

Title of Guideline	Intrapartum management of severe hypertension (pre-eclampsia) in pregnancy
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Division & Specialty	Surgery - Obstetrics
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Explicit definition of patient group to which it applies	Maternity patients
Abstract	
Statement of evidence base of the guideline Evidence Base (1-5)	
1a	
1b	
2a	
2b	
3	
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5	
Consultation Process	O&G Guideline Group
Target Audience	Maternity and A&E staff
<p><b>This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.</b></p>	

# **Intrapartum management of severe hypertension (pre-eclampsia) in pregnancy**

Adapted from the North West regional guidelines for the management of severe pre-eclampsia for use at Royal Albert Edward Infirmary, Wigan, July 2004, amended March 2005, updated July 2006, July 2009, further minor amendments October 2009 and June 2010, updated December 2011 and minor changes July 2012 and October 2012. Reviewed with minor changes December 2015 and updated November 2017 (for new syntocinon protocol commencing 15<sup>th</sup> January 2018). Updated October 2019 (new NICE guideline). Urate removed April 2020 (V12.1)

## **Introduction**

These guidelines are adapted for use in Wigan from the regional guidelines for the management of severe pre-eclampsia which have been compiled, in order to standardise the management of pre-eclampsia throughout the region, by the North West Pre-eclampsia Core Group (February 2011).

## **Antenatal and postnatal diagnosis and management of hypertension in pregnancy is covered in [Guideline Obs99](#)**

The UKOSS (2007) study on eclampsia in 2005-6 showed that the incidence had reduced to 2.7 per 10,000 compared with 4.9 per 10,000 in 1992. 99% of those with eclampsia were treated with magnesium sulphate in accordance with national guidelines. It may be that the use of magnesium sulphate is responsible for the fall in incidence.

The MBRRACE report Saving Lives, Improving Mothers' Care 2015 showed that deaths from pre-eclampsia are now at their lowest ever. In 2011-2013 6 women died due to hypertensive disorders, compared with 9 women in 2010-2012 and 10 women in 2009-2011.

## **Definitions**

### **1. Eclampsia.**

Eclampsia is defined as the occurrence of one or more convulsions superimposed on pre-eclampsia.

### **2. Pre-eclampsia**

Pre-eclampsia is defined as pregnancy induced hypertension in association with significant proteinuria. Virtually any organ system may be affected.

It is classified as **severe** if

#### ***Either***

- a. **Severe Hypertension:** average of 3 blood pressure readings in a 15 minute period

Systolic blood pressure over 160mmHg

or

Diastolic blood pressure over 110mmHg

(mean arterial pressure - MAP 120-130mmHg)

with at least proteinuria of a +

or 1g on a semi quantitative

assessment

#### ***Or***

- b. **Moderate Hypertension:** average of 3 blood pressure readings in a 45 minute period

Systolic blood pressure over 140 mmHg

or

Diastolic blood pressure over 90 mmHg

(mean arterial pressure - MAP >110mmHg)

with at least proteinuria ++

or

3g on a semi-quantitative assessment

or

Protein:Creatinine Ratio (PCR) >30mg/mmol

and

any of: severe headache with visual disturbance

RUQ pain/ vomiting

clonus (3 or more beats)

platelet count falling to below  $100 \times 10^9/l$

Alanine amino transferase rising to above 70iu/l

## **General measures for management**

### **The principles of management of severe pre-eclampsia in pregnancy are:**

1. Make the correct diagnosis to avoid aggressive therapy in someone who does not need it.
2. Transfer the patient to the best environment for monitoring and treatment (Labour Ward)
3. Inform senior staff and document this in the notes - these cases can be difficult to manage and expert help should be sought as early as possible
4. Commence monitoring, establish IV access and perform investigations necessary for full assessment of the case
5. Reduce blood pressure to a safe level in a safe manner
6. Consider anticonvulsant prophylaxis
7. Restrict fluid input and monitor fluid balance strictly
8. A management plan for conservative therapy or delivery (which may include induction of labour ([Guideline Obs 7](#))) should be documented clearly in case notes by the consultant.
9. Continue the above until fully stabilised postpartum - these women may deteriorate significantly for the first 24 - 48 hours post-postpartum, and 50% of eclamptic fits now occur post-partum.

