

HYPERTENSION IN PREGNANCY

Cross References (including NSW Health/ SESLHD policy directives)	NSW Health PD2011_064 Maternity - Management of Hypertensive Disorders in Pregnancy NSW PD 2010_022 Maternity - National Midwifery Guidelines for Consultation and Referral SGSHHS Criteria for Maternity Care at Sutherland and St George Hospitals SGSHHS 2013 Standing Order for the Administration of Nifedipine in Delivery
1. What it is	A guideline for staff for the management of hypertension, preeclampsia and eclampsia in pregnancy and in the postpartum period
2. Risk Rating	High
3. Employees it Applies to	Midwifery and Medical staff Nurses Midwifery and medical students

Index

Numbers	Headings	Page
4.1	Aspirin for the Prevention of Preeclampsia	2
4.2	Blood Pressure Measurement	2
4.3	Referral to Day Assessment Unit (DAU)	2
4.4	Referral to Obstetric Medicine Physician (OMP)	3
4.5	Antenatal Management of Women Admitted with Hypertension	3
4.6	Management of Mild-Moderate Hypertension	4
4.7	Women with Preeclampsia having a Caesarean Section	5
4.8	Management of Severe Hypertension in Pregnancy and Postnatal	5
4.9	Intrapartum Care of the Woman with Preeclampsia	6
4.10	Eclampsia Convulsion Prophylaxis with Magnesium Sulfate (MgSO ₄)	7
4.11	Management of Eclampsia	8
4.12	Postnatal Management of Women with Hypertension	8
4.13	Potential Risks	9
4.14	Documentation	9

Process

All medications listed in this document are to be ordered by a medical officer prior to administration by midwifery staff. The exception will be when medications administered for first line management of moderate &/or severe hypertension which are to be administered by midwifery staff in accordance to standing orders.

4.1 Aspirin for the Prevention of Preeclampsia

- Pregnant women considered to be at high risk of preeclampsia (PE) who should receive aspirin are those with:
 - Previous history of PE
 - Pre-existing diabetes (Type 1 or 2)
 - Antiphospholipid syndrome
 - Chronic hypertension
 - Chronic kidney disease
- High risk women need to start 100mg aspirin daily prior to 16 weeks gestation
- These women should be seen in Risk Associated Pregnancy (RAP) and/or Obstetric Medicine Clinic (OMC) prior to 12 weeks gestation
- Women with a combination of other risk factors: nulliparity, multiple pregnancy, family history of PE, obesity, age ≥ 40 , can be considered for aspirin prophylaxis
- Aspirin may be ceased at 37 weeks but is safe to continue longer
- There is no increase in bleeding complications for women on low dose aspirin in pregnancy.

4.2 Blood Pressure Measurement

- Seat the woman in a chair or on the edge of the bed with feet supported on a flat surface
- Record BP on the right arm, using a validated mercury-free sphygmomanometer
- A large cuff must be used when the mid upper arm circumference is ≥ 33 cm
- The cuff is to be placed directly on skin, so sleeves may need to be rolled up or removed
- The diastolic pressure is that at which the pulse sounds disappear (Korotkov 5)
- Women without hypertension or a history of hypertension can have BP measured during pregnancy using the automated validated device for use in pregnancy
- Aneroid devices should NOT be used.

4.3 Referral to Day Assessment Unit (DAU) at SGH

- DAU is conducted three mornings a week – Monday, Wednesday and Friday
- Women booked at SGH should be referred to DAU if they have:
 - Hypertension diagnosed after 20 weeks without proteinuria or other features of PE, where admission and delivery is not already indicated
 - Obstetric cholestasis not requiring delivery
- Women require a written referral by a medical officer with a provider number
- Contact 1South to arrange an appointment to the DAU (ext. 33145)
- Women booked at TSH will attend AAU at TSH and be referred to SGH as appropriate (see Criteria for Maternity Care at Sutherland and St George Hospitals CIBR)
- Initial investigations of women referred to DAU with hypertension will include:
 - BP profile
 - Urinalysis and assessment of urinary proteinuria if indicated
 - FBC, UEC, LFT, Urate

- CTG
- Ultrasound for fetal growth/wellbeing (if there has not been a normal growth/wellbeing ultrasound performed within the previous 2 weeks)

