGENT - HYDRALAZINE**

Use only if labetalol and nifedipine are contraindicated or fail to control B/P (NB – there are large differences between the oral and IV doses of hydralazine)
- Cause tremors
- Worsens systemic lupus
- Increases risk of fetal bradycardia compared with other anti-hypertensive

All three drugs have a cumulative effect (peaking at 30 min) and all three act synergistically with magnesium sulphate to lower blood pressure. Nifedipine also increases the muscular blockade effect of magnesium sulphate.

**4.2.1. Fluid balance**

**It is essential that fluid balance be closely monitored**
- Insert indwelling Foley catheter and assess fluid output at **HOURLY** intervals. The total fluid intake should not exceed 2.5 L in 24 hours.
- Aim for fluid replacement of 1ml/kg/hour (e.g. if the woman weighs 75 kg then she should have 75 ml/hour).
- Be aware of the natural diuresis following delivery.
- Total fluid given will depend on electrolyte levels.
- Insert CVP line if urine output falls below 0.5 ml/kg/hour. Fluid bolus/challenges should only be given after consultation with anaesthetist.
- If oliguria persists the consultant obstetrician may consult the renal consultant on further management.
- Use concentrated solutions of infused drugs including infusion post-delivery for example, during PPH 40ui of Syntocinon made up to 40 mls with normal saline and infused at 10mls/hour.
Guide to Fluid Balance

4.2.2. Observations

- Use ITU and MEOWS charts to record clinical condition.
- Hourly recording of pulse, blood pressure, respirations, SpO₂ and urine as a minimum.
- CVP measurements, if appropriate.
- Hourly reflexes, if on MgSO₄.
- If low SpO₂ requiring O₂ therapy to maintain normal saturations, assess for pulmonary oedema +/- chest X-Ray.
- 4 hourly temp and
- Assessment of hydration status (skin turgor, mucous membranes).

The Registrar should review if the following occurs, as a minimum twice daily on Consultant ward rounds, or more frequently if necessary

- Change in symptoms, especially confusion and persistent visual disturbance.
- Record on ward rounds:
- Examination findings: (Full chest examinations, noting early pulmonary oedema).
- Level of consciousness and reflexes.
- Running total of intake and output.
- Total dosage of anti-hypertensive drugs administered and reasons for starting/stopping.
- Up to six hourly blood investigations (FBC, platelets, clotting, U&Es, LFTs, uric acid (if requested) frequency to be decided by consultant.

Urine output > 0.5 mL/kg/hour
- Continue fluids at 1 mL/kg/hour

Urine output between 0.25 and 0.5 mL/kg/hour
- For regular review

Urine output < 0.25 mL/kg/hour
- Insert CVP line

CVP < 0 cm water
- Give 200 mL 20% of Crystalloid

CVP 0-5 cm water
- For regular review
- Continue fluids at 0.5 ml/kg/hour

CVP > 5 cm water
- IV furosemide
- Consider renal opinion
- Risk of renal failure

Crystalloids IV 1ml/kg/hour

The use of MgSO$_4$ for primary prevention of seizure or recurrent seizure following eclamptic fit.

Magnesium Sulphate 50% injections must NEVER be given undiluted.

5.1.1. Loading dose: 4g Magnesium Sulphate as SLOW BOLUS over 5 minutes

- Draw up 8 ml of 50% Magnesium Sulphate solution (4g) followed by 12 ml of 0.9% saline into a 50 ml syringe. The solution should be mixed well.
- This will give a total volume of 20 ml.

The infusion can be given by hand in the following manner;
- Infuse 1ml every 15 s
  OR
- 4ml every 1min
  
  The I.V. infusion will run over 5 minutes.

To run the infusion through a pump the rate should be set at 240 ml / hour (not all syringe drivers are capable of this).

5.1.2. Maintenance dose: 1g/hour

- Draw up 10 ml of 50% Magnesium Sulphate solution (5g) followed by 40 ml of 0.9% saline into a 50 ml syringe.
- This will give a total volume of 50 ml.
- Place the syringe into a syringe driver and run at 10 ml/hr.

