Obstetrics & Gynaecology

Junior Doctors' Handbook

Darent Valley Hospital

First edition, July 2015. Adil Todiwala ST2 O&G
Sixth edition, July 2020. Samantha Maden ST2 O&G.

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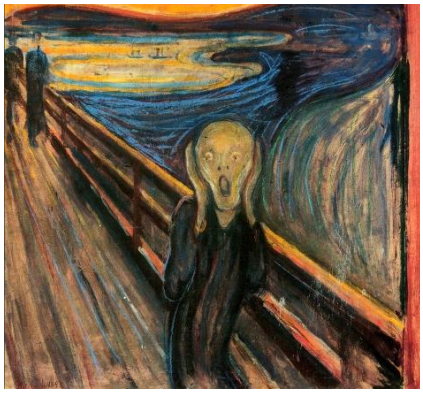
Welcome

Welcome to Obstetrics & Gynaecology (O&G) at Darent Valley Hospital, Dartford! We know O&G can be a daunting specialty for many people, especially if you haven't been lucky enough to work in this great specialty for a few years; however, this handbook aims to be a guide to ease you into the job and provide some useful information that you need to hit the ground running! Everyone is very friendly and approachable, so please ask anyone for anything you are unsure of. Wider reading is encouraged, and at the bottom of some pages you will find references and reading suggestions, such as the relevant NICE or RCOG guidelines.

Objectives/Learning outcomes

- Understand the daily duties and roles of an O&G SHO
- Become familiar with the language and abbreviations used in O&G
- Be able to take an obstetric history and measure symphysio-fundal height
- Be able to take a thorough gynaecological history
- Be able to perform a gynaecological examination
- Develop a systematic approach to diagnosing and managing common acute gynaecological complaints
- Be aware of Early Pregnancy Assessment Unit, and the criteria for referrals
- Be aware of the medication used in Pre-term Pre-labour rupture of membranes, and Induction of Labour
- Become familiar with classification of CTGs according to NICE guidelines
- Understand when to prescribe and administer Anti-D immunoglobulin
- Be aware of local antimicrobial guidelines

You, just now



You, by the end of your rotation

Location of work

Darent Valley Hospital is your main place of work. Occasionally you will cover clinics and theatres at Queen Mary Hospital in Sidcup.

Team Structure

There are 12 consultants, 15 registrars and 10 SHOs in the department. All consultants are general Obstetricians and Gynecologists. Most have a subspecialty or another role for which they are lead:

Mr. Abhishek Gupta	AG	Urogynecology Advanced Prolapse Surgery
Mr. Elias Kovoor	EK	Clinical director Lead for minimal access and endometriosis
Miss Anahit Zakaryan	AZ	College tutor Rapid Access EPAU and GAU
Mr. Mohsen El-Sayed	MES	Undergraduate lead Subfertility
Miss Ritu Rana	RR	Deputy lead for Undergraduates
Mr. Mike Jones	MJ	Colposcopy Vulval Pathology
Mr. Robert MacDermott	RMD	Lead for RAC services (oncology) Urogynecology and Advanced Prolapse Surgery
Mr. Mark Waterstone	MW	CTG Trainer High risk Obstetrics
Mr. Gabriel Awadzi	GA	Gynae Risk Management and Audit lead Lead for EPAU and GAU
Miss Urmila Singh	US	Colposcopy lead Lead for Diabetes and Pregnancy Outpatient therapeutic Hysteroscopy
Mr. Karan Sampat	KS	Lead for Obstetrics Maternal Medicine
Mr. Ahmed Khalil	AK	Fetal Medicine
Miss Sajitha Nalini	SN	Locum Consultant Obstetrics and Gynaecology

You will be assigned an educational supervisor (ES) who will be responsible for your progress during your rotation in O&G. You should make early contact with your ES to arrange meetings and plan out your learning objectives for the rotation. It is up to you to arrange subsequent meetings with your ES to make sure you're up to date with your portfolio.

There is a hot week consultant who is on call for both obstetrics and gynaecology Monday to Friday 8.30am to 5pm. After 5pm there is a different consultant who is on call overnight, Monday to Friday. On weekends the same consultant is on call both day and night. Consultants can be contacted via bleep 926, through their secretaries or via email. In emergencies (usually overnight) they can be contacted directly on their mobile via switchboard. Any emergency patient that is admitted during the 24 hours comes under the care of the evening Consultant, despite them only starting at 5pm.

Rota

You will have been emailed the rolling rota for the whole of your rotation. This basically tells you **when** you are supposed to be at work. The main rota for the week (which tells you **what** you are supposed to be doing when you're at work) is usually emailed out on Fridays. When you receive the rota make sure you double check to make sure you haven't been missed out/ placed in two locations at the same time, etc. and let the rota team know so amendments can be made.

