2024 MEDI6003 Summative Exam

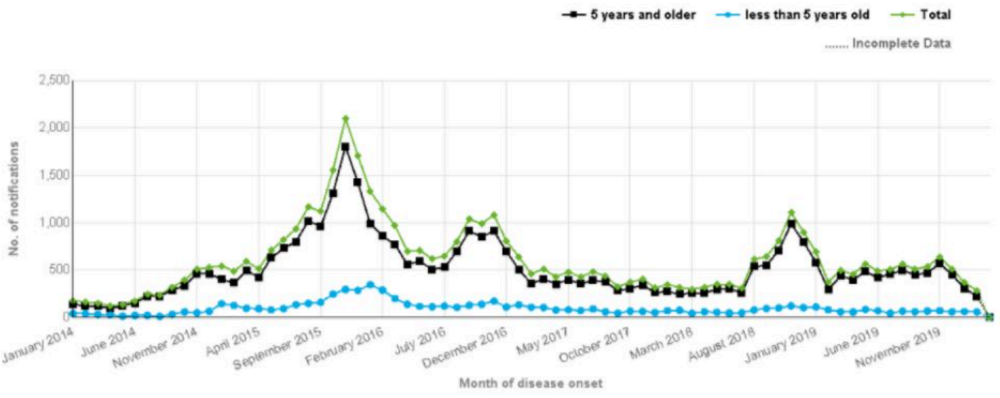
SAQ

PPH/PPD (So many)

78 questions total (including BCS/PPH/PPD and all sub-questions – no CCS marks for SAQs) PPH/PPD q's came first in the exam.

1. **All probable and definitive cases of pertussis are notifiable in Australia**
   a. What clinical features must be present to make the diagnosis pertussis probable?
   b. What is another finding that in addition to the probable diagnosis of pertussis (based on clinical features) would make the diagnosis of pertussis definitive? (some weird wording like that)
   c. What changed in pertussis vaccination schedule in 2015 to for the protection of children or improve immunity in children?
   d. What are 2 other changes that occurred to reduce morbidity and mortality associated with pertussis, specifically in infants less than 3 months?
   e. Interpret graph on pertussis notification rates in 2018-2020, Give 3 findings? (similar graph)

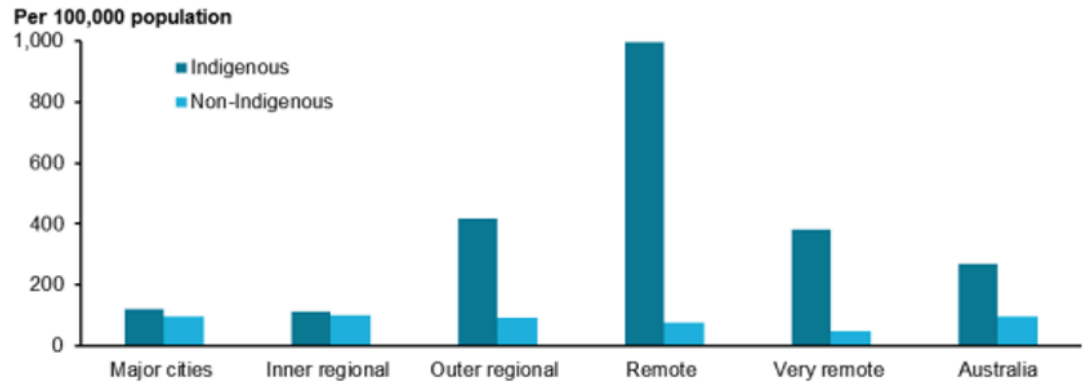
Pertussis notifications in NSW residents, by month of disease onset and age group. January 2014 to March 2020.



f. What 4 public health personal hygiene factors were implemented in 2020 that explains the reduction rates of pertussis? (with reference to COVID-19 pandemic and measures related to that)
g. Absolute contraindication to pertussis vaccine