Remember to reduce the infusion rate when changing from the loading dose to the maintenance dose

- Continue for up to 24 hours post delivery or post seizure, whichever is later

5.1.3. Recurrent seizures while on Magnesium Sulphate

- Seek immediate senior help.
- Draw up 4 ml of 50% Magnesium Sulphate solution (2g) followed by 6 ml 0.9% saline into a 10 ml syringe.
- This will give a total volume of 10 ml.
- Give as I.V. bolus over 5 minutes.
- If possible, take blood for magnesium level prior to giving the bolus dose.
- If the woman is over 70kg, draw up 4g (8ml) in 12mls ml of 0.9% saline. (Total 20 mls). Can give 2-4g of MgSO$_4$, as discussed with the consultant.

Levels are not indicated unless severe oliguria (less than 10 ml / hr) for 2 consecutive hours and / or at any point in time loss of patellar reflex or respiratory depression. The first warning of impending toxicity in the mother is loss of the patellar reflex at plasma concentrations between 3.5 and 5mmol/L. Respiratory paralysis occurs at 5 to 6.5 mmol/L. Cardiac conduction is altered at greater than 7.5 mmol/L and cardiac arrest can be expected when concentrations of magnesium exceed 12.5 mmol/L.

5.2. Monitor

- The patellar reflex and oxygen saturation levels should be monitored hourly whilst Magnesium Sulphate is being administered to exclude signs of toxicity.
• Beware of the cardiac effects of MgSO4, which may include hypotension and arrhythmias. If concerns, consider ECG.

5.3. Toxicity
• Loss of biceps / patellar reflex, weakness, nausea, feeling of warmth, flushing, somnolence, diplopia, slurred speech.
• Muscle paralysis, respiratory arrest.
• Cardiac arrest.

5.4. Overdose
Overdose is treated with 10 ml of 10% Calcium Gluconate intravenously over 10 minutes

6. Anaesthesia
• Check clotting status if the platelet count is below 100x10^9/L and seek haematological advice.
• Discuss the plan for epidural and/or general anaesthesia with a senior anaesthetist.
• Do not preload these women with intravenous fluids prior to epidural infusions.

6.1 Anaesthetic considerations of pre-eclampsia for women requiring epidural anaesthesia.
It is important to identify those women who are at risk of uncontrolled haemorrhage from a torn epidural vein, due to low platelet count or poor platelet function.
• There is no published evidence that women with mild pre-eclampsia will have a significant clotting abnormality. Therefore no platelet count or clotting screen is required prior to epidural insertion.
• Women with severe or fulminating PIH should have a clotting screen within 4 hours of sitting an epidural.
• If the platelet count is >100 x 10^9, no further tests are required. Nevertheless, most anaesthetists will be reluctant to perform an epidural with a platelet count of 80 -100 x 10^9, and a full coagulation screen should then be ordered before a decision is reached.
• An epidural should not be sited where the platelet count is < 80 x 10^9.
• Beware of women with developing ‘HELLP’ syndrome (See 2.6).

7. Delivery
Mode of delivery will depend upon fetal presentation, wellbeing, gestational age and severity of hypertensive disease. Decision for delivery is to be made by a consultant obstetrician.

If the fetus is less than 34 weeks and delivery can be deferred for 24 hours at least one dose of steroids (Betamethasone or Dexamethasone) 12mg IM should be given. There is unlikely to be sufficient benefit to wait for the effect of a second dose and the decision for conservative management should be reassessed.

At gestations above 34 weeks once maternal condition has been stabilised and controlled, delivery is recommended. Vaginal delivery should be considered if the cervix is sufficiently favourable to allow ARM with delivery expected in a short timeframe. Syntocinon should be started immediately after ARM. If ARM is not possible, delivery should be by planned emergency caesarean section.