Currently the rota team is thus:
Lead: Miss Anahit Zakaryan – a.zakaryan@nhs.net
Reg Rota: Mr. Adil Todiwala – adil.todiwala@nhs.net
SHO Rota: Dr Samantha Maden – samantha.maden@nhs.net
Administrators: Ms Blessing Ukhueduan – b.ukhueduan@nhs.net (Ex 8359)

Swaps/ Annual Leave/ Study leave
Annual leave and study leave entitlements vary depending on your training stage:

	Annual Leave Allowance	Study Leave Allowance
Foundation Year 2	9 days during the rotation	30 days a year
GPVTS Trainee	9 days during the rotation	30 days a year
Core O&G Trainee	27 days a year	30 days a year

Aim to request all leave at least 6 weeks in advance. You are responsible for arranging swaps if your leave falls on a **long day** or **night on call**. Let the rota team know of any swaps. There is a maximum of **three** SHOs allowed off on any one day.

Process of requesting all leave

1. You will have been emailed a link to the DVH SHO Off Days Google Sheet which is the pain rota platform for SHOS. The first thing you must do is make a comment to the days you would like leave (via 'EDIT' → 'ADD COMMENT') (emailed requests for leave will be responded with "Please comment on the Google Sheet")
2. If you have to swap long days/ nights email the rota team so this can be updated on the rolling rota
3. One of the rota team will resolve the comments on the Google Sheet and you will get automatic email notification of this
4. All requests must be followed up with the Annual Leave/ Study Leave request forms which need to be signed by the rota Reg and the rota Consultant lead before sending them to medical education/ the rota administrators

Sickness
If you are sick/ have unforeseen circumstances that need you to be off please follow the following pathway:
1. Email the rota team (Consultant/ REG/ SHO/ Administrator) to formally let them know that you'll be off + how long you are likely to be off for

2. You will be added to the SHO O&G WhatsApp group – easier to leave a message here as soon as you know, however you must also formally email the team
3. When you feel better, let the rota team know that you will be coming back to work on a specific day so can be put back on the rota

Teaching

There is departmental teaching (mostly conducted by registrars) every Wednesday afternoon at 1pm in the Mulberry Ward doctors' room or in one of the Library seminar rooms. Everyone is welcome to attend! There is a teaching rota which will be sent around once you start so that yu know what you will be taught each week. There are also various other educational sessions like Labour Ward Forum, Journal Club and CTG teaching which you are also encouraged to attend. FY2s tend to have teaching on Tuesday afternoons between 1pm and 3pm. This will be accommodated on the rota as far as possible. The education center requests that FY2s inform them when they are not able to attend teaching as there is a minimum number of sessions needed (80%) for a satisfactory ARCP outcome at the end of the year. The O&G departmental teaching counts towards this allowance (you just need to show them that you have attended this teaching instead).

GP SHOs have a separate teaching programme coordinated by the education center which has a set timetable. Study leave needs to be requested for this. Usually it is on a Wednesday afternoon therefore a half day of study leave needs to be requested.

Shift Patterns

There are four main types of shift:

Gynae on call (LD or LD1)	08:30 – 21:00
Standard day	08:30 – 17:00
Night on call	20:30 – 09:00
Labour ward on call (LD2)	08:30 – 21:00

For all on call shifts handover starts on labour ward at 8.30am. If you are the outgoing on call SHO, you are responsible for updating the handover and printing enough copies for the incoming team. The handover document can be found on the S Drive under Gynaecology Handover like so:

My Computer → "Shared on 'dvhfile01'" → Folder: "Gynae Handover" → Folder: current month

You need to be logged in to PAS to access this. It is the responsibility of the on call SHO covering Gynae to update this before the end of each on-call shift. There are therefore two handover sheets per day (AM and PM).

Gynae on call (Long Day)
For this shift, the SHO is responsible for seeing all the gynae inpatients as well as any A&E and EPU referrals. On the most part, the SHO is accompanied by one of the senior gynae nurses for the inpatient ward round. They may also be accompanied by the consultant or registrar if there is one allocated.

Labour ward on call (during the week)
For this shift there is the hot week consultant, the registrar on call and an SHO. The team will cover labour ward, Aspen and Cedar Wards. If there is no allocated SHO for Triage (Tambootie),

the labour ward SHO also covers this. At 5pm there is another handover whereby the day consultant hands over to the night consultant. The labour ward SHO also hands over to the long day SHO who will cover both Obstetrics and Gynaecology.

At 8.30pm there is a final handover whereby the registrars and SHOs change over to the night team.

Standard day
On a standard day there is a lot of variety. You could be on EPU, on Triage, doing the elective section list, in clinic or theatres. You may be asked to be on call till 5pm if there is shortage.

Night on call
At night there are two registrars (one for Obstetrics and one for Gynaecology) and a SHO. You cover the whole department – both obstetrics and gynaecology (therefore carry both bleeps). The on-call consultant is usually off site unless they are called in for emergencies.