2. Repeat Q of 2023 ESKD Graph and analysis

Figure 6.1: Total patients with end-stage kidney disease per 100,000 population, by Indigenous status and remoteness area, at 31 December 2017



Notes

1. Rates are calculated based on 2016 estimated resident Aboriginal and Torres Strait Islander and Non-Indigenous populations by remoteness areas.
2. Rates per 100,000 population by remoteness area category are crude rates. National (Australia) rate is age-standardised and matches values in Supplementary Table 6.1

Source AIHW analysis of ANZDATA 2017 registry data.

a. What is the epidemiological measure that is used in this graph?
b. What are 3 trends?
c. What are 2 underlying reasons for the distribution of Indigenous ESKD in the remote region?

3. Graph showing highest expenditure drugs from PBS, top 2 drugs were rosuvastatin and atorvastatin

a. What CV risk factor does the highest expenditure drug (rosuvastatin) address?
b. What are 4 personal preventable lifestyle factors that can reduce CVD risk and also contribute to a high disease burden?

4. Shared decision making

a. What are 2 features of shared decision-making?
b. What are 5 benefits of shared-decision making?

5. A patient comes in with face lacerations, an image of the laceration needs to be sent to the surgeon for review to determine the urgency of the

management. The patient has already consented to taking and sending the image to the surgeon.

a. What are 3 things you need to consider before taking a clinical image (for a face laceration image)?
b. What 2 things would you do once the image has been taken?

6. **A 22 year old woman comes for a checkup at the GP after surgery. Surgery went well and there are no problems. She hasn't seen the GP in 3 years.**
   a. What are 2 opportunistic preventative things the GP could do? How would the GP explain the benefit of these (4 marks)
7. **What are 4 things that could suggest sexual abuse in a child?**
8. **Mental Health Act: Involuntary admission**
   a. 3 things a doctor must consider about a patient before admitting?
   b. 4 rights of involuntary admitted patients in addition to the rights all mental health patients have?
   c. 2 kinds of treatment there needs to be extra consent for despite involuntary admission
9. **Drug seeking behaviour**
   a. 4 kinds of drug seeking behaviour besides anger and aggression?
   b. 2 most sought after drugs of dependence?
   c. 2 things put in place by practices / GPs to reduce drug seeking behaviour?

Note* no questions on calculator sensitivity, specificity, PPV, NPV, OR or RR

BCS

Snake Bite in a Paediatric patient occurred 30 mins ago, bitten on the ankle, now in ED with parents

- History Questions to ask
- Management (3 steps)
- 3x Exam findings for snake bites

Bipolar disease - Manic

- 2x specific physical examination signs
- 3x history to ask patient's partner on collateral history

PID

- 4x examinations and investigation findings that would support PID

Patient presented a few weeks ago with fatigue, thinks she is iron deficiency, but blood tests return normal. She returns again distressed and can't sleep. She becomes teary during the consultation.

- What is your DDx?

1st student: (I think this Question was pushing for a DDx of somatization disorder, factitious disorder etc)

Another student thoughts: My thinking was this question was wanting you to jump to psych, without sufficient evidence there was not an organic issue going on, thyroid studies for example always need to be done prior to any mood disorder dx, so I answered organic w/up thyroid, consider psychosocial stressors and psych dx that would qualify etc..)

3rd student: —< kinda agree with second student)

Patient is having withdrawal symptoms from Heroin and wants help

- 2x History Questions you can ask
- Buprenorphine (heroin replacement therapy) Mechanism of Action - why it works for drug withdrawal
- 2x things to consider before starting Buprenorphine

Healthy 22 yo female patient comes into GP post surgery otherwise well

- What 2x preventative things could you do and what advice would you give that is associated to them

Note that you can't say CST in this updated version of the question because patient is <25 years old

Pre-eclampsia Patient with HTN, proteinuria, epigastric pain in stem

- 4x Clinical Examination findings
- What is the diagnosis
- 2x Complications for foetus
- 2x Complications for mother

Refugee with depression, need to assess

- 4x history questions to assess high risk for suicide in the same day

Rhesus -ve mother, G1P0:

- What situation would cause them to need Anti-D?
- In what circumstances would Anti D be given and when in pregnancy is it given (specify timeframes)

Pregnant woman 8 weeks of gestation, positive home pregnancy test, with bleeding and lower abdo pain.