Throughout labour the woman should receive 1:1 continuous midwifery care together with continuous CTG monitoring. Epidural anaesthesia is advisable if platelets >100 or clotting screen is normal.
A normal active second stage of labour is safe providing she does not have a severe headache, visual disturbance and the blood pressure is controlled. Instrumental delivery should be considered if she is symptomatic as above or the BP is significantly high between contractions. Regardless of mode of delivery the woman may need to be nursed in a high dependency area post partum.

In labour:
- Measure BP hourly, unless more frequent recordings are indicated.
- Continue antenatal hypertensive treatment.
- Carry out blood tests, particularly prior to epidural siting.
- Encourage woman to have epidural as a method of pain relief.
- Measure and record fluid input output.

8. Third Stage of Labour

In cases of known gestational hypertension or where no BP has been recorded during labour i.e. women who labour rapidly after an uneventful antenatal period, 10iu Syntocinon IM or 5iu Syntocinon IV can be administered. Do NOT use syntometrine or ergometrine.

9. Care of Fetus/Neonate

Any case of preterm PIH or small for gestational age must be discussed with the neonatal consultant. A course of steroids and MgSO4 may be prescribed if delivery is imminent. A neonatal consultation should be requested and will discuss possible neonatal outcomes with the parents.

During antenatal period, USS for growth and liquor volume and umbilical artery Doppler studies may be requested together with regular CTG recordings. The type of monitoring and frequency must be clearly documented within a care management plan. The management plan must be agreed between the mother, obstetricians and neonatal team, as indicated clinically.
10. Management of Seizures

CALL FOR HELP – via emergency Buzzer, instruct first in attendance to call 2222 and request ‘Emergency Obstetric Team’ to attend Room ‘X’ on CDS/TCW or Argyll Ward on level X.

- Note the time of the seizure occurred and duration
- Note the time of the emergency call and time of arrival of staff which should include:
  - Senior Midwife for Ward area
  - Midwives – designate appropriately
  - MCA’s – to act as runners
  - Obstetric Registrar
  - Obstetric SHO
  - Obstetric Consultant Anaesthetist
  - Obstetric Registrar Anaesthetist
- Inform NICU
- Inform Consultant Obstetrician

Please record all of the above in the patient records, as appropriate. See appendix 1 for eclampsia proforma.
**11. Postnatal Management of Severe PIH**

After delivery the woman **must** remain on CDS for a minimum of 24 hours. The decision to transfer to the wards must be made by the Consultant Obstetrician or Senior Registrar.

Pre-eclampsia is an unpredictable condition, particularly postpartum, and high dependency care is advised until diuresis and for at least 12 hours post-delivery or cessation of magnesium sulphate, whichever is the latter.

During this time BP should be measured at least
- Hourly until it is consistently below 150mmHg systolic or 100mmHg diastolic.
- 2 hourly for a further 4 hours then,
- 4 hourly until transfer to the ward.
- Antihypertensive treatment should be initiated or increased if BP is consistently above 150/100mmHg.
- Blood pressure peaks 3 days post-partum so deferred antihypertensive treatment may be required.
- Monitor BP 4 x a day on postnatal ward for 3 days.
- Twice daily thereafter if stable.

Discontinue antihypertensive treatment once BP< 140/90mmHg and return to routine care. Antihypertensive treatment must be continued as indicated. Measure BP, as minimum, daily for 5 days. If BP falls below 140/90 refer to medical team for review of treatment.

**11.1 Indications for transfer to ITU following delivery**
- Uncontrolled convulsions after delivery - need for ventilation.
- Unconscious patient.
- Adult respiratory distress syndrome.
- DIC.
- Renal failure not responding to normal guidelines following consultation with renal physicians.
- Arterial line.

**12. Postnatal Management of Mild/Moderate gestation hypertension**

These are the patients who have required antihypertensive therapy, have had proteinuria or any other complication related to gestational hypertension.

Measure blood pressure
- At least four times a day whilst an inpatient.
- Every 1-2 days for up to 2 weeks after transfer to the community until the women is off treatment and has no hypertension. Otherwise hand over to GP care.