## **Initial assessment, monitoring and delivery**

	<b>Action</b>	<b>Rationale</b>
1.	Transfer to Labour Ward Room 2 (High Dependency Unit)  Ascertain that labour ward shift leader, first and second on call obstetricians and labour ward anaesthetist are aware of the admission to Room 2.	To allow intensive observation and to have equipment available in case of need for urgent treatment  All staff need to be aware of a high risk patients and to be able to assess the situation.
2.	Inform senior Obstetrician on call via switchboard and consider informing the Consultant Anaesthetist and document in notes.  Inform Paediatric registrar and neonatal unit if preterm.  Midwife to commence record keeping on an obstetric high dependency chart  Antenatally one to one, continuous midwife-patient care should be given.  After delivery an individual level of care can be defined according to clinical condition	Senior staff need to be involved in assessment and decision making. Anaesthetic skills are often required for monitoring.  Delivery may be necessary  Good records are essential to aid appropriate management  Both maternal and fetal condition require intensive monitoring at the same time

3.	<p>Insert 16G (grey) iv cannula and take blood for the following</p> <ul style="list-style-type: none"> <li>• FBC</li> <li>• Coagulation screen (PT, APPT +/- fibrinogen, FDP's)</li> <li>• U+Es</li> <li>• LFTs</li> <li>• Group and save / cross match</li> </ul>	<p>IV drugs and fluid may be required urgently</p> <ul style="list-style-type: none"> <li>• Evaluate for HELLP (haemolysis, elevated liver enzymes, low platelets) and in case caesarean section is needed</li> <li>• Evaluate for DIC (disseminated intravascular coagulation)</li> <li>• Evaluate for renal impairment</li> <li>• Evaluate for HELLP</li> <li>• In case of caesarean section and due to increased risk of postpartum haemorrhage</li> </ul>
4.	Insert Foley catheter with burette	Monitor urine output

5.	<ul style="list-style-type: none"> <li>• Maternal monitoring</li> <li>• Absolute measurement of blood pressure should be performed with a sphygmomanometer, and Karotkoff phase 5 (the noise disappears as you are listening for the blood pressure) should be used to determine the diastolic pressure. Woman should be rested at 45 degree angle and an appropriate size cuff used. To assess blood pressure trends automated BP recordings can be used every 15 minutes.</li> <li>• Where the reading from the automated and the manual device differ, the manual device should be used. In such cases an arterial line should be considered.</li> <li>• Once blood pressure is stabilised, recordings should be made every 30 minutes</li> <li>• Oxygen saturation with pulse oximeter hourly</li> <li>• Hourly urine volumes (burette)</li> <li>• Fluid balance chart restrict intravenous input to 85 ml/hr</li> <li>• Respiratory rate should be measured hourly</li> <li>• Temperature should be measured 4 hourly</li> <li>• Neurological assessment should be performed hourly using A (alert) V (vocal) P (pain score) U (unresponsive), as per high dependency chart</li> </ul>	<ul style="list-style-type: none"> <li>• BP observation is essential to decide management</li> <li>• Automated devices can underestimate raised blood pressure.</li> <li>• Monitor oxygenation (lung function). Medical review will be required if saturation falls below 95%</li> <li>• Monitor renal function</li> <li>• Avoid fluid overload, women with pre-eclampsia are at increased risk of pulmonary oedema</li> <li>• Monitor respiratory function</li> <li>• Monitor for signs of infection</li> <li>• Monitor neurological function</li> </ul>
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6.	<p>Fetal monitoring</p> <ul style="list-style-type: none"> <li>Review and document size of fetus using clinical assessment or ultrasound biometry if available</li> <li>CTG intermittent or continuous depending on the clinical situation</li> <li>Ultrasound examination may occasionally be appropriate</li> <li><b><u>Give 2 doses steroids 24hrs apart between 24-34 weeks</u></b></li> <li><b><u>Consider steroids if 35-36 weeks</u></b></li> </ul>	<ul style="list-style-type: none"> <li>A poorly grown fetus may be less able to cope with the stress of labour</li> <li>Fetus may become compromised either due to the pathology or its treatment</li> <li>To check presentation, placental site, or fetal heart activity (if in doubt)</li> <li>Steroids improve lung maturity if it is safe to delay delivery 12 hours or more</li> </ul>
7.	<p><b>Anticonvulsant Prophylaxis</b></p> <p>Start magnesium sulphate according to the protocol below for all women with severe or fulminating pre-eclampsia in whom delivery is planned once stabilised</p>	<p>The MAGPIE trial has proved the effectiveness of magnesium sulphate for prevention of eclampsia in addition to its safety for mother and baby. <b>No</b> other agent is appropriate for anticonvulsant prophylaxis</p>
8.	<p>The cervix should be assessed and a normal delivery aimed for if rapid progress is expected</p>	<p>Vaginal delivery may be possible for these women</p>
9.	<p>A plan for delivery (which may include induction of labour) should be made and documented by a consultant obstetrician.</p>	<p>Important that delivery is planned and it is clear to everyone caring for the patient.</p>
10.	<p>Regional analgesia is recommended if the platelet count (obtained within the last 6 hours) is normal, whatever the type of delivery. Do not preload with fluids.</p>	<p>Epidural anaesthesia in labour provides excellent analgesia and has the additional benefit of reducing blood pressure. Both epidural and spinal anaesthesia for caesarean section are safer than general anaesthesia.</p>
11.	<p>If general anaesthesia is required it should be remembered that induction of anaesthesia can cause a large rise in blood pressure. Time must be allowed for the anaesthetist to take measures to mitigate for this (in accordance with anaesthetic guidelines) even if there is fetal distress requiring urgent delivery</p>	<p>Maternal safety must not be compromised even when there are concerns about fetal wellbeing. This was a specific recommendation in the Confidential Enquiry into Maternal and Child Health (2007).</p>
12.	<p>Consideration should be given to elective instrumental delivery if BP not well controlled</p>	<p>Active pushing may result in elevation of BP</p>

