St Mary’s Maternity Services

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St Mary’s Hospital

- The major acute hospital for north west London
- Runs one of four major trauma centres in London
- 24/7 A&E department
- Maternity unit and alongside Birth centre and home birth service
- Antenatal clinic, FMU, Maternity Day Assessment unit, Triage, 24/7 anaesthetics
- Level 2 Neonatology
Caring for our women and families

GP or self referral   Community clinics
Caring for our women and families

- 60% of women have all appointments in community
- Out of area and high risk women are seen in antenatal clinic
- Core team of 8 obstetricians. Gynaecology on site
  - Fetal medicine specialists
  - Maternal medicine specialists – HIV/infectious diseases (Jefferiss Wing), Diabetes (Endocrinology team), Neurology, Haematology
  - Preterm labour clinic
  - Multiple pregnancy
  - Pelvic floor clinic

- Perinatal mental health team
  - Perinatal psychiatrist, perinatal mental health midwife, Lead obstetrician, IAPT service
- Bereavement clinic – specialist midwives and consultant lead
- Postnatal follow up clinic
- ‘Blue team’ – small group of caseload midwives looking after women with social complexity
Caring for our women and families

• **Antenatal education classes**
  - Parent Education Centre at St Mary’s
    - Birth and Parenthood Preparation Classes
    - Breastfeeding
    - Infant massage

• King’s midwifery students and Imperial College medical students

• GP trainees, clinical fellows, subspecialty trainees and specialty trainees

• **Maternity Day Assessment Unit** (0203 312 7707)
  - 8am-8pm Mon-Fri. Reduced fetal movements, Itching, BP checks,

• **Triage** – on LW
  - A&E for pregnancy. 24/7. Waters broken, early labour
Place of Birth

• Birthplace study
• Home birth – community teams
• 17% women give birth in our Birth centre
  o Birth preparation classes from 36 weeks
  o AN appts at 38, 40 and 41 weeks
  o Fewer interventions, low CS/instrumental birth rates
Place of Birth

- Labour ward
  - Obstetricians, anaesthetists
  - 2 pools
  - Telemetry
  - 2 theatres
  - Recovery area and HDU
  - Bereavement room
Postnatal

• Enhanced Recovery for CS
• PICO dressings
• Discharge talk every day 11am
• Partners/support can stay
• Infant feeding supporters and specialist mws
• Physio input
• Easy referral back to MDAU- wounds, perineums, BP, bladder
Contact details

Imperial.obstetrics-stmarys@nhs.net

- Email for non urgent queries for St Mary’s patients
- Consultant Obstetrician response within 2 working days
Updates in Maternity 2018
## Hypertension - definitions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic hypertension</td>
<td>Hypertension present at booking or before 20 weeks or if the woman is already taking antihypertensive medication when referred to maternity services. It can be primary or secondary in aetiology</td>
</tr>
<tr>
<td>Gestational hypertension</td>
<td>New hypertension presenting after 20 weeks without significant proteinuria</td>
</tr>
<tr>
<td>Mild hypertension</td>
<td>Diastolic blood pressure 90–99 mmHg; systolic blood pressure 140–149 mmHg</td>
</tr>
<tr>
<td>Moderate hypertension</td>
<td>Diastolic blood pressure 100–109 mmHg; systolic blood pressure 150–159 mmHg</td>
</tr>
<tr>
<td>Severe hypertension</td>
<td>Diastolic blood pressure 110 mmHg or greater; systolic blood pressure 160 mmHg or greater</td>
</tr>
<tr>
<td>Pre-eclampsia</td>
<td>New hypertension presenting after 20 weeks with significant proteinuria.</td>
</tr>
<tr>
<td>Severe pre-eclampsia</td>
<td>Pre-eclampsia with severe hypertension and/or with symptoms, and/or biochemical and/or haematological impairment</td>
</tr>
<tr>
<td>Significant proteinuria</td>
<td>Greater than 300mg/24 hours or &gt;30mg/mmol</td>
</tr>
</tbody>
</table>
Pre-eclampsia: definition (ACOG Committee opinion, 2002)

New onset hypertension (>140/90) after 20 weeks

New onset proteinuria
   > 1+ proteinuria on urine dipstick
   >300mg/24 hours - 24° urine collection
   **Spot protein: creatinine ratio >30mg/mmol** (in absence of UTI)

Biochemical abnormalities
   Low platelets, deranged LFTs, deranged renal function, coagulopathy

Exceptions?

