A GUIDE TO STARTING FY1 IN THE SOUTH-EAST OF SCOTLAND

Updated for the 2021 FYs by Eilidh Clark, Sarah Douglas, Mathew Lyons and Felix Torrance

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Introduction

Starting as a junior doctor can feel like a huge step and there were many areas we felt unprepared for when starting. However, with August around the corner you will be introducing yourself as “one of the doctors” before you know it!

This booklet highlights topics we struggled with when we started work and has been written and peer reviewed by current junior doctors in the South-East Scotland deanery. Due to everyone’s incredible enthusiasm and dedication, this expanded dramatically over what was initially planned – please don’t feel the need to read it all once and instead use it as and when you need to. If you note any issues with any of the sections, feel free to get in touch and recommend changes.

It is worth mentioning that this does not replace the support we want to give you on the wards, if you are unsure ask - we’ll always be keen to help and teach you!

Above all, remember you have been good enough to get this far, don’t feel like an imposter and embrace the little things that make this job an absolute joy.

Good luck!

Comment on COVID-19

Lots of things in all of the hospitals are continually in response to the fluctuating COVID-19 pandemic. Wards are being repurposed and rearranged, rotas are changing, and consultants are cross-covering wards they would not usually cover. Most of what is written in this handbook is about how things run normally, and, for the most part, it is anticipated will stay the same or similar during the course of the pandemic. Some COVID-19 specific changes have been mentioned in this guide but please remember the situation is very dynamic and everything is changing on an almost daily basis. Please make sure to refer to local information and guidance in relation to the pandemic and always ask if you are unsure or something is unclear.

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Peer-reviewers: Lily Hua, Giovani Klefti and Fazila Rasul

Introduction

Firstly, congratulations! You've made it and are now at the place you've worked so hard for over the last 6 years (if not longer). However, we found this new job placed different strains on us outside of work that we hadn't appreciated before. In this section we discuss the equally important but more boring things associated with life as a doctor:

Sleep well

Obviously. FY1, especially the first few weeks, can be unexpectedly exhausting as everything is so new and the decisions that come easier with time take a bit more brain effort. Everyone has different sleeping tactics ahead of nightshifts, so find what works best for you. No-one I've spoken to has ever regretted buying an eye mask, ear plugs or blackout curtains.

Prepare in advance

It is so valuable to set aside the time to prepare for work. I'm afraid it's time to make sure you have enough work clothes washed and ironed. Trust me, you won't want to be doing last minute laundry in the middle of a week on-call.

Prep and plan your meals - don't always count on the canteen as it may well be closed by the time you get to it. Saying that, it is so important to make sure you set aside time for breaks. You are entitled to and should definitely take a half hour break in a normal day and two half hour breaks in a long day (the MED website states that 'natural breaks' should be taken – 30 mins of continuous rest after 4 hours of continuous working). Not taking your breaks (even when it's busy) doesn't make you a hero, it's likely to negatively impact the rest of your team and patients if you are hypoglycaemic and hangry.

Decompress

Talking about the tough things that happen at work is essential. It is important to discuss difficult situations with your team at work and your supervisor. Don't be afraid to initiate these conversations. Friends and family outside of medicine can also help provide valuable alternative perspectives.

It can be totally normal to occasionally get upset about work (it can be a difficult and stressful environment). Crying every now and then is normal, but if you find yourself crying weekly or daily, you may be struggling, and this would be a good time to accept some help. It's very important to talk to your team or educational supervisor if and when you need support, it's what they're there for!

Continue hobbies

Don't stop the hobbies you enjoyed throughout university. Make the most of the joy of not having to study and spend your time outside the hospital to do the things you like to do or try new things. Join community sport teams, choirs, running clubs and book clubs to meet new people.

I'd highly recommend joining the SES Doctor's mess (find them on facebook), which organises events including sports, BBQs, drinks events and balls for all the junior doctors in Scotland. Whilst traditionally attended by FYs it's a great way to meet all the new trainees in the area regardless of seniority!