4.4 Referral to Obstetric Medicine Physician (OMP)

- Women to be referred to OMP acutely (check roster in 1South or the hospital roster to determine who is on call for obstetric medicine, it is often not the same as the on-call hospital nephrologist):
 - All women with PE
 - Women with gestational hypertension (GH) when there is difficulty controlling BP requiring more than 2 antihypertensive agents
 - Women with acute severe hypertension
 - At the discretion of the RAP Obstetrician
- Women to be referred to OMC or Professor Brown's or Professor Mangos's rooms during pregnancy:
 - Chronic hypertension without PE
 - 'High risk' pregnancy or history of early onset PE
 - White-coat hypertension - before 20 weeks gestation
 - Renal disease or suspicion of an underlying secondary cause for hypertension
 - Antiphospholipid syndrome or other thrombophilia
- Women not requiring automatic referral:
 - Most cases of GH
 - Transient gestational hypertension i.e. women after 20 weeks whose BP is elevated in clinic or office but normal at DAU. These women need to be seen in the RAP clinic in one week for review and a plan made for further management. They have a 40% chance of developing GH or PE
 - Obstetric cholestasis
 - Ovarian Hyperstimulation Syndrome (unless concerns about oliguria, fluid management or abnormal renal function - use protocol first)

4.5 Antenatal Management of Women Admitted with Hypertension

- All women (except private patients) with hypertension in pregnancy will be admitted under the RAP obstetrician on call or staff specialist at TSH
- Women with PE at TSH should be transferred to SGH
- Assess the woman and her family's educational needs regarding hypertension in pregnancy, and give them the brochure to read
- Observations and monitoring:
 - Perform full maternal observations every 6 hours
 - BP 3-hourly at 0600, 0900, 1200, 1500, 1800, 2100hrs
 - 2100 – 0600 Antenatal women are not woken for observations.
 - Calculate and record average BP for the previous 24hrs each evening
- All women with hypertension have an automated dipstick urine test daily in the morning using a correctly collected MSU sample

- Send spot urine for protein and creatinine ratio (PCR) if $\geq 1+$ protein revealed on UA. Once PCR ≥ 30 , do not send repeated urine samples for PCR unless otherwise directed
- 24 hour urine collection is NOT required to assess proteinuria unless requested by OMP
- CTG on admission (if ≥ 26 weeks), then Monday and Thursday, unless otherwise clinically directed
- FBC, UEC, LFT, Urate on admission
- Repeat blood tests on Monday and Thursday, unless otherwise indicated, until birth
- Record blood results on woman's 'Hypertension in Pregnancy Data Collection Sheet'
- Record QID fetal movement, fetal heart rate, uterine activity and vaginal loss
- Ultrasound scan for fetal growth/wellbeing (unless a normal growth/wellbeing ultrasound has been performed within the previous 2 weeks and there are no new clinical concerns about fetal welfare)
- Manage hypertension as per the guidelines below in 4.6
- Indications for delivery:
 - Women with confirmed PE ≥ 37 weeks
 - Inability to control BP with maximum antihypertensive therapy
 - Progressive deterioration in liver and/or renal function or thrombocytopenia
 - Neurological signs and symptoms
 - Concerns about fetal wellbeing
- Women < 32 weeks and/or EFBW < 1800 g may need to be transferred to a Level 6 hospital if their clinical condition allows

4.6 Management of Mild-Moderate Hypertension

- Principles:
 - First line agents are oxprenolol or methyldopa
 - Target BP is Systolic BP 110-140 and Diastolic BP 80-90
 - Allow 24 hours for each dose increment to take effect
 - Increase dose every 24 hours until target BP reached
- Regimen:
 - Commence oxprenolol 40mg tds (in absence of contraindications)
 - If BP still elevated after 24 hours, increase oxprenolol to 80mg tds
 - Common side effects include wheezing and lethargy
 - Substitute methyldopa for oxprenolol (250mg tds increasing to 500mg tds as above) when B-Blockers are contraindicated (usually asthma)
 - If BP still elevated after 24 hours, add hydralazine 25mg tds
 - Increase hydralazine to 50mg tds 24 hours later if BP remains elevated
 - Consult OMP if hypertension persists despite maximum oxprenolol (120mg tds) and hydralazine (50mg tds)

4.7 Women with Preeclampsia having a Caesarean Section

- Pre-operatively:
 - Inform anaesthetic team
 - Use hourly urine bag when catheterised (usually in theatre)
 - Ensure FBC has been attended that day to exclude thrombocytopenia
 - Severe hypertension should be managed prior to transfer (see below) if clinical condition allows
 - Otherwise manage as per Caesarean Section CIBR