Weekend on call
If you are allocated for the LD1 shift, you will be covering all things gynaecology over the weekend (that means the gyane inpatients, A&E referrals and EPU referrals). The weekend on call consultant may join you for the ward round for the inpatients under gynae.
If you are allocated for the LD2 shift, you will be covering all things obstetrics over the weekend (this means labour ward, Triage, Aspen and Cedar wards for the postnatal patients).

Referrals whilst on call
All referrals must ideally be made to the registrar. If a team attempts to refer a patient to you discuss with the registrar before accepting – it is difficult to give back patients that have been inappropriately accepted. If you are going to see a patient in A&E take basic PV examination equipment you anticipate will be needed. There is a gynae bag in the consultant office on labour ward which you can take with you. A&E also has two gynae trollies (one in Majors and one in Minors) which you can use. Any patient you see in A&E that you think needs admission (particularly overnight) needs to be seen by the registrar.

Scans whilst on call
If you see a patient in A&E that does not need admission but needs a scan because they are pregnant, you can write "**For EPU**" in front of their A&E CAS card. The EPU nurses will pick this up the following morning and will be in touch with the patient. Inform the patient that EPU will contact them the next morning, however if their symptoms of pain / bleeding get worse then they must re-present to A&E immediately. GP's and A&E doctors can also refer patients to EPU in this same way. Often the A&E doctors are not aware of this process, and need reminding!

Bleeps

	Bleep number
Consultant on call	926 (carried by the gynae registrar overnight)
Registrar on call	342
Gynae SHO on call	309
Labour ward SHO on call	193
Triage	999

Bullying/ Raising Concerns/ Exception reporting/ Datix

If you find yourself working outside of your scheduled contracted hours/ role then you are encouraged to submit an exception report. Please contact Debby Sands for login details for your exception reporting accounts.

If you feel bullied or undermined, your educational supervisor should be your first port of call. If you feel you cannot talk to your educational supervisor, any of the other consultants are happy to be approached. Debby Sands can provide more contacts for support for bullying if you would like to discuss things outside the department. Also, Mr. Awadzi is the freedom to speak up champion in the department. He is very approachable if you want to talk about something in confidence.

If you have any clinical concerns or any concerns about conduct in the department, you can complete a Datix form. All Datix submissions are reviewed individually and on the most part feedback is given about the outcome of the Datix.

Areas of work

- Labour Ward / Delivery Suite: (3rd floor)
- Cedar Ward: Antenatal & Postnatal patients (3rd floor)
- Aspen Ward: Postnatal patients (3rd floor)
- Tambootie / Maternity Triage (off Labour Ward)
- Main Theatres: (3rd floor)
- Day Care Unit Theatres: (2nd floor)
- Surgical Assessment Unit (3rd floor): where patients are consented prior to Main Theatre lists.
- Gynae Outpatient Clinic, GOP (2nd floor)
- Antenatal Clinic, ANC (2nd floor)
- Queen Mary's Hospital, Sidcup: Occasional clinics and theatre lists.

Rota Abbreviations	
ANC	Antenatal Clinic
GOPD	Gynae Outpatients clinic
MT	Main theatres
QMT	Queen Mary Sidcup Theatres
LW	Labour ward
ELCS	Elective Caesarean Sections
DCU	Day Case Unit
EPU	Early Pregnancy Unit
Gynae	Long day on call
Examples:	
MT GA → Mr. Awadzi's main theatre	
ANC US → Miss Singh's antenatal clinic	

Reviewing patients on Cedar / Aspen Ward

Antenatal patients are reviewed by Registrars. Postnatal patients are reviewed by SHO's. Generally speaking, the relatively simple uncomplicated spontaneous vaginal delivery's (SVDs), do not need to be reviewed by SHOs before they are discharged, and can be discharged by midwives. This also applies to uncomplicated elective Caesarean sections.

All other postnatal patients need to be reviewed and be discharged to midwife-led care. There will be a list of patients on Aspen and Cedar wards for SHO review. You may need to write the appropriate discharge medication (TTO's) but the midwives kindly then care for them and will write their discharge summary.

The postnates are seen by the SHOs' who are scheduled to be in **clinic** in the morning (Gynae clinic, GOPD or Antenatal clinic, ANC). Every morning, these SHO's (who are due to work in clinic in the morning) must go to Cedar and Aspen ward and see the postnatal patients. If you are scheduled for any clinic, you are responsible for reviewing postnatal patients between 08.30am

and 09.00am when clinic starts. Any patients left over for review will be seen by the SHO scheduled for the Postnatal Ward round or by the Labour ward SHO.

Theatre sessions
Morning theatre lists start at 8:45am. You would need to join the operating Consultant and Registrar to consent the patients from 8:30am, before starting the list. This would be in Surgical Assessment Unit for Main Theatre lists, or in Day Care Unit if they are in the Day Care Unit Theatres. Afternoon lists start at 1:30pm.

Elective Caesarean Section Lists
The elective LSCS list is displayed next to the handover room on Labour Ward. You would need to join the Registrar or Consultant in consenting the patients on Labour Ward at 8:30am. The elective sections usually start immediately after handover.