- 4x Ddx

Patients present for their first antenatal check up at 8 weeks gestation (confirmed intrauterine pregnancy on ultrasound. All initial antenatal screening was negative

- What are 6 screening things done routinely throughout pregnancy for preventative healthcare

(not including initial blood test at the first visit like Hep B, C etc)

Man comes in with a palpable groin mass. On examination, there is a 2cm palpable lymph node in the right groin.

- 4 differential diagnoses (4x causes for lymphadenopathy specifically?)

- What investigation would be used to identify a diagnosis? (Which is different to a 4x DDx for a lump in the groin)
- What other sites would you examine? (3x)

39F comes in for a repeat COCP. she has been on it for years and happy to continue

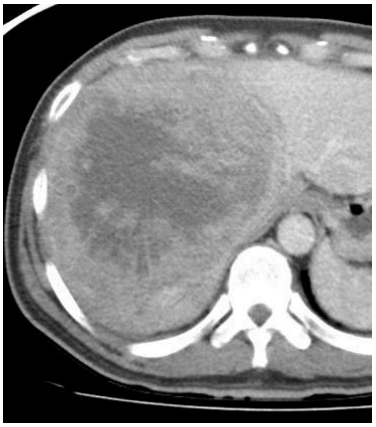
- 4x contraindications to COCP
- 4x Alternative options to the OCP which will lower risk of thrombosis

Patient is being administered zoledronic acid by a nurse, who steps out into another room, you are the medical student and you notice they (?in another patient) are suddenly pale and coughing.

- What is your primary diagnosis? (1 point)

CT of liver

- What are 2 features seen on the CT?
- What is your primary diagnosis? Looked like the liver and spleen was affected.
  Past exam question - HCC and the CT scan
  (Similar to this image, with spleen side changes as well, not sure what they were)



Patient presents with haematemesis and dark tarry stools, hepatosplenomegaly. Blood tests results given (low Hb, low albumin, AST = 86, ALT = 122, MCV high, thrombocytopenia).

- Why is the patient tired and has oedema?
- What 3 aspects of social history would you inquire about in order to determine the diagnosis?
- What is the significance of raised AST/ALT?

Patient case painting a picture of nephrotic syndrome, which includes examination findings and some blood tests (24hr urine = 4g protein, hypertensive, 4 RBCs in urine, fatty casts in urine, total cholesterol = 8, oedema to shin and periorbital).

- What are 4 DDx?
- What 3 investigations would you perform?
- What are 3 treatments/management options?
- If the patient declines treatment, what are 2 likely complications?

UTI is a 3-year-old child.

- What are 4 things that increase the risk of UTIs in children?
- What are 3 typical causative organisms?
- If they have recurrent UTIs, what are 3 investigations you want to do?

Patient is 3 days post hemi-colectomy and has started on PO fluids. Has developed abdominal pain, guarding, afebrile, and constipation, and urine output is XXX ml/hr (was it 10ml?) in the last 2 hours.

- What are 4 DDx?
- What are 6 things in immediate management?

Nurse calls you to review a patient in a nursing home who has started acting confused 24-48h of Symptoms. Nurse thinks the patient has delirium.

- What are 4 common DDx?

42 yo male with painless non-febrile haematuria, on aspirin, beta-blocker, ACE-I. Nonsmoker, does not drink.

- Lift 5 differentials
- List 5 investigations

Mother brings her child in who she felt was hot, then developed a seizure.