IF CONCERN REGARDING PRE-ECLAMPSIA, BP >150/100, OR SYMPTOMATIC OF PET, PLEASE REFER URGENTLY TO DAU/ TRIAGE
Pre-eclampsia – management of hypertension

Aim to keep BP <150/100 or <140/85 if evidence of end-organ disease (chronic hypertension, CKD etc)

Drug treatment options

**Prophylaxis:**
Low dose Aspirin; Calcium /Vitamin D

If high risk of Vitamin D deficiency, should check blood level and prescribe high dose replacement if necessary (eg. 20,000 IU cholecalciferol weekly for 4-8 weeks)

**Antenatally:**
Labetalol, Nifedipine (MR preparations), Amlodipine, Methyldopa, Doxazocin, Hydralazine (IV)

If patient is on ACEI or ARB prior to pregnancy, consider switching to one of the above agents pre-pregnancy or at positive pregnancy test at the latest

**Postpartum:**
Atenolol; Amlodipine, Nifedipine, Enalapril

Aim for once daily dosing if possible to facilitate compliance
Reduced Fetal Movements (RFM)

Reducing stillbirth is a priority for the NHS

- Reducing stillbirth is a Mandate objective from the government to NHS England
- Better Births (February 2016) identified the ‘Saving Babies Lives’ care bundle as good practice in reducing stillbirths:
  - Reducing smoking in pregnancy
  - Risk assessment and surveillance for fetal growth restriction
  - Raising awareness of reduced fetal movement
  - Effective fetal monitoring during labour
- If patient is concerned regarding fetal movements >20 weeks, please refer woman to MDAU for assessment
- If RFM associated with abdominal pain and bleeding, consider calling an ambulance

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Reduced fetal movements

- Aspiration
  - Raising awareness amongst pregnant women of the importance of detecting and reporting reduced fetal movement (RFM), and ensuring providers have protocols in place, based on best available evidence, to manage RFM
- Interventions
  - Information and advice leaflet on reduced fetal movement (RFM), based on current evidence, best practice and clinical guidelines, to be provided to all pregnant women by, at the latest, the 24th week of pregnancy and RFM discussed at every subsequent contact
  - Use provided checklist to manage care of pregnant women who report reduced fetal movement, in line with RCOG Green-top Guideline 57
Growth Assessment Protocol (GAP)
DEtection of Small for GestatioNal Age Fetus
(DESiGN Trial)
# Ultrasound request Form to be used in Conjunction with Departmental Guideline

**Patient name**

**MRN Number**

## Examination

<table>
<thead>
<tr>
<th>Reason</th>
<th>Please tick</th>
<th>Any Comments</th>
<th>Printed Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 3 working days - refer to SGA policy; discuss with CFC/FMU if urgent and no capacity in ultrasound department</td>
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<td></td>
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<tr>
<td>First SFH &lt;10th centile</td>
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<tr>
<td>SFH static/slow growth</td>
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<tr>
<td>SFH excessive growth</td>
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## Appointment to be booked at:

<table>
<thead>
<tr>
<th>Appointment date and time</th>
<th>28 weeks</th>
<th>32 weeks</th>
<th>36 weeks</th>
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## Clinical History:

- Smoker 10+ cigarettes per day
- Current illicit drug user
- BMI <18kg/m² or >40 kg/m²
- Heavy bleeding in 1st trimester similar to menses
- Low PAPP-A <0.3MoM
- Maternal age >40 years
- Previous SGA baby (birth weight below 10th centile)
- Previous stillbirth
- Previous early-onset pre-eclampsia or IUGR requiring delivery <34 weeks
- Previous late-onset pre-eclampsia >34 weeks
- Chronic hypertension
- Other medical conditions eg. Pre-existing diabetes, APS, SLE, chronic kidney disease, inflammatory bowel disease, gastric bypass, congenital cardiac disease, sickle cell disease, on anti-psychotic meds, etc...

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**Requester**

**Receptionist ONLY**

MW / Obstetrician to Request

Appointment date and time

- 28 weeks
- 32 weeks
- 36 weeks

**Obstetric Medicine or PNMMH Consultants ONLY**

MW / Obstetrician to Request

Appointment date and time

- 28 weeks
- 32 weeks
- 36 weeks
Information


• Perinatal Institute [www.perinatal.org.uk](http://www.perinatal.org.uk) Examples of Growth Chart patterns

Four referral reasons:
1. First plot below the 10th percentile
2. Static growth
3. Slow growth
4. Accelerated growth

Send an email to imperial.appointment.maternity@nhs.net

Explain to the woman that she will hear from the admin team the next working day and if this doesn’t happen she should phone the maternity helpline 020 3312 6135
Antenatal Assessment & Management: assess at booking and repeat on each admission
(tick box)

| Single previous VTE +                     | HIGH RISK Requires antenatal prophylaxis with enoxaparin and TEDS
|                                          | Refer to obstetric medicine (QCCH) or obstetric consultant (SMH). |
|                                          | **INTERMEDIATE RISK**  |
|                                          | Refer to obstetric medicine/consultant. Consider antenatal prophylaxis with enoxaparin (and TEDS if in patient) |
|                                          | **LOW RISK**  |
|                                          | mobilisation and avoidance of dehydration Consider TEDS |