The SHO's and Registrars that are on the elective LSCS lists also cover Maternity Triage (Tambootie). So, between the elective sections, see if there are any patients waiting for review in Triage. The elective section/triage SHO carries bleep 999. However, the midwives are more used to bleep 193 so they will tend to bleep this first. If you are on for triage, go to Tambootie and introduce yourself to the midwives and tell them you are carrying bleep 999. If you are mid Caesarean section when they bleep, ask that they call the Labour ward SHO to review the patient in the interim. There are usually no elective sections to be done in the afternoon (they are usually all done by about 1pm), so if you are on elective sections in the afternoon, it essentially means covering Triage.

Surgical Management of Miscarriage
Main theatres reserve the first two slots on the CEPOD list every morning for Surgical Management of Miscarriage (SMM) cases. There are usually 2 every day. If you are the Gynae SHO on call it is your responsibility to make sure you have added the names and details of the SMMs for the following day onto the handover sheet before you finish at 5pm. Ask the Early Pregnancy Unit (EPU) which patients need to be added to the handover sheet for the following day's SMMs.

(Early Pregnancy Unit) EPU
O&G training SHOs are scheduled for scanning sessions on EPU occasionally. They are there to learn scanning. EPU is still covered by the on call gynae SHO however, if the list is not busy, the EPU SHO may help out.

Queen Mary Hospital, Sidcup
Occasionally you will be placed at QM for theatre sessions (this appears as QMT on the weekly rota). Patients will be located on Mottingham Ward pre-operatively, which is on Level 4. They will be seen and consented here. Theatres are on Level 2 and start at 08.30am and 13.30pm.
For parking, you can either park in the Pay and Display areas (and pay for your ticket via the machines or the 'JustPark' app or you can contact Lynnete Butt (her office is next to the theatre reception desk at Queen Mary Sidcup) who will give you scratch cards to put in your car which allows you to park in the staff car park only. Tickets paid for with the JustPark app can be claimed back via Easy Expenses on the trust intranet.

Common Abbreviations and Terminology in O&G

Gravidity – Number of pregnancies, including the current one

Parity – X+Y where X=number of pregnancies with delivery >24 weeks and Y=number of pregnancies ending <24 weeks (Abortion/Miscarriage)
Lie – Relationship of baby to the long axis of the mother.
Presentation – The most leading part of the baby (i.e. closest to cervix)
Position – orientation of the baby identified by the presenting part, in relation to the pelvis of the mother (e.g. occiput anterior)

ARM	Artificial Rupture of Membranes	MMM	Medical Management of Miscarriage
BSO	Bilateral salpingo-oophorectomy	OC	Obstetric Cholestasis
Bx	Biopsy	PET	Pre-eclampsia/Pre-eclamptic toxaemia
CTG	Cardiotocograph	PID	Pelvic inflammatory disease
Cx	Cervix	PIH	Pregnancy induced hypertension
EDD	Expected due date	PPH	Post partum haemorrhage
EFM	Electronic Fetal Monitoring	PROM	Premature rupture of membranes
ECV	External cephalic version	SFH	Symphysio-fundal height
ERPC	Evacuation of retained products of conception	SMM	Surgical Management of Miscarriage
FHR	Fetal Heart Rate	SROM	Spontaneous rupture of membranes
GBS	Group B Streptococcus	TAH	Total abdominal hysterectomy
GDM	Gestational Diabetes	TOP	Termination of Pregnancy
IUD	Intrauterine Death	VBAC	Vaginal birth after C-Section
IUCD	Intra uterine contraceptive device	VE	Vaginal examination
IUGR	Intrauterine growth restriction		
LMP	Last menstrual period		
LSCS	Lower Segment Caesarean Section		

Obstetric History & Examination

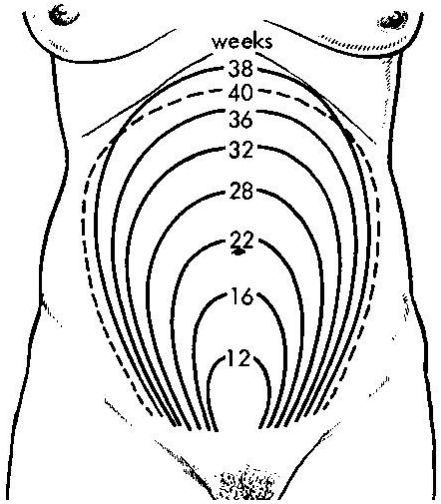
Gravidity and Parity

- Gravida, G: the total number of pregnancies, including this one.
- Para, P: the number of births beyond 24 weeks gestation.
- If there are any miscarriages / TOPs before 24 weeks, they appear as "+" after Para.
- e.g. a woman who has been pregnant 4 times, with 1 previous normal delivery, and one miscarriage at 9 weeks would be: $G_4P_1^{+1}$.