- Post-operatively:
 - Manage in ICU 2 if hydralazine and/or magnesium sulfate infusion necessary
 - Recommence oral antihypertensive therapy as soon as the woman able to tolerate
 - Monitor urine output. Arrange medical review if less than 30mL/hr:
 - If no signs of fluid overload, administer gelofusine 200mL stat and assess response. Do NOT give more than 500mL
 - If evidence of fluid overload (elevated JVP or basal lung crepitations, notify OMP for further management
 - If urine output adequate, maintenance fluids can be Hartmann's or Normal Saline 1000mL/8 hours until tolerating oral intake
 - Recheck FBC, UEC, LFT and urate if there were abnormalities in these pre-operatively. Otherwise no further blood tests are routinely needed after delivery
 - Do not use non-steroidal anti-inflammatory drugs (NSAID)

4.8 Management of Severe Hypertension in Pregnancy and Postnatal

- Principles:
 - Urgent treatment is indicated if SBP \geq 170mmHg and/or DBP \geq 110mmHg. Repeat BP after 5 minutes:
 - If $<$ 170/110, recheck again in 30 minutes
 - If still \geq 170/110 follow protocol immediately
 - Initiate Obstetric PACE Tier 1. Notify obstetric RMO, OMP, RAP consultant (or obstetrician if private)
 - Collect FBC, EUC, LFT, Urate
 - Obstetric RMO to discuss with obstetric registrar
 - Give normal antihypertensive medications if due, as well as additional management as outlined below
 - Commence continuous CTG monitoring on the pregnant woman until BP stabilises

- Antenatal and Postnatal Management:
 - Administer 10mg nifedipine orally as per standing order (give at time of notifying RMO)
 - Monitor and record BP every 15 minutes.
 - If after 45 mins severe hypertension persists:

- Notify obstetric registrar (Obstetric PACE Tier 1)
- Give a further 10mg nifedipine orally
- Monitor BP every 15 minutes until BP stabilises or another 45 minutes has elapsed
- If after 90 mins from initial dose of nifedipine severe hypertension persists:
 - Notify obstetric registrar (Obstetric PACE Tier 2)
 - Cannulate and collect FBC, EUC, LFT, Urate send to pathology marked urgent
 - Transfer to Delivery Suite
 - First dose of IV Hydralazine 5mg/5ml may be given prior to transfer to Delivery suite if delay in transfer occurs.
- Intrapartum management:
 - Commence IV gelofusine 500mL over 4 hours
 - Dilute 20mg hydralazine in 20mL water for injection - give 5mL (5mg) as an IV bolus
 - Check and record BP every 10 minutes
 - Repeat up to 3 bolus doses of 5mg hydralazine at 20 minute intervals if necessary
 - Dose 1 = 5mg/5ml IV bolus
 - Dose 2 = after 20 minutes 5mg/5ml IV bolus
 - Dose 3 = after further 20 minutes, 5mg/5ml IV bolus
- If severe hypertension persists (>3 boluses of hydralazine)
 - Notify obstetric registrar for immediate review (Obstetric PACE Tier 2). Registrar to notify RAP consultant and OMP
 - Commence hydralazine infusion via infusion pump
 - Draw 10mL out of a 500mL Normal saline bag, mix the 10mL with 80mg hydralazine powder and then load it back into bag to make 500mL bag
 - Commence infusion at 30mL/hr i.e. 5mg/hr
 - Increase infusion by 10mL every 30 minutes to a maximum of 90mL/hr (ie. 15mg/hr), aiming for SBP 140 –160mmHg and DBP 90-100mmHg
 - Hydralazine infusions should be weaned and overlapped with oral antihypertensives (unless low BP) under the direction of the OMP
- Initiate OBSTETRIC PACE Tier 2 call if there is deterioration in maternal or fetal condition e.g. hypotension (SBP \leq 110mmHg and/or DBP \leq 80mmHg), neurological symptoms, epigastric pain, fetal distress
- Women with PE who require magnesium sulfate and/or hydralazine infusions should NOT be transferred to another hospital for delivery, as it is not considered safe practice. In early onset cases delivery should be expedited at SGH, NETS notified in advance and, if necessary, the baby then transferred. These women should be managed in ICU2 after delivery. If, after consultation between the obstetrician and OMP involved, it is considered safe to discontinue the infusion for the duration of the transfer, transfer could then occur.