If a women has taken methyldopa to treat pre-eclampsia, stop within 2 days of birth. In women with pre-eclampsia who did not take antihypertensive treatment and have given birth, start antihypertensive treatment if blood pressure is 150/100 mmhg/Hg or higher.
**Mild/Moderate PET**

0: Hourly BP until it is consistently below 150mmHg systolic or 100mmHg diastolic. 2 hourly BP for a further 4 hours then, 4 hourly until transfer to the ward.

1 - 5: Monitor BP 6 hourly (or as clinically indicated). Measure BP, as minimum, daily for 5 days. Discontinue antihypertensive treatment once BP < 140/90mmHg and return to routine care.

7: Review by CMW (D/W GP if BP > 150mmHg systolic or 100Hg diastolic).

9: BP review by GP

11: Review by CMW (D/W GP if BP > 150mmHg systolic or 100Hg diastolic).

14: BP review by GP

**Severe PET**

0: Must remain on CDS for minimum 24 hours. Hourly BP until it is consistently below 150mmHg systolic or 100mmHg diastolic. 2 hourly BP for a further 4 hours then, 4 hourly until transfer to the ward. Continue MgSO4 for up to 24hrs post delivery/post seizure, whichever is later.

1 - 5: Monitor BP 6 hourly (or as clinically indicated). Measure BP, as minimum, daily for 5 days. Discontinue antihypertensive treatment once BP < 140/90mmHg and return to routine care.

7: Same as Mild/Moderate

9: Same as Mild/Moderate

11: Same as Mild/Moderate

14: Same as Mild/Moderate

**Women who are breastfeeding and still need hypertensive treatment in the postnatal period should be advised that the following antihypertensive drugs have no known adverse effects on babies receiving breast milk: labetalol, Nifedipine, Enalapril, Captopril, Antenolol, Metoprolol.**

However there is not enough evidence on the safety in babies receiving breast milk of the following antihypertensive drugs: ARB’s Amlodipine, and ACE inhibitors other than Enalapril and Captopril.

Women should be informed about their increased risk of developing pre-eclampsia in subsequent pregnancies and cardiovascular disease in later life. The opportunity should be taken to encourage the patient to make lifestyle modifications where necessary and provide contraceptive advice.

**13 Eclampsia Box**

These should have the contents replaced once used and be regularly checked. The guideline should be laminated and attached to every box in the department. A proforma should be within the box for use in an emergency. Every time the content of the box is checked, the guideline and proforma should also be checked to ensure the most up to date version is in the box.
14. Record Keeping

It is expected that every episode of care be recorded clearly, in chronological order and as contemporaneously as possible by all healthcare professionals as per Hospital Trust Policy. This is in keeping with standards set by professional colleges, i.e. NMC and RCOG. All entries must have the date and time together with signature and printed name.

It is the responsibility of the lead clinician to ensure there is a documented and up-to-date management plan in the patient records. MEOWS charts MUST be used.
## Appendix 1 – Eclampsia proforma

### Plymouth Hospitals

#### Eclampsia proforma

**Date:**

**Time of seizure:**

**Duration of seizure:**

**Witness to seizure:**

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Name</th>
<th>Time called</th>
<th>Time arrived</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-call obstetric consultant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duty obstetric registrar</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Duty obstetric SHO</td>
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<td></td>
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</tr>
<tr>
<td>On-call anaesthetic consultant</td>
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<tr>
<td>Duty anaesthetic registrar</td>
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<td>Other</td>
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</tbody>
</table>

#### Eclampsia Resuscitation

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2222 obstetric emergency team</td>
</tr>
</tbody>
</table>