Important points to remember during the Obstetric History

- Age, Gravidity, Parity
- Gestation today (e.g. 35+4 / 40)
- Expected date of delivery (EDD)
- Gestation of previous deliveries (e.g. 39+5 weeks, Term+11)
- Mode of previous deliveries (e.g. emergency LSCS for failure to progress)
- Rhesus positive / negative
- Fetal movements (any reduction, or absence)
- Recent scans and results (e.g. showing placenta praevia, or breech)
- Any history of rupture of membranes / PV bleed / discharge / abdominal pain

Symphysio-fundal height (SFH)



- Objectively measure uterine size with the tape measure facing down.
- Measure from the upper margin of pubic symphysis to the highest point of the fundus.
- Appropriate growth is estimated to be the number of weeks gestation in centimetres (± 2 cm).
- The uterus normally becomes palpable at 12 weeks
- Level of umbilicus = approx. 20 / 22 weeks
- Level of xiphisternum = approx. 36 weeks

Gynaecological History Taking

This follows the general principles of history taking, with a few additions;

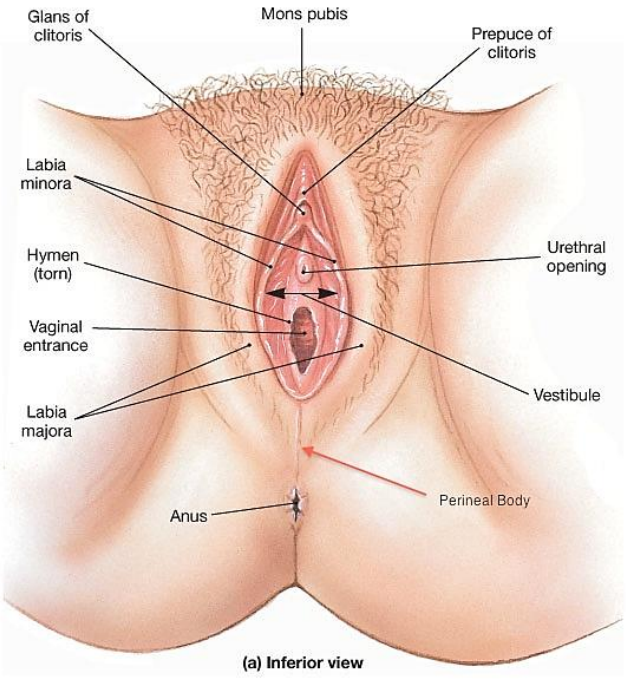
- Age, Gravidity, Parity
- Presenting complaint
- History of presenting complaint
- To include progression of symptoms as well as any relationship with menstrual cycle
- Menstrual History
    - Age of Menarche
    - LMP
    - Duration and regularity (x/y where x is number of menstruating days per cycle and y is the time between start of each cycle)
    - Flow (and quantify i.e. number of pad/tampon changes per hour/day)
    - Menstrual pain
    - Other irregular bleeding (i.e. intermenstrual bleeding – see below)
- Menopausal symptoms, HRT use and age of menopause if relevant
- Past Gynae History
- Contraceptive History
- Last cervical smear and result (treatment if abnormal smear)
- Past Obstetric History
    - Delivery modes, complications, birth weight
- Sexual History (never assume elderly patients are not sexually active!)
- Drug History

Important symptoms to remember:

- Dysmenorrhoea
- Menorrhagia
- Intermenstrual bleeding
- Post-coital bleeding
- Post-menopausal bleeding
- Dyspareunia (superficial / deep)
- Pelvic pain
- Bladder and Bowel symptoms

Gynaecological Examination

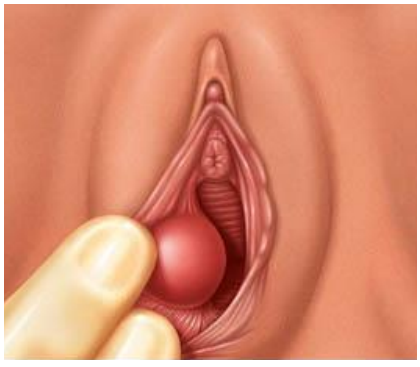
- **Equipment**: Sterile gloves, lubricant, Cusco's Speculum, Swabs.
- **Explain**, **Consent** and **Chaperone** (for males and females).
- **Positioning** – Lying flat on the bed, clothes removed from the waist down. Modified Lithotomy position; *"Bring your heels together towards your bottom and let your knees fall to the sides".*
- **Be gentle and try to make them relax –** it'll be easier for you and them.
- **Inspect** the External Genitalia.