Exercise everyday

Even if it is just walking to work, try and do something to keep moving. Yes, it can be hard to make time for but try to hit the gym, play a team sport or log an entry into the hospital Strava group.

In the times of Covid there are loads of home workouts available and companies offering NHS discounts. Also make the best use of your daily ration of outdoor activity as currently allowed.

Go outside

Now it's legal to do so, make sure you spend your time off in the fresh air as you have plenty of time cooped up inside the hospital. If you are new to Edinburgh, then there is so much to see/do/explore outside. Some fun places to go include Cramond Promenade, Portobello beach, Arthurs Seat, Inverleith Park, Blackford Hill, Corstorphine Hill, Pentland Hills, Stockbridge Market and down the coast to North Berwick.

Wash your hands

Not just advice for times of Covid - it's always good sense to wash your hands to avoid getting ill. Working long hours can easily make you run down and your exposure to lots of different types of infections is higher than as a student.

Commuting

Lift sharing is a great way to get to know people and is better for the environment. It is also great to have someone to chat to keep you awake after a night shift. Never ever drive home if you feel unsafe - most hospitals have options to stay over or just get public transport or a taxi and collect your car another time. Even better, walk or cycle - all the hospitals have safe spaces to lock up bikes and shower facilities. Remember if you work at SJH/VHK/BGH then you can claim some travel expenses.

Keep an eye on the money coming in

An FY1 salary in Scotland will be around £24,000 which is then multiplied by a certain amount depending on the banding you have. Do check your rota and see if you think you are correctly banded (as below). Above all check that you are being taxed correctly on your first pay-check (lots of people get put onto an emergency tax code initially – a quick call to HMRC will sort this out) and make sure you're not repaying student loans, which shouldn't start till the April after you graduate.

See the BMA sections on money and getting paid for more information.

Band 3 *is non-compliant with new deal hours and rest limits (100% banding, base salary x2)*

Band 2A *is working more than 48 hours a week with more than 1/3 outside 7am to 7pm Monday to Friday OR more than 1 in 3 weekends (80% banding, base salary x 1.8)*

Band 2B *is working more than 48 hours a week otherwise (50% banding, base salary x 1.5)*

Band 1A *is less than 48 hours a week but more than 1/3 outside 7am to 7pm Monday to Friday OR more than 1 in 4 weekends (50% banding, base salary x 1.5)*

Keep an eye on money going out

It's great having some money for once and do enjoy your new wealth – enjoy meals out, drinks at fancy places for special occasions but do remember it is finite and budgeting is important. Having just been students you will know all the budgeting tips, just remember to carry some of them on once you start earning!

Additionally, consider saving early as the majority of your savings later in life will come from the amount you put away in the early stages of your career. Have a look at the website "junior doctor finance" for more advice.

Consider putting aside some money every month for inevitable work-related expenses (eg membership exams, courses beyond your study budget). If you put aside £50-100/month from the start, you will learn not to notice you had it, but two years later, means you can pay for an exam without cancelling a holiday.

Similarly, keep track of work-related expenses (eg GMC fees, MPS/MDU, BMA fees) as you will be able to claim tax back on these. You can claim for several years at once, so perhaps worth doing at the end of FY2!

Social media

Some social media such as medical Twitter and LinkedIn etc can be great for networking and for learning but be wary of when you need to switch off! Some less well-intentioned patients and staff may want to find you online so make sure your privacy settings are tight, and don't put anything compromising online!

Portfolio, portfolio, portfolio

I cannot repeat this enough. It is the biggest hassle chasing people up to complete tickets as you rotate around jobs and potentially even hospitals. Send out more tickets than the minimum for SLEs and TABs as some people will not complete them and send them out early. Do not feel shy to ask for people's emails, most people expect to do these sorts of things all the time, and they're normally more than happy to help. A personal email or face to face reminder can really get people completing your tickets.

Embrace your errors

We have all made mistakes in our jobs, some of which have led to patient harm - unfortunately, we aren't perfect and mistakes will happen. Take a deep breath and reflect on it when you have some quiet time. Discuss it with your supervisor and improve your practice with the lessons you have learnt. Developing coping mechanisms for dealing with mistakes and learning from them will be key as your career progresses.