13.	Any perineal trauma should be repaired promptly	To minimise blood loss secondary to any clotting abnormalities.
14.	10 units IM syntocinon (oxytocin) should be given for the third stage ( <u>not</u> syntometrine)	Syntometrine may cause an elevation of BP
15.	If further doses of syntocinon are required in the event of PPH monitor urine output very carefully	Bear in mind the antidiuretic effect of high doses of syntocinon (oxytocin) which may compromise renal function further if oliguria is present

### **Management of hypertension**

	<b>Action</b>	<b>Rationale</b>
1.	<b>Systolic blood pressure <math>\geq 160</math>mm Hg requires prompt treatment</b>	A high systolic blood pressure can result in severe vascular damage, such as CVA
2.	<p>Aim to prevent any increase and to <b>slowly</b> decrease the BP. Ideally the BP should be maintained at about 140/90 mmHg (MAP 125mmHg)</p> <p><b>DO NOT</b> reduce BP too rapidly</p> <p>Reduction of the blood pressure should therefore be done in a controlled manner. Should a precipitous drop in BP occur, administration of 250ml of a colloid plasma expander (e.g. Haemacel) will often correct this</p>	<p>This will not prevent eclampsia (which can occur with a low BP) but it is likely to prevent CVA</p> <p>Rapidly lowering the blood pressure may decrease placental perfusion and lead to acute fetal distress, and can also cause cortical blindness and myocardial ischaemia.</p> <p>Remember, these patients are usually intravascularly contracted, therefore rapid vasodilatation will result in a rapid drop in BP</p>
3.	There are two main drugs used in the management of severe hypertension in pregnancy	<p>Labetalol is the drug of first choice with Hydralazine as the next option should labetalol be inadequate</p> <p>If magnesium sulphate is required this may also reduce the BP.</p>