4.9 Intrapartum Care of the Woman with Preeclampsia

- Administer routine medications as charted prior to commencement of labour or induction
- Do not give further antihypertensive medications once labour is established unless specifically instructed
- Cannulate with wide bore (16fg or 18fg) cannula

- Collect FBC, UEC, LFT, urate, and group and hold
- Measure and document BP every 30 minutes when in labour
- If SBP \geq 170mmHg or DBP \geq 110 mmHg during labour, give Hydralazine 5mg IV as above
- If epidural is to be used, preloading should be gelofusine (500mL) over 60 minutes. Inform anaesthetist of platelet count before insertion of epidural block
- IVI fluids should be 80mL/hr and should not exceed 120mL/hr (after preload as above)
- Record urine output. In severe PE, a urinary catheter should be inserted and urine measured hourly. Contact renal registrar if concerned about urine output (<30mL per hr) or renal function (creatinine >90micromol)
- Do not use ergometrine or syntometrine as first line management in third stage because of hypertensive action
- Obstetrician and OMP to determine most suitable ward immediately postpartum (i.e. 1 South, ICU2 or Delivery Suite)

4.10 Eclampsia Convulsion Prophylaxis with Magnesium Sulfate (MgSO₄)

- The use of MgSO₄ treatment must be discussed with the obstetrician and OMP on call
- Indications for MgSO₄ treatment:
 - After a convulsion
 - In the presence of:
 - altered mental state
 - hyperreflexia with clonus (\geq 3 beats)
 - hyperreflexia with severe headache
 - repeated visual scotomata
 - Right upper quadrant pain
 - Consider if severe or rapidly progressive PE
- Principles:
 - MgSO₄ must be administered via an infusion device and through a second cannula
 - No other drugs or fluids must be administered via the MgSO₄ IV line
 - The administration of MgSO₄ antenatally is an indication for delivery
 - MgSO₄ infusion must be ceased and tubing disconnected on transfer to theatre or continued via infusion device at appropriate rate to prevent accidental overdose
 - MgSO₄ infusions should be managed in the Delivery Suite in the antenatal and intrapartum periods with 1:1 midwifery care, and ICU2 postnatally
 - Measurement of serum MgSO₄ levels is not necessary unless signs of toxicity-see below
 - Discuss with OMP if maintenance calcium channel blockers are being used concurrently (nifedipine for acute severe hypertension is safe).
- Regimen:
 - Loading dose - dilute 4g (8mL) MgSO₄ in 100mL Normal Saline and give IVI at 300 mL/hr via infusion device (over 20 minutes)
 - Maintenance dose- Remove 20 mL solution from 100 mL normal saline infusion bag and discard. Add 10g MgSO₄ (4 amps = 20 mL) to the bag. Infuse at 10mL/hr = 1g/hr and maintain for 24-48hrs postnatally

- Observations during MgSO₄ infusion:
 - Continuous CTG monitoring if ≥ 26 weeks gestation (if < 26 weeks gestation, perform 30 minutely auscultation)
 - Respiratory rate and pulse oximetry every 30 min.
 - BP 30 minutely
 - Maternal pulse hourly
 - Urine output hourly
 - Reflexes at the completion of the loading dose and then every 2 hours by RMO
- Management of MgSO₄ toxicity:
 - Signs:
 - Respiratory rate < 10 /min or $\text{SaO}_2 < 92\%$
 - Urine output < 30 mL/hr for 3 consecutive hours.
 - Reflexes absent
 - Systolic BP ≤ 110 mmHg and/or diastolic BP ≤ 80 mmHg
 - Cease the infusion, take blood for MgSO₄ level
 - Notify the obstetric registrar
 - Treatment:
 - Calcium gluconate 10%: give 10mL in 100 mL normal saline IVI over 10-20 minutes

4.11 Management of Eclampsia

- Initiate PACE Tier 2 call (obstetric and adult)
- Maintain safe environment
- Manage fitting (eclampsia):
 - Place woman on her side, clear pharynx by suction', insert airway, give oxygen
 - Administer MgSO₄ IVI 4g bolus over 10-20 minutes and repeat if fitting has not ceased
 - Call RAP consultant and OMP
 - Commence maintenance dose MgSO₄ infusion (as above) to prevent further fitting
- Manage hypertension if present
- Collect FBC, UEC, LFT, Urate and coagulation studies
- Prepare for delivery of the baby where appropriate