Inspection:

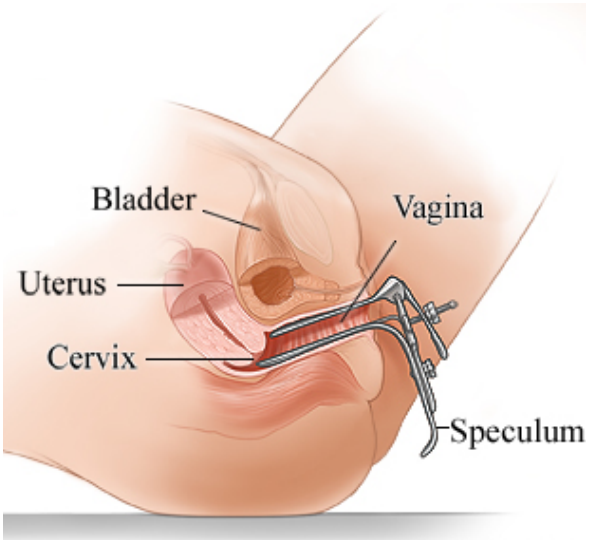
- Varicosities
- Ulcers
- Abnormal discharge
- Vulvitis
- Eczema/psoriasis
- Vulval atrophy
- Lumps
- Prolapse (on bearing down)
- Stress incontinence (on cough)

Bartholin's cyst – caused by blockage of the Bartholin's gland (Greater Vestibular gland). This can get infected and may need drainage in theatre, especially if the patient is systemically unwell or in significant pain.



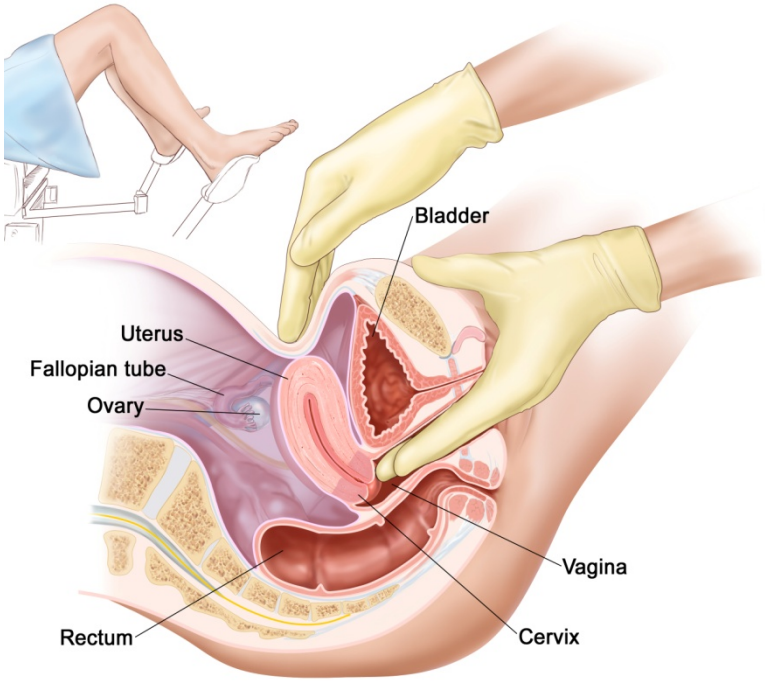
Speculum Examination

- Wearing sterile gloves, apply lubricant to the speculum
- Separate labia with non-dominant hand.
- Rest speculum at the introitus sideways.
- Ask the woman to relax and take deep breaths as you insert the speculum as far as it will comfortably go, aiming for the posterior fornix (rotating 90 degrees).
- Open the blades to view the cervix and screw the bolt in position.
- Inspect cervix – External os open? Shape? Erosions, ulcerations or growths, discharge, bleeding.



Bimanual palpation

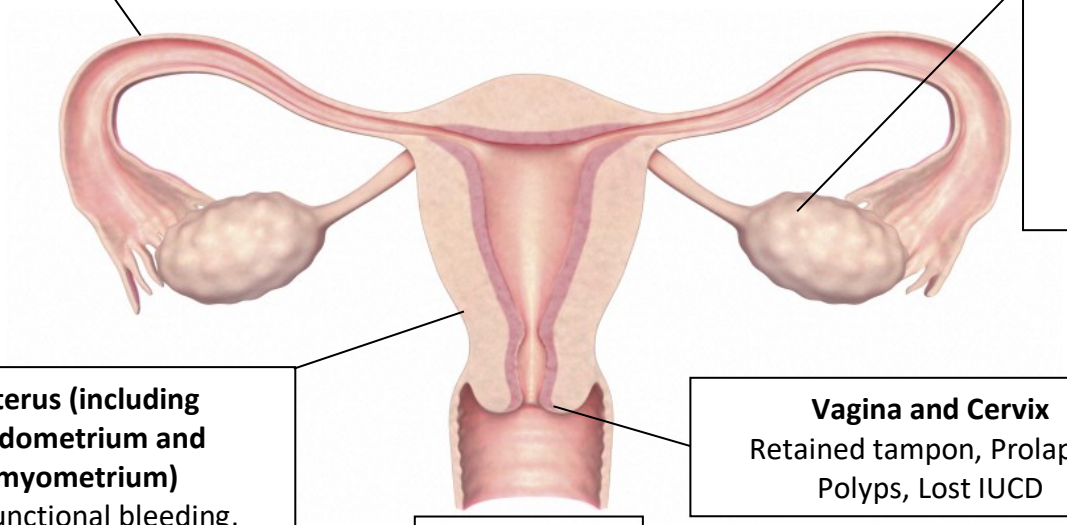
- Separate the labia with non-dominant hand.
- Gently insert index and middle fingers into the vagina along the posterior wall, towards the posterior fornix, feeling the walls for any irregularity.
- With fingers behind the cervix, palpate between fingers and abdominal wall. Assess the position, size and shape of the uterus.
- Examine both adnexae for masses and tenderness.
- Cervical Excitation (Controversial sign) – one finger in each lateral fornix, and push cervix side to side – is there pain? Positive in Ectopic pregnancy and PID (high false +ve rate, and risk of rupturing an ectopic)
- Take swabs if necessary