| Single previous provoked VTE without FHx or thrombophilia (inherited or APS) | Thrombophilia (inherited or APS) + no VTE |
| Medical co-morbidities e.g. heart or lung disease, SLE, cancer, inflammatory conditions, nephrotic syndrome, sickle cell disease, Morbid obesity BMI > 40 kg/m², myeloproliferative disorders, IV drug user. |
| Surgical procedure e.g. appendicectomy |
| OHSS |
| Hospital Admission |

| Age > 35 years | Obesity (BMI > 30 kg/m²) |
| Parity ≥3 |
| Smoker |
| Gross varicose veins |
| Immobility, e.g. paraplegia, SPD, long distance travel (>4 hours) |
| Pre-eclampsia |
| Current systemic infection |
| Dehydration/hyperemesis/OHSS |
| Multiple pregnancy or ART/IVF |
| Surgical procedure e.g.TOP/ERPC |
| Family history of VTE |
| Low risk Thrombophilia |

1 risk factor, or 2 if an out patient

4 or more risk factors antenatal LMWH
3 risk factors LMWH from 28/40
2 risk factors LMWH only if admitted
Figure 2 - Imperial Thromboprophylaxis Postnatal Risk Assessment

Postnatal Assessment & Management: assess after delivery

(to be assessed on Labour Ward) (tick box)

| Any previous VTE |  |
| Anyone requiring antenatal prophylactic LMWH |  |
| Prolonged admission >10 days |  |
| FH of VTE and low risk thrombophilia |  |
| High risk thrombophilia | HIGH RISK 6 weeks prophylactic enoxaparin and TEDS |

| Emergency C-Section |  |
| Thrombophilia (heritable or acquired + no VTE) |  |
| Class III obesity (BMI>40kg/m²) |  |
| Prolonged hospital admission |  |
| Any surgical procedure in puerperium |  |
| Readmission in puerperium |  |
| Medical co-morbidities e.g. heart or lung disease, SLE, cancer, inflammatory conditions, nephrotic syndrome, sickle cell disease, myeloproliferative disorders, IVDU. | INTERMEDIATE RISK At least 10 days postnatal prophylactic enoxaparin. (and TEDS while an in patient) NB. If persisting or >3 factors consider extending prophylaxis with LMWH |

| Age > 35 years |  |
| Obesity (BMI > 30 kg/m²) |  |
| Parity ≥3 |  |
| Smoker |  |
| Gross varicose veins |  |
| Immobility, e.g. paraplegia, SPD, long distance travel |  |
| Pre-eclampsia |  |
| Current systemic infection |  |
| Wound infection |  |
| Mid-cavity or rotational forceps |  |
| Prolonged labour (>24 hours) |  |
| Stillbirth this pregnancy |  |
| PPH>1L or blood transfusion |  |
| Low risk thrombophilia |  |
| Elective caesarean section |  |
| Family history of VTE |  |
| Preterm delivery |  |

2 or more risk factors

1 risk factor

LOWER RISK Early mobilisation and avoidance of dehydration + Consider TEDS
Postnatal Hypertension

- Discharged day >4
- Community midwifery BPs
- If birth <34 weeks offer APS
- Obstetric medical clinic involvement if:
  - Labile BP, > 2 antihypertensives, PCR >100, Cr >90
- If on antihypertensive – 2 week medical review
- If no antihypertensive – 6-8 week medical review
  - Urine dip – if > 1 + protein, renal check up in 3 m with possibility of renal referral
- Refer in if BP >160/100
Antihypertensives and Breastfeeding

No known adverse effects
- Labetalol
- Nifedipine
- Enalapril
- Captopril
- Atenalol
- Metoprolol

Insufficient evidence
- ARBs
- Other ACE inhibitors
- Amlodipine

Avoid diuretics
Mastitis

- Breast Pain, erythema ‘wedge’, swelling, discharge
- Assess for abscess

Further Management

- Anlagesia – Paracetamol, Ibuprofen
- Antibiotics; 1st Line
  - PO Co-amoxiclav 625mg TDS 10-14 days
- 2nd Line Penicillin allergic /Non lactational mastitis
  - PO Clindamycin 300mg QDS 10-14 days

If breastfeeding, MRSA+, fungal – consult microbiology

Lactational mastitis
- Encourage patient to “express breast, heat and rest”

Discharge home
Clinically well patients do NOT require admission
Perineal Infection and breakdown

• Ask about perineum and offer inspection at each visit
• If concerns about infection – start broad spectrum antibiotic immediately (co-amoxiclav) and review
• Refer to MDAU if clinically unwell, broken down concerns/unsure, not improving with antibiotics, obvious mismatch
Contraception

• Earliest known time from birth to ovulation 27 days
• Breastfeeding – fully – 6m
• 12 month pregnancy interval recommended (18-24 months for LSCS)
• Aiming to trial – fitting of IUDs (MIRENA, Cu coil) immediately post partum.
Thank you