4.12 Postnatal Management of Women with Hypertension

- Observations:
 - Perform full maternal observations every 6 hours
 - BP 3-hourly (0600, 0900, 1200, 1500, 1800, 2100hrs)
 - 2100 – 0600 attend full maternal observations when the mother is awake tending to the care of the baby.
- Do not use non-steroidal anti-inflammatory drugs

- Only recheck FBC, UEC, LFT and Urate if there were abnormalities in these pre operatively or woman’s condition deteriorates postnatally. Otherwise no further blood tests are routinely needed after delivery
- Follow-up:
 - All women should be followed up by their GP or OMP:
 - Within 1 week if BP still elevated or taking antihypertensives at discharge
 - After 3 months in all women to ensure BP & U/A are normal
 - Yearly for life to detect cardiovascular disease or hypertension
- The Hypertension in Pregnancy Data Collection Sheet should be completed by the midwife prior to discharge. This information is used by the OMP for:
 - Generating summary and follow-up letters to GPs and Obstetricians
 - The Hypertension in Pregnancy database is used to report quality outcomes

4.13 Potential Risks

- Inappropriate management of hypertension in pregnancy may lead to increased maternal and/or fetal/neonatal morbidity and mortality.

4.14 Documentation

- Relevant observation charts
- SMOC
- Partogram
- Fluid balance chart
- Magnesium sulfate observation chart
- CTG sticker
- Medication chart
- Intravenous fluid order chart
- Appropriate clinical pathway
- Clinical notes
- Patient result flow chart
- Hypertension in Pregnancy Data Collection Sheet
- ObstetriX

5. Keywords	Hypertension, pregnant, preeclampsia, eclampsia, magnesium sulfate (MGSO4)
6. Functional Group	Women’s and Children’s Health
7. External References	<p>Lowe SA, Brown MA, Dekker G, Gatt S, McLintock C, McMahon L, Mangos G, Moore MP, Muller P, Paech M, Walters B. The SOMANZ Guidelines for the Management of Hypertensive Disorders of Pregnancy</p> <p>2008. Brown M, Lindheimer M, de Sweit M, Van Assche A, & Moutquin JM. The classification and diagnosis of the hypertensive disorders or pregnancy: Statement from the International Society for the Study of Hypertension in Pregnancy (ISSHP). 2001 Hypertension in Pregnancy, vol 20, no.1, pp IX-XIV.</p>

	Australian College of Midwives: National Midwifery Guidelines for Consultation and Referral. May 2013
8. Consumer Advisory Group (CAG) approval of patient information brochure	Women' & Children's Online Consumer Pilot Hypertension Brochure Approval date:
9. Implementation and Evaluation Plan Including education, training, clinical notes audit, knowledge evaluation audit etc	The new CIBR will be notified to staff at various meetings including ward staff meetings, management and education meetings, open forums, through direct email contact with clinicians and through in-service education where appropriate and necessary. Staff are required to sign an audit sheet in their clinical area to acknowledge they have read and understand the new CIBR. The CIBR will be uploaded to the W&CH CIBR page on the intranet.
10. Knowledge Evaluation	<p>Q1: Pregnant women considered at high risk of preeclampsia who should receive aspirin are those with? A1: Previous history of preeclampsia; pre-existing diabetes (Type 1 or 2); antiphospholipid syndrome; chronic hypertension; chronic kidney disease</p> <p>Q2: Indications for MgSO₄ treatment? A2: After a convulsion</p> <ul style="list-style-type: none"> • In the presence of: <ul style="list-style-type: none"> ○ altered mental state ○ hyperreflexia with clonus (≥3 beats) ○ hyperreflexia with severe headache ○ repeated visual scotomata ○ RUQ pain • Consider if severe or rapidly progressive preeclampsia <p>Q3: Where should documentation occur for these women? A3: See section 4.14</p>
11. Who is Responsible	O&G Clinical Director, St George Hospital O&G Clinical Director, The Sutherland Hospital