Common Gynaecological Presentations

Fallopian Tubes
PID, Ectopic

Ovaries
Haemorrhagic cyst, Cyst rupture, Ectopic, Cyst torsion, Ovarian torsion, Mittelschmertz (ovulation pain)



Uterus (including Endometrium and myometrium)
Dysfunctional bleeding, Fibroids, Polyps

Vagina and Cervix
Retained tampon, Prolapse, Polyps, Lost IUCD

Vulva
Bartholin's cyst
Other abscesses and cysts, acute genital herpes.
Malignancy

Early Pregnancy Unit (EPU)

EPU is situated at the front of Mulberry Ward. (EPU Ext: 5378 / 8029). **It** is open 6 days a week, Sunday – Friday, 8am – 7pm. Not all patients need to be admitted. Patients that you may see in A&E which are stable enough to be discharged and meet the EPU criteria can be discharged from A&E and followed up by EPU. EPU only accepts pregnant women up until 16 weeks. **Always discuss with a senior before discharging / referring to EPU.**

Criteria for referral to EPAU:

- Under 16 weeks gestation
- Haemodynamically stable
- Mild PV bleed / Pelvic pain
- Suspected 1st trimester miscarriage or ectopic pregnancy (if stable)
- Suspected RPOC following TOP / delivery (up to 4 weeks postpartum)

Criteria NOT suitable for EPAU:

- Over 16 weeks gestation (these women should present to Triage (AKA Maternity Assessment Unit or Labour ward
- Haemodynamically unstable
- Profuse PV bleed / Severe Abdominal pain
- Patients with strong clinical suspicion of ectopic pregnancy

If you are the Gynae SHO on call, EPU may ask you to consent patients for SMM's for the following day. There is a pre-written consent form that you need to go through with the patient, and the EPU nurses will guide you if you need any help. The EPU nurses can scan only scan gestations under 12 weeks. Women presenting with abdominal pain or bleeding after 12 weeks should not automatically be referred to EPU. They should have a speculum exam and a check of the fetal heart using a sonicaid.

Pre-term Pre-labour Rupture of Membranes (PPROM)

For rupture of membranes before 37 weeks gestation:

- If less than 36 weeks: **Dexamethasone 12mg IM, 2 doses, 12 hours apart.**
- **Erythromycin 250mg PO QDS for 10 days** (if not allergic).
- If the woman goes into established labour, intrapartum intravenous antibiotic prophylaxis for Group B Strep with Benzylpenicillin (or Clindamycin if penicillin allergic) should be administered (see page 17)

Induction of Labour with Propess pessary & Prostin gel

You will often be asked to prescribe propess and prostin for antenatal patients. Always discuss with a Reg / Consultant before prescribing and check it is suitable correct to prescribe. However, for your general information, the doses are:

- **Propess 10mg PV STAT.**
- PRIMIPS: **Prostin 2mg PV STAT.** Followed by **Prostin 1mg** 6 hours later.
- MULTIPS: **Prostin 1mg PV STAT.** Followed by **Prostin 1mg** 6 hours later.
- (Second dose of Prostin is only given if, following cervical assessment 6 hours later, the patient is not ARM-able)

CTG Interpretation

You will not be expected to interpret CTG's. This is a very specialized skill with important implications. However, for your information, the following may be useful:

Dr: determine risk (standard / high)
C: contractions (e.g. 3 in 10)
M: maternal pulse, membranes intact/SROM
Bra: baseline rate
V: variability (e.g. 5 – 10)
A: accelerations
D: decelerations
O: overall impression

Feature	Baseline (bpm)	Variability (bpm)	Decelerations	Accelerations
Reassuring	**110-160**	**≥5**	**None**	**Present**
Non-reassuring	100-109 161-180	<5 for 40-90 minutes	Typical variable decelerations with ≥50% of contractions, occurring for ≥90 minutes. Single prolonged deceleration up to 3 min	The absence of accelerations with otherwise normal CTG is of uncertain significance.
Abnormal	<100 >180 Sinusoidal pattern ≥ 10minutes	< 5 for 90 minutes	Either atypical variable decelerations with over 50% of contractions or late decelerations, both for ≥30 min. Single prolonged deceleration for more than 3 mins	