4.	<p><b>Labetalol</b>  Contraindicated in those with <b>severe</b> asthma and use with caution in women with pre-existing cardiac disease</p> <p>Initial dose: <b>200mg orally</b>  A response should be seen in ½ hour, and a second oral dose can be given if needed.  If oral medication cannot be tolerated or has not been effective in controlling the blood pressure then continue as below</p> <p>Intravenous dose: <b>50mg IV over 5 minutes</b> (10ml)  Repeat at 10 minute intervals if MAP&gt;125mmHg up to <b>four times</b> (max dose <b>200mg</b>)  If BP &lt;160/105 , <b>MAP&lt;125mmHg</b> maintain with <b>infusion</b>  Infusion of 300mg (60ml, 5mg/ml) via syringe driver starting at 20mg(4ml)/hr.  Double infusion rate every 30 minutes to titrating against <b>BP (max rate 160mg (32ml)/hr)</b>  If <b>MAP&gt;125mmHg</b> – consider hydralazine or combination therapy. Senior involvement will be required</p>
5.	<p><b>Hydralazine</b>  Patient response is variable. Consider giving 500ml crystalloid fluid with hydralazine to reduce the risk of a precipitous drop in blood pressure with an adverse effect on placental perfusion.  Make up 20mg hydralazine (1 ampoule) in 20 ml normal saline</p> <p><b>Initial dose: 2.5mg iv over 5 minutes</b> (2.5ml) measuring BP every 5 mins. This can be repeated every 20 minutes to a maximum dose of 20mg.</p> <p>If <b>MAP&lt;125mmHg</b> maintain with <b>infusion</b>  Infusion of 40mg in 40ml 0.9% saline (1mg/ml) via syringe driver starting at 1mg/hr (1ml/hr). Increase by 1mg/hr (1ml/hr) every 15 minutes titrating against BP (<b>max rate 5mg/hr (5ml/hr)</b>).</p> <p>If <b>MAP&gt;125mmHg</b> consider combination therapy with Labetalol. Senior involvement will be required.</p>
6.	<p><b>Pros and cons of the available drugs</b>  Hydralazine has the disadvantage of requiring mixing prior to administration, and it can cause maternal tachycardia and a sudden drop in blood pressure.  Labetalol has the advantages of availability in a preparation ready to administer.  Anaesthetists are familiar with the use of labetalol, and oral therapy with labetalol is usually commenced post delivery, avoiding polypharmacy.</p>

### **Antenatal Fluid Management**

	<b>Action</b>	<b>Rationale</b>
1.	It is essential that an accurate fluid balance chart of input and output is kept in all cases of hypertension. All fluids should be given via an infusion pump so the rate of administration can be accurately controlled and monitored. The patient should be catheterised and hourly urine volume recorded.	Fluid tends to move from the intravascular compartment into the extravascular i.e. the tissues. The patient can have reduced intra-vascular fluid whilst being overhydrated. Total body fluid is difficult to assess.
2.	Aim for a urine output of 0.5ml/kg/hr. However, a urine output greater than or equal to 80mls in 4 hours is acceptable and a standard intravenous fluid regime of 85ml/hour should be maintained	This indicates adequate renal function and hydration
3.	Oliguria in the antenatal period should not precipitate any intervention except to encourage early delivery	Delivery is likely improve the renal function
4.	If oxytocin is used it should be at a high concentration (Syntocinon 30 international units in 47mls of normal saline to make it up to 50mls (60 milliunits in 0.1ml) in syringe driver. The infusion should commence at 0.2ml/hour (2mU/minute), and be increased every 30 minutes as below to a maximum of 1.6 ml/hour (16mU/minute) in multipara and 2.0 ml per hour (20 mU/minute) in nulliparas until adequate contractions are established. The volume should be included as part of the total intravenous fluid input of 85 ml/hour.	To help maintain control over fluid input
5.	Do not preload with fluids even if having epidural anaesthesia	

### **Oxytocin dose Schedule**

Mix oxytocin 30 international units in 47mls of normal saline to make it up to 50mls (60 milliunits in 0.1ml) in syringe driver.

<b>Time after starting (min)</b>	<b>Syntocinon dose (milliunits /min)</b>	<b>Volume infused (ml/hour)</b>
0	2	0.2
30	4	0.4
60	8	0.8
90	12	1.2
120	16	1.6
<b>Upper Dose Limit For Multiparous Women</b>		
150	20	2.0
<b>The licensed maximum dose of oxytocin is 20 milliunits per minute. ONLY USE THE FOLLOWING DOSES IN SHADED AREA AFTER DISCUSSION WITH CONSULTANT. The maximum dose used should not exceed 32 milliunits per minute.</b>		
210	24	2.4
240	28	2.8
270	32	3.2

### **Indications for Central Venous Pressure Monitoring**

CVP lines can be misleading in women with pre-eclampsia. However, a CVP line may be indicated if blood loss is excessive:

- i) particularly at Caesarean section
- ii) or if delivery is complicated by other factors such as abruptio placentae.