Approval for HYPERTENSION IN PREGNANCY	
*Specialty/Department Committee	Women's & Children's Protocols Committee Chairperson name/position Louise Everitt CMC
*Specialty/Department Committee	Women's & Children's Protocols Committee Chairperson name/position Dr Trent Miller O&G Senior Medical Officer
*Nursing/Midwifery Co-Director	Lorena Matthews Midwifery & Nursing Co-director W&CH
*Medical Co-Director	Prof Michael Chapman Medical Co-Director W&CH
*Drug and Therapeutics Committee (SGH)	Chairperson's Name: A/Prof Winston Liaiw
*Drug and Therapeutics Committee (TSH)	Chairperson's Name: Dr Justine Harris
Executive Sponsor	Prof Michael Chapman Medical Co-Director W&CH
Contributors to CIBR development e.g. CNC, Medical Officers (names and position title/specialty)	Louise Everitt, CMC, SGH Jane Griffith, CMC, SGSHHS Dee Sinclair, CMC, SESLHD Kirstin Lock, Lactation Consultant, SGSHHS Dr Trent Miller, Staff Specialist Obstetrician, SGH Dr Steven Thou, Staff Specialist Obstetrician, SGH Dr Andrew Zuschmann, O&G Clinical Director, TSH Dr John Breen, Staff Specialist Obstetrician, TSH Dr Amanda Henry, Staff Specialist Obstetrician & RAP, SGH Associate Prof. Greg Davis, Consultant Obstetrician & RAP, SGH Professor Mark Brown, Obstetric Renal Physician, SGH Dr George Mango, Obstetric Renal Physician, SGH Dr Franziska Pettit, Obstetric Renal Physician, SGH Rebecca Bedding, Midwifery Manager, Birthing Services & Antenatal, TSH Catherine Rita , Acting Midwifery Manager, Maternity, MSP & SCN, TSH Lyndall Nuttall, Clinical Midwifery Educator, Birthing Unit & Antenatal Clinic, TSH Michelle Culshaw, Clinical Midwifery Educator, Maternity, MSP & SCN TSH Sara Issa, Midwifery Manager, Antenatal, Postnatal & MSP, SGH Victoria Couldwell, Acting Midwifery Manager, Birthing Services, SGH Noreen Murray, Midwifery Manager, W&CH Outpatients, SGH

	<p>Chris Johns, Nurse Unit Manager, Gynaecology , SGH Marina Rhodes, Midwifery Network Educator, SGSHHS Linda Blanch, Acting Clinical Midwifery Educator, Antenatal, Postnatal & MSP, SGH Paul Martin, RAP Clinical Midwifery Specialist Faith Robertson, RAP Midwife Amanda Reilly, Clinical Midwifery Educator, Antenatal Services, SGH Tricia Ke, Gynaecology, Clinical Nurse Educator, SGH Dr Bob Fonseca, Director Paediatrics, SGH Dr Alys Swindlehurst, Paediatrician, TSH Dr Christina Lau, Paediatrician, TSH</p>
--	---

Revision and Approval History

Date	Revision number	Author (Position)	Revision due
Jan 03, Feb 04, April 07, Mar 10	4	Blood Pressure measurement Christine Catling-Paull (CMC Policy Development)	
Jan 03, May 03, Feb 04, April 07, Feb 10	5	Referral to Day Assessment Unit (DAU) Christine Catling-Paull (CMC Policy Development)	
Jan 03, May 03, Feb 04, April 07, Feb 10	5	Referral to Obstetric Medicine Physician (OMP) (CMC Policy Development)	
Sept 05	5	Antenatal Management of Woman admitted with Hypertension (CMC Policy Development)	
Jan 03, May 03, Feb 04, April 07, Feb 10	5	Urine testing of woman admitted with hypertension (CMC Policy Development)	
Jan 03, April 07, Mar 10	3	Woman with Pre-eclampsia (PE) having a Caesarean Section (CMC Policy Development)	
Sept 11	5	Management of Severe Hypertension in Pregnancy and Postnatal (CMC Policy Development)	
Mar 2011	5	Intrapartum care of woman with Pre-eclampsia (PE) (CMC Policy Development)	
Sept 11	5	Eclampsia Convulsion Prophylaxis with Magnesium Sulfate (CMC Policy Development)	

Sept 11	5	Management of Eclampsia (CMC Policy Development)	
Jan 03, April 07, Mar 10	3	Postnatal care of the woman with Hypertension (CMC Policy Development)	
Nov 14	1 (combined as above)	Louise Everitt (CMC)	November 2017

Acting General Manager Ratification

Name: Leisa Rathborne

Date: 15.05.15