Category	Definition
Normal	An FHR trace in which all four features are classified as reassuring
Suspicious	An FHR trace with one feature classified as non-reassuring and the remaining features classified as reassuring
Pathological	An FHR trace with two or more features classified as non- reassuring or one or more classified as abnormal

Anti-D

"The development of anti-D antibodies usually occurs as a result of fetomaternal haemorrhage (FMH) in a rhesus D (RhD) negative woman with a RhD positive fetus."[1]
Approximately 99% of women have a FMH of less than 4ml at delivery. In patients with greater than 4mls, 50% will have occurred during normal delivery. Traumatic deliveries, including caesarean section; manual removal of placenta; fetal deaths; stillbirths; and abdominal trauma are likely to be associated with a large FMH.

- "An intramuscular dose of 500 IU of Anti-D immunoglobulin (Ig) will neutralise an FMH of up to 4ml. A minimum dose of **250 iu** is recommended for prophylaxis following sensitising events up to 19^{+6} weeks. For all events at or after 20 weeks, a minimum dose of **500 IU** should be given, and a test to identify FMH greater than 4mls performed; additional Anti-D Ig should be given as required."[1] (However, currently there is a shortage of supply - the only dose available is **1,500 IU**.)
- "A Kleihauer screening test should be performed within 2 hours of delivery to identify RhD women with a large FMH who require additional Anti-D Ig."[1]
- "For successful immunoprophylaxis, Anti-D Ig should be given as soon as possible after the potentially sensitising event, but always within 72 hours."[1]

Miscarriage

- "Anti-D Ig should be given to all non-sensitised RhD negative women who have a spontaneous complete or incomplete miscarriage at or after 12 weeks."[1]
- "Anti-D Ig is not required for spontaneous miscarriage before 12 weeks."[1]
- "Anti-D Ig should be given to all non-sensitised RhD negative women undergoing surgical evacuation of the uterus, regardless of the gestation."[1]

Threatened Miscarriage

- "Anti-D Ig should be given to all non-sensitised RhD negative women with a threatened miscarriage after 12 weeks."[1]
- "Anti-D Ig should be considered in non-sensitised RhD negative women if there is heavy or repeated bleeding or associated abdominal pain as gestation approaches 12 weeks."[1]

Ectopic Pregnancy

- "Anti-D Ig should be given to all non-sensitised RhD negative women who have an ectopic pregnancy, regardless of management."[1]

Termination of Pregnancy

- "Anti-D Ig should be given to all non-sensitised RhD negative women having a therapeutic TOP whether by surgical or medical methods, regardless of gestational age."[1]

Local Antimicrobial Guidelines

The following can be found on the MicroGuide app or on the trust intranet. Please refer back to the trust guidelines for accurate and updated advice. Keep in mind dose adjustments for patients with poor renal function; and note that there are alternatives if the patient is allergic to penicillins / cephalosporins.

PID	Ceftriaxone	1g IV	Stat
	Doxycycline	100mg PO BD	14 days
	Metronidazole	400mg PO BD	14 days
Bartholin's abscess	Co-Amoxiclav	1.2g IV TDS (or oral if outpatient)	7 days
Episiotomy infection 3rd / 4th degree tear	Co-Amoxiclav	625Mg PO TDS	7 days
Manual Removal of Placenta	Cefuroxime Metronidazole	1.5g IV TDS 500mg IV TDS	For 24 hours then switch to oral Co-Amoxiclav 625mg TDS for 5 days
Urinary Tract Infection in pregnancy	Trimethoprim (avoid in 1st trimester) Nitrofurantoin (avoid at term)	200mg PO BD 50mg PO QDS	7 days 7 days

Common antibiotics prescribed in septic patients

Oral				Intravenous			
Metronidazole	400mg	PO	TDS	Metronidazole	500mg	IV	TDS
Cefalexin	500mg	PO	TDS	Cefuroxime	1.5g	IV	TDS

Prevention of Early-onset Neonatal Group B Streptococcal Disease

Prevention of neonatal GBS disease	Benzylpenicillin	3g IV	1 x STAT after onset of labour
	Benzylpenicillin	1.5g IV 4 hourly	Until delivery

Group B Strep (GBS) is the most frequent cause of severe early-onset (less than 7 days of age) neonatal sepsis. Approximately 21% of women are carriers of GBS. The background UK incidence of neonatal GBS sepsis is 0.5/1000. If GBS is detected on vaginal swabs during pregnancy, the risk of neonatal disease increases to 2.3/1000[2]. Please read the RCOG Green-top guideline 36 (reference given below) for details on the specific use of intrapartum antibiotic prophylaxis. **Clindamycin 900mg iv 8 hourly should be given to those allergic to benzylpenicillin**.[2]

Reference 2. RCOG Green-top guideline 36: The prevention of early-onset neonatal group B streptococcal disease, 2012.

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