- What are 4 aspects of the history that indicates it is a simple febrile seizure?
- What are 5 (or 3) steps of management?

Patient is a few days post radical prostatectomy, and develops SOB and distress a few hours ago.

- Give 4 possible causes
- Give 6 questions on history that would differentiate the cause?

Case with a 2 year old child who is dehydrated - slightly sunken eyes, decreased alertness but easily arousable, cap refill 2sec, dry mucous membranes, normal BP, HR and RR.

- What are 4 categories of clinical assessment that determines their hydration status?
- Does the patient have mild, moderate or severe dehydration and why?
  I think the first question was trying to get categories, not 4 single signs/symptoms. I.e. 1) vitals: HR, BP, RR, 2) clinical features: moist/dry membranes, alertness, skin colour, cap refill, pulses, sunken eyes, skin turgor, 3) fluid chart: PO intake, and urinary output, 4) blood tests: haematocrit, electrolyte abnormalities,

the 45 year old presents multiple swollen joints in hands, MCP, PIP, symmetrical, worse in the morning.

- What are the 4 most likely diagnoses?
- What are 6 investigations?

5 features of PTSD

MCQ

BCS/CCS (lots of new q's, missed a few cause we cant remember)

1. Patient who had a general for a c-section and post op and on x-ray had rhonchi and rales 12 hours later and decreased breath sounds. What could you have done before to prevent this?
    a. Regional Anesthesia
    b. Ramantide or something before the procedure
    c. NGT suction of gastric content
    d. Two answers on the way you extubate them (method)
2. Patient had cervical motion tenderness, dysuria, discharge and cervical erythema, multiple sexual partners - awaiting cultures- what abx would you give?
    a. Doxycycline
    b. Azithromycin
    c. Metronidazole
    d. Clindamycin
    e. Ciprofloxacin
3. Previous barrettes diagnosis - what is the diagnosis of the cancer
    a. Adenocarcinoma
    b. Squamous
    c. Adenosquamous
    d. Small cell
    e. Basal cell
4. Isolated thyroid nodule, 20mm, most likely cancer
    a. Papillary
    b. Medullary
    c. Follicular
    d. Anaplastic
    e. Lymphoma

5. Two questions on an infant with hyperbilirubinemia and was having fits - one said they were pale and lethargic, one said they were premature + bilirubin was getting higher.
    a. Kernicterus
    b. Intraventricular haemorrhage
    c. Meningitis
    d. Encephalitis
6. Woman Spoke about herself a lot, hyped up appearances, change in mood when receiving negative criticism. Dressed provocatively.
    a. Bipolar
    b. Histrionic
    c. borderline
    d. antisocial
    e. Narcissistic personality disorder
7. Gardening with linear line of vesicles on lateral foremar, what is the dermal pattern of this
    a. Spinal nerve
    b. Subcut
    c. Dorsal root ganglion
    d. Dermis
    e. Epidermis
8. Patient with membranous exudate tonsils, generalised lymph, Hepatosplenomegaly
    a. Antistreptolysin
    b. Bone marrow blast
    c. Peripheral smear with atypical lymphocytes
    d. CMV something test
    e. Scict test
9. 39. Kid has fixed split S2 systolic murmur at the left upper sternal edge
    a. Ventricular septal defect
    b. ASD
    c. Pulmonary stenosis
    d. Aortic stenosis
    e. Tetralogy of Fallot