Our job is hard, even more so when you're not in the right headspace. Finding the things that help you cope will make you a better doctor and more importantly, a happier person!

Navigating the Lothian Intranet

Author: Felix Torrance
Peer reviewers: Sophie Marriott and Eilidh Clark

Introduction

Ah the intranet, a place where almost all knowledge can be found and yet is more difficult to navigate than central Edinburgh during the Fringe. You may be searching for the guidelines, but actually only find the minutes from the meeting where they decided on the font the guidelines should be written in. However, many of these frustrations can be reduced if used well, so whilst I don't think anyone would say they have conquered the intranet, here are our best tactics to tackling it.

Use the directory first.

The directory breaks up many common resources into sections which are meant to be updated by their specialities. This is often the best source of most recent guidelines and how to refer to specialities – MOE for example have forms that need to be downloaded from their area of Trak.

Beware of the search

Always useful if you can't find what you're looking for under the correct section; but be careful as nothing seems to be deleted off it and it is not location specific. Check the date – do the guidelines seem recent enough? And is it specific to your hospital?

Know where to find the antithrombotic guidelines

This is under Haematology – policy documents and is a life saver for normal prophylaxis; prophylaxis in renal failure; treatment of DVTs and covers this in the context of malignancy too. This will save you the embarrassment of haematology asking if you've checked the guideline when you call to check the dosing of Dalteparin for someone with an eGFR of 12.

GP email addresses

Found under GP clinical inboxes – the best way of getting in touch with GPs in a non-urgent way and will save both you and them a lot of time.

Other online resources

Useful online resources

- **Lothian Medical Education Website** (https://www.med.scot.nhs.uk)
- **Mind the Bleep** (https://www.mindthebleep.com)
- **Geeky Medics** (https://geekymedics.com)
- **Radiopaedia** (https://radiopaedia.org)
- **Medics Academy** (https://www.medics.academy/courses/preparing-for-f1 - free at time of writing)
- **Edinburgh Laboratory Medicine** (https://www.edinburghlabmed.co.uk/) - directory of all tests and how to request them in Lothian.

Useful apps

- BNF
- Lothian Joint Formulary
- iResus (resuscitation guide)
- Lothian Clinical Companion (Includes the Adult Medical Emergencies Handbook and guidance on Fluid prescribing, Head Injury, PE and Hip Fracture)
- Induction (Site specific extension and bleep numbers)
- Antimicrobial Companion (Board specific antimicrobial guidelines)
- PocketDr (oncall guidance and checklists)
- Toxbase
- MDCalc
- NHS Palliative Care
- UpToDate
- BMJ Best Practice

Day to Day Tasks

Clerking

Author: Jenny Houston

Peer reviewers: Phillip Holt and Lei Hua

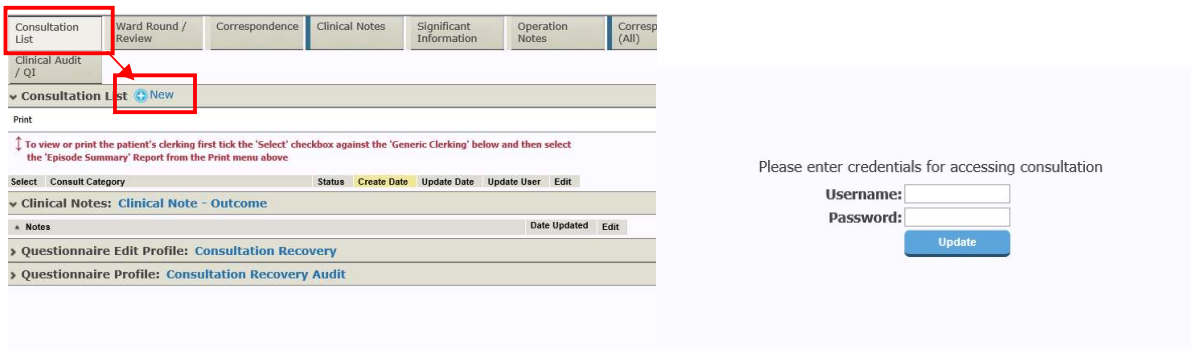
The specific documentation instructions in this section are for Lothian Trak, but general advice is applicable everywhere. Borders and Fife use paper clerking currently.