- Get Eclampsia box
- Head bed down, oxygen 10-15l/min, left lateral
- Assess airway, breathing, circulation
- Large bore cannula No1
- FBC, U&E, LFT, UA, coag, G&S
- Large bore cannula No 2
- Observations commenced on ITU chart
- Minimum requirement of Hourly UO, reflexes, SaO2, P BP, RR, 4hrly Temp
- Magnesium sulphate loading dose 4g over 5 min
- Magnesium sulphate maintenance dose 1g/h
- Recurrent seizure and need for second bolus of MgSo4
- Catheter and urometer
- Antihypertensive required (Systolic ≥160mmHg and/or Diastolic ≥110mmHg) Yes □ No □
- Fluid restricted 1ml/kg/h
- Monitor fluid balance
- Continuous electronic fetal monitoring Yes □ No □

**STABILISE THE MOTHER BEFORE DELIVERY**

**AVOID ERGOMETRINE**

**SENIOR REVIEW AND BLOODS EVERY 4 HOURS**

**COMPLETE INCIDENT FORM**

CLI.MAT.GUI.704.11 Gestational hypertension (GH) and pre-eclampsia including the use of magnesium sulphate
Appendix 2
Letter to GP.

Dear Dr …………..

Re:

The above named patient has pre-eclampsia / Gestational Hypertension and is now day ….. post-delivery. We have advised her that her condition is associated with an increased risk of developing high blood pressure with its associated complications in later life and have encouraged healthy lifestyle as well as maintaining a healthy weight.

She will need her blood pressure checked every 1–2 days for up to 2 weeks after transfer to community care or until she is off treatment and has no hypertension. She has been advised to continue antenatal anti-hypertensive treatment.

She will need a medical review at your surgery if after 2 weeks she still needs anti-hypertensives. Please, consider reducing anti-hypertensive treatment if her blood pressure falls below 140/90 mmHg and definitely reduce anti-hypertensive treatment if her blood pressure falls below 130/80 mmHg. Kindly, organise a specialist assessment for her if her blood pressure is still high at the 6–8 weeks post-delivery review.

At discharge, her biochemical and haematological indices: (delete 1 OR 2 as appropriate)

- 1) Where normal and does not need repeating.

OR

- 2) Were improving but within the abnormal range. Could you, kindly, help repeat her platelet count, transaminases and serum creatinine measurements as clinically indicated and at the (6–8 weeks after the birth) post-natal review.

Could you do a urinary reagent-strip test at the post-natal review and if she still has proteinuria (1+ or more), offer a further review at 3 months after delivery to assess kidney function. If she still has proteinuria then consider offering her a referral for specialist kidney assessment. If she doesn’t have proteinuria then reassure her that although the relative risk of end-stage kidney disease is increased, the absolute risk is low and no further follow-up is necessary. Kindly prescribe 75mg of Aspirin for in her next pregnancy after her 12 weeks scan.

Do not hesitate to call via switch board to speak to the registrar on call for further clarification.

Yours sincerely
Monitoring Audit

Auditable standards:
Severe pre-eclampsia and eclampsia:
Did blood pressure control and fluid balance follow local guidelines?
Prevention of seizures – use of MgSO₄
Evidence of fetal assessment and delivery planning?

Please refer to audit tool, location: ‘Maternity on cl2-file11’, Guidelines

Reports to:
Clinical Effectiveness Committee – responsible for action plan and implementation of recommendations from audit
Clinical Governance & Risk Management Committee

Frequency of audit:
Annual - severe preeclampsia
Continuous - eclampsia

Responsible person:
Senior CDS midwife / SHO

Cross references
Antenatal Guideline 44 – Guideline development within the maternity services
TRW/MMA/POL/271/5 Intravenous Drug Administration Policy
TRW/MMA/POL/265/2 Policy for the Safe and Secure Handling of Medicines
Antenatal Guideline 31 - Maternity Hand Held Notes, Hospital Records and Record Keeping

References:


Author
Guideline Committee
Imogen Montague (Consultant Obs&Gynae)
Aderonke Awe (ST7)

Work Address
Maternity Unit, Derriford Hospital, Plymouth, Devon, PL6 8DH

Version
11

Changes
Change PIH to GH
2222 flow chart
Post natal care pathway
Eclampsia Box
Letter to GP

Date Ratified
December 2016

Valid Until Date
December 2019