Pre-operative assessment

Summarise core details

- Patient details
- Operation (& anaesthesia required)
- Background

NB: look through past notes/e-documents to confirm details

Current health

- Recent/current illnesses (within 2 weeks)
- Baseline exercise tolerance (what makes them stop: SOB/chest pain/claudication)
- Symptoms of sleep apnoea (paroxysmal nocturnal dyspnoea, excessive sleepiness, morning headaches)
- Smoking/alcohol

Medical and drug history

- Medical conditions
  - Ask specifically about hypertension, diabetes (should be put first on list), asthma/COPD, cardiovascular disease, IHD, liver disease
  - Determine if conditions are adequately controlled
- Drug history (including allergies!!)

Anaesthetic history

- Previous anaesthetics and reactions
- Family anaesthetic history

Examination

- Anaesthetic assessment
  - Neck movement limitation/jaw opening limitation/dentures
  - Airway assessment: use Mallampati classification & note BMI
    1. See all soft palate and uvula
    2. See half of uvula
    3. See a small gap at end of soft palate
    4. Can only see hard palate
  - Back examination (if having spinal/epidural): look for skeletal malformations
- Multi-system examination
  - General: GCS, limb movements
  - Hands: cyanosis, warm peripheries, cap refill, peripheral pulses
  - Neck: JVP, carotid bruits
  - Chest: heaves/thrills, chest expansion, percussion resonance, lung & heart sounds
  - Abdomen: tenderness, masses/organomegaly, bowel sounds
  - Calves: swelling/tenderness, oedema

Investigations

- Routine tests (American Society of Anesthesiologists have guidelines on exactly who needs what)
  - Bloods within 1 week
    - FBC (all patients; anaemia increases surgical risk)
    - U&Es (all patients; assess risk of ARF post-surgery)
    - LFTs (if liver/biliary operation or past liver problems; impairment may delay healing)
    - Clotting (all patients)
    - TFTs (if taking thyroxine)
    - Group and save (all patients)
    - Sickle cell screen (if Afro-Caribbean/Mediterranean/Middle Eastern/Asian ethnicity)
  - ECG (if >50years or any heart problems)
- Other tests may be necessary
  - CXR (only if may need ICU care)
  - Echocardiogram (if valvular disease/murmur)
  - Spirometry (if lung disease)
  - Pacemaker check (if have pacemaker)

NB: Look at the patient's electronic record to determine history and any previous results e.g. echocardiography etc.

Preparation

Correct investigation abnormalities

For a day 1 pre-op assessment:

- Correct INR if abnormal (>1.4)
    - Aggressive regime (if on warfarin for AF): 5-10mg IV vitamin K, then repeat INR in 6 hours – if still high, discuss with haematology regarding giving prothrombin complex concentrate pre-op
    - Cautious regime (if on warfarin for artificial heart valve/recent PE): discuss with seniors and haematology – will usually require reversal of warfarin and unfractionated heparin infusion cover, which will be stopped 4 hours pre-op and restarted after
    - If raised due to liver disease: 10mg IV vitamin K, then repeat INR in 6 hours – if still high, discuss with haematology who may advise FFP/cryoprecipitate
- Blood transfusion if Hb <9g/dL, or <10g/dL if elderly/cardiovascular/respiratory disease
- Consider platelet pool if platelets <$50x10^9$/L (discuss with haematology if cause unclear)
- Correct electrolyte abnormalities

NB: If there are significant abnormalities, bloods must be repeated again pre-op (e.g. at 6am) to show they have been corrected.

For an early pre-op assessment (>1 week pre-op):

- INR may be corrected by stopping warfarin as below
- Anaemia should be investigated and the cause treated – e.g. with iron tablets for iron-deficiency anaemia

NB: If there are <u>any</u> concerns, contact the consultant or an anaesthetist.

Medications

- IV fluids: only prescribe fluids overnight (when NMB) if instructed by consultant or if patient needs variable rate insulin infusion or is dehydrated
- New mediactions
    - Operation preparation: give drugs required for specific operation (specified in pre-operative checklist) e.g. bowel prep for colorectal
    - VTE prophylaxis: prophylactic LMWH should be given the night before the operation, but omit any doses when the operation will start in <12 hours
    - Anti-emetics and analgesia: as required
- Regular medicines
    - Most should not be taken on the day of the operation (restarted the day after)
    - Vital drugs should be taken on the day of the operation: cardiovascular medications, anti-psychotics, anti-parkinsons, inhalers, glaucoma medications, immunosuppressants, thyroid medications, drugs of dependence (e.g. benzodiazepam)
    - Some medications must be stopped/changed pre-op:

Medications which must be stopped/changed pre-op		
Medication	**Stop pre-op**	**Details**
Warfarin	5 days	Therapeutic-dose LMWH should be prescribed in interim
Oral anticoagulant	24 hours for minor surgery; 48 hours for major surgery	
Therapeutic-dose LMWH	48 hours	May need heparin infusion cover if high risk indication
Unfractionated heparin infusion	4 hours	Restart post-op
Aspirin/clopidogrel/dipyridamole	7 days	If patient has had recent stent (<1 year), never stop without liasing with cardiology and seniors
Insulin	Avoid morning dose	Prescribe variable-rate insulin infusion with surgical fluid [5% dex/0.45% NaCl/0.15% KCl @ 80ml/h] from midnight the night before if not minor surgery
Oral hypoglycaemics	Avoid on day of operation	Prescribe variable-rate insulin infusion as above if blood glucose not well controlled. Also avoid metformin for a two days after (due to risk of lactic acidosis).
Diuretics/ACEi	Avoid on day of operation	
Long term steroids	Change to higher dose hydrocortisone	Liase with anaesthetist
COCP	4 weeks	Restart 2 weeks after

Forms

- VTE prophylaxis Performa
- Consent form (do it if you have sufficient knowledge, if not call registrar/consultant)

Fasting and admission

- Fasting guidelines
    - '2-6 rule' = NBM for 2 hours pre-op; clear fluids only for 6 hours pre-op
      NB: if you are unsure the operation time, prepare the patient for 8am (e.g. say clear fluids only from 2am, NBM from 6am)
- Patients only need to stay in overnight the night before if they are diabetic (and therefore require a variable-rate insulin infusion from midnight), they need specific medications pre-op which must be given overnight or INR/Hb/platelets need correcting