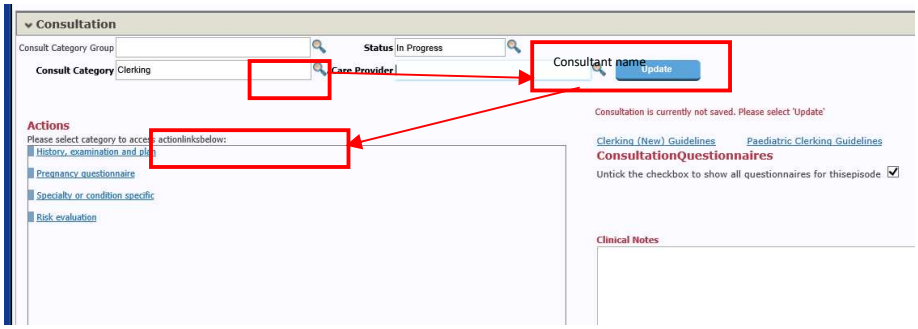
Introduction

Clerking a patient in is something that some FY1s like doing and others hate. The positives are that it is one of the few jobs you will do as an FY1 where you get time to actually speak to patients and have that patient contact that you signed up for, as well as putting into practise some of the skills you learned at medical school and feeling like a doctor. However, in reality it is one of the more time-consuming jobs, which makes others hate the process. Nevertheless, clerking is an important part of a patient's admission, regardless of whether a senior has already reviewed the patient, and it does not need to take forever.

Getting started

In Lothian, there is a specific clerking template on **Trak.** This guides you through exactly what you need to do. To get to it, you should click the first tab on Trak **"consultation list"**, click to bring up the list of options for new documents, then select **"history, examination and plan"**.





The template will come up blank. You can choose to use a computer-on-wheels as you're clerking the patient in as this makes the process a lot easier. In terms of filling it out, it's just a case of asking the questions that we all learned at medical school (PC, HPC, PMH, DH, FH, SH, Examination Findings, Plan). It

is not necessary to document the same level of detail in clerkings as you did in medical school and it is better to try to pick out what the key, relevant issues are. This can take time, but I assure you that when you have numerous clerkings on your jobs list, you will start to do this naturally anyway!