10. Patient on methotrexate because of RA what investigation is needed?
    a. Biweekly LFTs
    b. Quarterly Renal function
    c. Chest X-ray twice a year
    d. Two yearly ophthalmoscope
    e. Monthly FBC
11. Patient with blood results showing clear megaloblastic anaemia
    a. Crohn's
    b. Methotrexate
12. 12 year old with severe localised RLQ abdominal pain but then gave a ABG with a hectic metabolic acidosis - Completely stable vitals
    a. DKA
    b. Appendicitis
    c. Mesenteric Lymphadenitis
13. Two prostate ones - one was very obvious BPH and one was more of a urinary hesitancy one
    a. Alpha Agonist
    b. TURP
14. Patient with BPH symptoms as well
    a. Prostate ultrasound
    b. PSA
15. Big gallbladder, itchy, UC medical history 11 years, "deeply jaundiced"
    a. Cholangiocarcinoma
    b. Cholestasis
    c. Pancreatic (head) Cancer
    d. Periampullary Obstruction
    e. Biliary strictures
16. 80 year old lady who is confused as fuck and has findings of a UTI
    a. Reassurance
    b. Oral antibiotics
    c. IV antibiotics
17. Suicidal person, multiple attempts, -> BPD
18. In gestational baby death due to fetal hydrops -> what was the cause
    a. Parvovirus

    b. Rubella
    c. Toxoplasmosis
19. Fever graph of a lady post hysterectomy, no signs of UTI (catheter was clear), lower abdominal pain (onset after 5 days)-> what was the cause
    a. Pelvic abscess
    b. Wound infection
    c. Atelectasis
20. Post esophagectomy cause of fever (onset within 24 hours)
    a. Atheletalasis
    b. Pneumonia
21. Little boy with rash from inside after friends house, no acute anaphylaxis signs, no big tongue, stabilised airway
    a. Refer to Allergist
    b. Steroid cream
    c. Antihistamine
    d. PO steroids
22. Floppy baby + tongue fasciculations -> cause anterior horn (which is commonly caused by Spinal Muscular atrophy)
23. Child 4 days of 40 plus fevers, day five fever gone but rash present
    a. Erythematous infectious
    b. Roseola infantum (sudden high fever that lasts 3-5 days, followed by a rash that appears when fever breaks)
    c. Measles
24. Patient with psoriasis, how to confirm diagnosis
    a. HLA B27 Test
    b. RF Test
    c. Biopsy of Psoriatic Plaque
25. Patient with clear findings of candidiasis - cottage cheese appearance - what testing feature would be consistent
    a. Clue Cells >20%
    b. Brown Agar
    c. Pseudohyphae
    d. Scict test
26. MSK patient description->what imaging for rupture of ACL ->

    a. MRI
    b. US
    c. X-ray
    d. Bone scan
27. MSK. Landed on a flexed knee. Medial joint line tenderness.Pain some minor swelling. Unable to fully extend and pain past 70 degrees flexion -> (last year q)
    a. Meniscus tear
28. Gout question: image of unilateral erythematous / swollen hand. Past history of big toe involvement
    a. Gout
    b. RA
    c. CRPS
29. Dorsalis pedis and post tib are absent on the left, which vessel is occluded?
    a. Popliteal
    b. Common Femoral
    c. Posterior tibial
    d. Superficial femoral
30. Fibromyalgia question: next best step in management
    a. CBT and amitriptyline
    b. RF and ANA test
    c. Opioids
    d. Something about stress
    e. Send for spinal x ray
31. 22 year old boy Boy with hyperpigmentation, hyponatremic, hyperglycemic, FHx of pancreatic cancer, mild dehydration. Sun exposure.
    a. T1DM
    b. T2DM
    c. Addisions
    d. Pancreatic Cancer
    e. Dehydration from Sun Exposure
32. Mastitis in a mother. Febrile.
    a. Reassure this is normal
    b. Stop Feeding from breast

c. Oral Flucloxacillin
d. Paracetamol

33. Pregnant lady exposure to grandmother with active shingles? Mx options
    a. Education
    b. Zlg
    c. Zlg if she's negative
    d. Immediate delivery
34. Man complaining about leg pain when walking. Also mentions chest pain that wakes him up from sleeping and ECG with t wave inversions. What's his diagnosis (lol)
    a. Unstable angina
    b. Peripheral Artery Disease
    c. Aortic Aneurysm
35. Lady presents after straining. She has has lump (inguinal) that comes and goes in the past. She is stable/ vitals all normal but the lump is firm, tender, doesn't reduce erythematous skin. What's the next appropriate step
    a. Urgent surgical referral
    b. CT abdo
    c. Ultrasound
    d. Fine needle biopsy