An intra-arterial pressure monitor may be indicated if:

- i) the woman is unstable
- ii) the blood pressure is very high
- iii) the woman is obese, when non-invasive measurements are unreliable
- iv) there is a haemorrhage of >1000 mls

### **Treatment of eclampsia**

	<b>Action</b>	<b>Rationale</b>
1.	Call Obstetric Emergency Team by dialling 2222. Ask Consultant to attend if covering as non-resident	To ensure appropriate staff are in attendance
2.	Maintain maternal airway and administer facial oxygen  Place in left lateral position or tilt if not delivered	Risk of airway obstruction and hypoxia during fitting  This will reduce caval compression so maintaining placental blood supply
3.	Administer magnesium sulphate as per the following: Take 4g in 20ml and give over 5-10 minutes iv. Patient may feel warm during the injection.  Diazemuls may be administered if the fitting continues at the discretion of the anaesthetist 5-10mg iv.	Eclamptic fits tend to be of short duration, and most will cease within one minute without treatment. Magnesium should be given as soon as possible. Magnesium sulphate can be used to terminate an eclamptic fit. It should be used with caution in those with hepatic or renal impairment and cardiac disease.
4.	Check vital signs, protect airway. Use pulse oximeter.	Continue to monitor patient who will still be unconscious
5.	Monitor fetal heart rate if undelivered	Consider fetal well being which may be compromised by fits
6.	Commence magnesium sulphate infusion as described below	To minimise risk of further fits
7.	Deliver once stabilised	This is the only effective treatment for eclampsia and will reduce the chance of fetal morbidity due to recurrent fits.

### **Magnesium Sulphate Regimen**

	<b>Action</b>	<b>Rationale</b>
1.	<b>Loading dose</b> 4g in 20ml over 5-10 minutes using a syringe driver ( <b>120 ml/hr</b> ). Patient may feel warm during the injection	High initial dose needed as this will be distributed round the body
2.	<b>Maintenance infusion</b> By <b>Syringe driver</b> 20ml (10g) magnesium sulphate diluted in 30ml normal saline (=1g/5ml). Give at <b>5ml/hr</b> via a syringe driver. Or <b>Graseby Pump</b> Add 40 ml (20 g) of Magnesium Sulphate to 60 ml of normal saline (remove 40 ml from a 100 ml bag) (=1g/5ml). Give at <b>5ml/hr</b> via a Graseby pump  This infusion is continued for 24 hours after commencement, If undelivered by 24 hours, continue until delivered. In clinically well patients with well controlled blood pressure, good urine output and no proteinuria after delivery discontinuation can be considered.	Once a steady state is reached a smaller dose is required to maintain it

3.	<p><b>Clinical Monitoring</b> In addition to observations as stated above check respiratory rate, oxygen saturation and pulse after loading dose and at 30 minutes</p> <ul style="list-style-type: none"> <li>• Respiratory rate should be &gt;12/minute</li> <li>• Urine output should be &gt;80ml in 4 hours. <b>If not, consider stopping magnesium sulphate infusion</b> and follow fluid regime</li> <li>• Oxygen saturation should be &gt;95% on no more than 4L/min O<sub>2</sub></li> <li>• If pulse rate irregular consider ECG</li> </ul> <p><b>These findings must be recorded on the high dependency chart. The woman should be reviewed by medical staff every 4 hours. Her reflexes should be checked and documented every 4 hours.</b></p>	<ul style="list-style-type: none"> <li>• Respiratory depression is later sign of magnesium toxicity. The infusion should be stopped/reduced if the respiratory rate is &lt;12/min</li> <li>• Magnesium sulphate is excreted by kidneys so renal failure may result in rapid toxicity. If the magnesium is not being excreted levels will remain adequate even if no more is given. No other anticonvulsant is necessary.</li> <li>• Another measure of respiratory function</li> <li>• Magnesium can cause arrhythmias</li> </ul> <p>To monitor the condition of the woman and make appropriate and timely management decisions</p> <p>Absent reflexes can be another sign of magnesium toxicity.</p>
4.	<p><b>ANTIDOTE IS CALCIUM GLUCONATE ONE GRAM (10ml of 10%) IV OVER 3 MINUTES</b></p>	