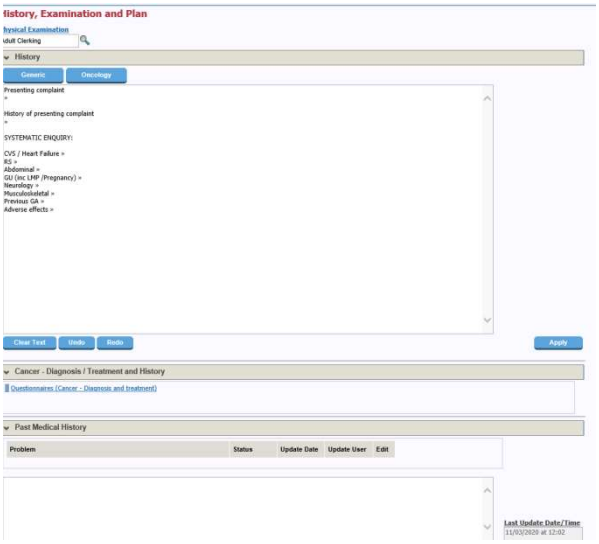
Med Rec

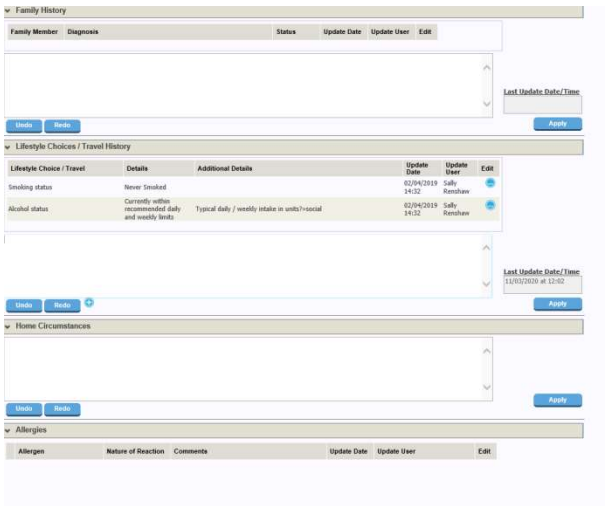
When you get to the medication section you should complete the **Med Rec** and Kardex to ensure the patient does not miss any of their regular medications. There is a separate chapter in this handbook detailing how to do this but overall, you are looking to confirm with 2 separate sources (e.g. patient and ECS) what medication the patient takes regularly, to ensure their drug Kardex is as accurate as possible! Double check with your senior if you are unsure as to whether a patient should be continuing their regular medications.

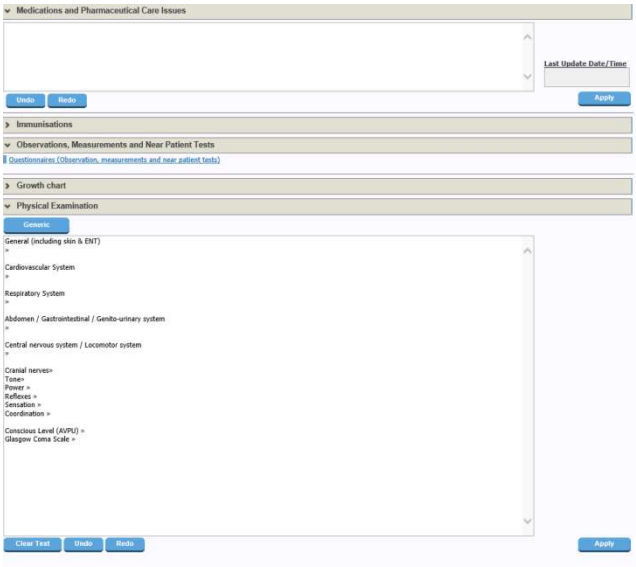
Examination

This is just the same as what you learned at medical school but again, without the minute details. There are shorthand ways of documenting your examination finding e.g. for a non-abdominal presenting complaint, it is usually sufficient to write "Abdo SNT, BS +". As long as your examination findings are easy for others to understand, it doesn't need to be too thorough (although if you want to document vocal resonance on resp exam, no one will get annoyed!). With that said if a patient is presenting with abdominal pain you should do a comprehensive abdominal examination, if they are presenting with new neurology you should complete a comprehensive neurological examination etc. Remember that the clerking acts as an important documentation of the patient's baseline examination findings at admission.

Please do a thorough neurological examination on all patients presenting with falls and seizures, and reduced responsiveness, as well as the more obvious stroke patients. Everyone should have at least a brief neurological examination!