32. Question about CST results showing high grade results, what is the next step in management

a. Colposcopy + Biopsy
b. Retest in 6 months
c. Hysterectomy

33. History of alcohol, sick with pneumonia. Wide gait, ocular disturbance.immediate mx

A. IV Thiamine
B. Oral benzodiazepine

34. Lady complains about the price of groceries (there was much more) ?

A. Reasonable
B. Unreasonable
C. Histrionic Personality disorder
D. PCOS

35. Lady is allergic to cats

A. Allergy test
B. Iron deficiency anaemia
C. Allergy test

36. Blood test results: shows pancytopenia

a. Aplastic anaemia
b. Immune thrombocytopaenia
c. Thrombotic thrombocytopaenia

37. Woman with hectic worsening migraines over the last 6m, inc aura, nausea and vomiting

a. prophylaxis : beta blocker
b. Acute attack management: tryptan
c. Do an MRI
d. Referral to neurologist

38. Something about a man presenting to ED 160ish/ something HTN with signs LVH on ECG with pleural effusion / pulmonary edema. What's the management of his pulmonary oedema?

a. IV Diuretics
b. IV sodium nitroprusside
c. IV Beta blocker
d. Can't remember the rest ?

40. Lady with anaemia and RLQ pain then o

41. Person comes in with Sleep apnoea, has daytime sleepiness, wakes up in the middle of night etc (lots of info about Epworth stuff)
What do you do next?

a. Epworth scale
b. Polysomnography

42. Guy with RLL consolidation pneumonia, high WBC, left shift in white cells. Drinker and smoker. What is the most likely cause of his symptoms?

- Bacterial colonisation -> consolidation

- Viral something
- Aspiration secondary to gastric reflux Can't recall the question?

Psych

- Guy thinks he's going to be killed (the stem literally quoted ‘like terminator” movie) then after he’s dead, the they will kill the rest of world
  What type of delusion?
    a. Persecutory delusions
    b. Grandiose delusions
- Woman with history of severe depressive episodes and mania - currently requiring admission again having stopped taking her meds -
    a. ?Lithium
- Lady with long long standing depression over her whole life which is worse over the past 2 years -
    a. Options were dysthymia and MDD - I think it was MDD due to most days being low, worthlessness, psychomotor retardation, anhedonia, difficulties concentrating etc

Obstetrics and Gynae

- Lady with chocolate cysts what is she at risk for in the future?
    a. Infertility
- Lady with primary infertility. Husband was 34 years old and had normal sperm. no signs of hyperandrogenism, cycles were 45-90 days apart, - What was the cause

a. PCOS
b. Tubal infertility
c. Endometriosis
d. Husbands age
e. Ovulatory dysfunction

- Lady with oligomenorrhea, multiple cystic lesions ON ovaries on ultrasound, palpable mass in RIF, also had pain during sexual intercourse,

a. PCOS
b. Endometriomas
c. Dermoid cyst

d. Functional ovaria cyst

- Lady who was pregnant but had acute RLQ pain very typical of appendicitis - baby very happy on CTG,

a. Urgent surgical review
b. Ultrasound for placental abruption

- Woman was 31 weeks and got measured and was only 27 cm which was the same measurement that occurred 4 weeks ago. She had a dating scan early in the pregnancy
    - Incorrect dating
    - IUGR
    - Fibroids
    - Twins
- VBAC G2P1 - spontaneous labour, 4cm dilated 1,5cm effaced, happy baby on CTG, she had a BP of 130/80, membranes not ruptured yet and no scar tenderness
    - Immediate c section
    - Induced with oxytocin
    - Artificial rupture of members
    - Give a 1000 ml of fluids
    - Continue partogram with normal birth - this one?
- There was an image of a CTG
    - Sinusoidal pattern
    - 3 in 10 contractions
    - Normal variability - this one?
    - Late decelerations
    - Foetal tachycardia
- 46 years old with heavy, irregular periods and also difficulty tired and concentrating at work. What investigation
    - FSH
    - TSH
    - Pelvic ultrasound