5.	<p><b>Management of further fits whilst on therapy</b></p> <ul style="list-style-type: none"> <li>• Give a further bolus of 2g of magnesium sulphate</li> <li>• Increase rate of infusion of magnesium sulphate to <b>1.5g/hr</b> (7.5ml)</li> <li>• If a woman continues to fit then consider the following in discussion with the Consultant Obstetrician/Anaesthetist Diazepam can be used TO ABORT SEIZURE ACTIVITY - DO NOT GIVE IF FIT HAS STOPPED SPONTANEOUSLY. The dose regime is <b>5mg-10 mg IV as a single dose at the discretion of the anaesthetist.</b></li> <li>• Those women who continue to fit despite this therapy may require paralysis and ventilation and consequently transfer to ITU.</li> <li>• A CT scan may be indicated once she is stabilised</li> </ul>	<ul style="list-style-type: none"> <li>• Assume subtherapeutic levels of magnesium</li> <li>• Eclamptic fits are usually self limiting and polypharmacy should be avoided where possible</li> <li>• Diazepam is a long-acting benzodiazepine with a half-life of 20-50 hours. It causes significant maternal sedation that may lead to problems with the airway. Prolonged use of diazepam is associated with an increase in maternal death</li> <li>• Other intracranial pathology should be considered.</li> <li>• The seizures may not be due to eclampsia</li> </ul>
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## **Postpartum Fluid Management**

	<b>Action</b>	<b>Rationale</b>
1.	It is essential that an accurate fluid balance chart of input and output is kept in all cases of hypertension. All fluids should be given via an infusion pump so the rate of administration can be accurately controlled and monitored. The patient should be catheterised and hourly urine volume recorded.	Fluid tends to move from the intravascular compartment into the extravascular i.e. the tissues. The patient can have reduced intra-vascular fluid whilst being over hydrated. Total body fluid is difficult to assess.
2.	If an oxytocin infusion is required to prevent or treat an atonic uterus it should be at a high concentration (40IU in 50mls 0.9% normal saline) given via a Graseby pump at 12.5 ml/hour and the volume included as part of the total intravenous fluid input of 85ml/hour.	This reduces the fluid load infused.
3.	Urine output should be recorded and a cumulative total recorded on the HDU chart over a 24 hour period.	A satisfactory urine output indicates adequate renal function and hydration
4.	If two consecutive blocks of 4 hours of measurement of urine output fail to achieve 80ml over each 4 hour period, then further action is appropriate. <ul style="list-style-type: none"> <li>• Check U&amp;E.</li> </ul>	To manage the poor renal function
5.	If total input is <b>more than</b> 750 ml in excess of output in the last 24 hours (or since starting the regime) then 20 mg of iv furosemide should be given. Colloid should then be given as below if a diuresis of >200mls in the next hour occurs.	
	<p style="text-align: center;"><b>Or</b></p> <p>If total input is <b>less than</b> 750 ml in excess of output in the last 24 hours (or since starting the regime) then an infusion of 250ml of colloid over 20 minutes should be given.  The urine output should then be watched until the end of the next four hour block.  If the urine output is still low then 20mg of iv furosemide should be given.  If a diuresis in excess of 200 ml occurs in the next hour the fluid should be replaced with 250ml of gelofusine over 1 hour in addition to baseline fluids.</p>	
6.	If the urine output fails to reach 80mls over a four hour period following furosemide in either situation then a discussion with a Renal Physician would be appropriate.	To aid with further management



## **Thromboprophylaxis**

[See guideline Obs 18](#)

## **Postnatal management of hypertension**

[See guideline Obs 99](#)

## **References**

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## **Process for audit**

### **Severe pre-eclampsia**

- An audit will be undertaken at least every 3 years which will audit compliance with this guideline. The audit will include as a minimum set of standards the following criteria
  - **blood pressure control**  
blood pressure should be maintained with a MAP < 125mmHg and systolic BP < 160 mmHg
  - **fluid balance**  
IV fluids should be limited to 85 ml/hr  
urinary catheter with hourly urine measurements should be in place
  - **prevention of seizures**  
Magnesium sulphate should be used for all those with severe pre-eclampsia or eclampsia
  - **fetal assessment**  
evidence that fetal size/growth was assessed  
continuous CTG monitoring until delivered
  - **delivery plan**  
should be documented in the notes by a consultant obstetrician
  - **postnatal follow up**  
plans should be documented in the notes
- The audit will be presented at a monthly departmental multidisciplinary audit meeting following which an action plan will be formulated to correct any deficiencies identified and a date for re-audit planned.
- The implementation of the action plan will be reviewed at the monthly audit meeting 3 months after presentation

### **Eclampsia**

**CONTINUOUS AUDIT** of cases of eclampsia will be maintained by clinical incident reporting. Each case will be reviewed by the Clinical Issues Group with appropriate feedback to those concerned. Amendments required to this guideline as a result of such an investigation will be actioned by the Guideline group.