Paediatrics

- Kid with rash see above
- 16-month old with 10 days of fever and increased urinary frequency, poor feeding, signs of circulatory compromise
    - DKA
    - Sepsis
    - Pyrloric stenosis
- 16 year old with 5 months of amenorrhea - vegetarian diet, very thin, mother worried
    - Anorexia
    -
- 10 year old with metabolic acidosis with massively low base excess, rapid onset generalised abdo pain which then became RLQ abdominal pain with RLQ tenderness
    - DKA
    - Appendicitis
    - Mesenteric
- Rickets in a 10 month old - bowing of legs etc - what to see on X-ray
    - Metaphyseal cupping / flaying
    - Lytic tumours
    - Evidence new and old bone
    - New bone formation

SCT (overall mostly of repeats)

- Had the one with three CTs
    - Leaky aortic aneurysm
    - Left renal calculi
    - Complicated sigmoid diverticulitis
- If you suspect Fibrotic lung disease and the patient has used methotrexate for 5 years
- Patient on sertraline and then you consider dropping the dose (stable on 100) at patient request due do you do that considering she had a suicide attempt in a severe episode - -2

OSCEs

Histories

Notes: Almost all stations begin with: “You are a senior medical student in…”
They had the stem taped to the table in the room in case you forgot timing/questions. If you got a bit off track with your answers the examiners would often redirect you to the question. fewer stations with physical examinations.. Many stations asking for a “targeted” history often around 5mins.

- **Fatigue History (7 mins)**
  - Patient with fatigue, nocturia, polyphagia, polydipsia, weight gain, vegetarianism, vaginitis, mild back pain, night sweats.
  -3 mins investigations and questions on differentials - *?T2DM, anaemia (Fe/B12/Folate), leukaemia*
- **Psychiatry History with classic DSM PTSD** Symptoms (6 mins), *Patient was heavily drinking and dealing with machinery at work. Non suicidal. Work did drug/alcohol urine testing.* 4 mins (question1: Should I do back to work) about diagnosis and needing sleeping tablets - *PTSD*
- **Breast lump history (5 mins), targeted breast exam on model (3 mins),** questions/investigations 2 mins (what are your findings, Triple test)
- **Sudden Vision loss history (lost vision for 2 mins) + headache (6 mins)**, 2 mins questions/investigations, 2 mins explain diagnosis and investigations - *Giant cell arteritis*
- **45yo Abnormal/heavy uterine bleeding Hx** with clots (50c)(7 mins), questions/investigations 3 mins - *?endometrial cancer, what are the immediate treatments*
- **Crying infant 6 weeks old Hx ,** cries about 2-3 hours /day, most findings were normal. Baby would arch back and occasionally go blue in the face whilst crying., 3 mins questions: **Talk through a newborn examination** (all normal) and assess growth charts(normal) (7 mins) - *?infantile colic??? UTI???*

- **Post-surgical fever targeted history (4 mins),**
  Talk through /perform t**argeted examination** (3 mins) (patient had rebound tenderness and guarding in the RLQ *anastomosis leak*
  3 mins Q1. investigations Q2 What would you write in the notes in the “plan” section
- **STI urethral discharge History (6 mins),** gay 35yo business executive presents with urethral discharge. Q1. What tests would you perform? Q2. How confidential are my results (something like that) counselling, 4 mins - *gonorrhea*

Examinations

- **Cardiovascular exam (8 mins),** 2 mins questions - what's the murmur (recording) *Aortic stenosis with infective endocarditis, what investigations, what is you primary differential*