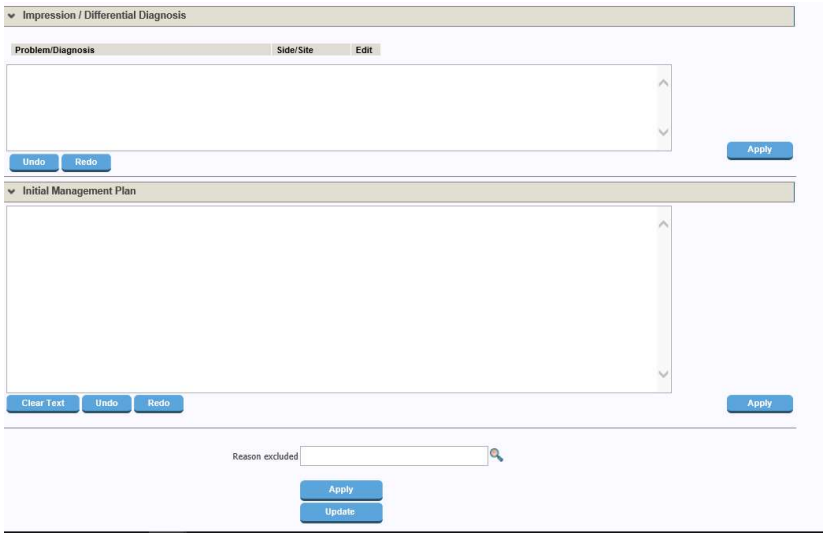






Impression and Management Plan

Usually as an FY1, a senior will have already seen the patient and made a plan prior to you clerking them in, so you can copy this into the box and write something along the lines of “as per senior r/v”. I would not recommend changing what a senior’s plan; however, you should always write any of your own impressions down! If no one has written a plan already you can initiate simple management such as bloods, fluids, ECG and CXR, but in general you should discuss with a senior before ordering CT scans or phoning the surgeons, for instance.



You will get quicker at clerkings as you go and remember the patient has often already been seen by a senior and a plan initiated, so the clerking is just a tick box in a lot of cases. That being said, a good clerking can give senior members of the team a lot of information that they may not have had the time to find out themselves and be really helpful in ensuring the patient gets the best management.

In Borders and Fife, clerking (and all notes for that matter) is done on paper - make sure you just do the medical part. You don’t need to do the nursing clerking; the nurses will do that!

Medicines Reconciliation

Author: Angus Wallace
Peer reviewers: Agnieszka Janas and Fazila Rasul

Introduction

Medicines reconciliation (Or medrec as it is more commonly known) is an important component of clerking a patient into hospital. Doing this ensures patients continue their regular medications, and also gives an opportunity to review medications that patients are no longer taking or need to be withheld because of their acute illness.

Confirm regular medications + allergies

The MedRec is done from the patient's ECS (electronic care summary) which can be printed off using Trak (either from the medications tab or from the discharge letter tab).

There are a number of sources you can use to fill it out:

- **The patient**: Ask them to tell you their medications – most common, but not always suitable
- **Patient's drugs:** Patient's often take their medications into hospital, but be aware that they may not have brought them all in
- **Patient's relative:** If the patient cannot remember or is unable to tell you their medication their relative may be able to
- **Correspondences:** If you're unable to confirm medication any other way, it may be documented in a correspondence from a speciality (found in Correspondence or SCI store on Trak)

Be careful as not all medication lists that patients bring to hospital are accurate – often the units of dosage can be incorrect (mg instead of micrograms!). If in doubt you can also call patient's pharmacy.

Once you have done this, you can complete patient's Kardex, unless you need to withhold anything...

Withholding drugs

You may need to withhold medications on admission. Consider why the patient has been admitted and what medications may exacerbate their condition or interact with medications they require acutely.

For example, if a patient is septic, you will want to consider holding nephrotoxics (eg ACEi, ARB, diuretics) and medications such as metformin. If a patient is on clarithromycin, you will hold their statin due to risk of rhabdomyolysis.

If a patient is bleeding, you may need to withhold their antiplatelets or anticoagulant, but please discuss this with a senior as this is not always clear-cut (eg if you have had a recent stent, you may need to think carefully before stopping DAPT).

Always remember to **document** if you have decided to withhold a drug and why.

If you are withholding a drug, it is good practice to still prescribe it on the Kardex but withhold it on the Kardex for a period of time. This ensures that drugs which have only been temporarily withheld, aren't missed out completely later on or on discharge.

Pharmacy check

The printed ECS is often rechecked by the pharmacy team at some point during the patient's admission, so make sure you document clearly if the patient is no longer taking a medication, a dosage is altered or you have decided to withhold something to make their lives easier. Please, make the job of your colleagues writing discharge letters easier and always do a med rec while clerking patients in!

Note: \medrec is a very useful proforma on Trak that you can use when clerking patients in Lothian.

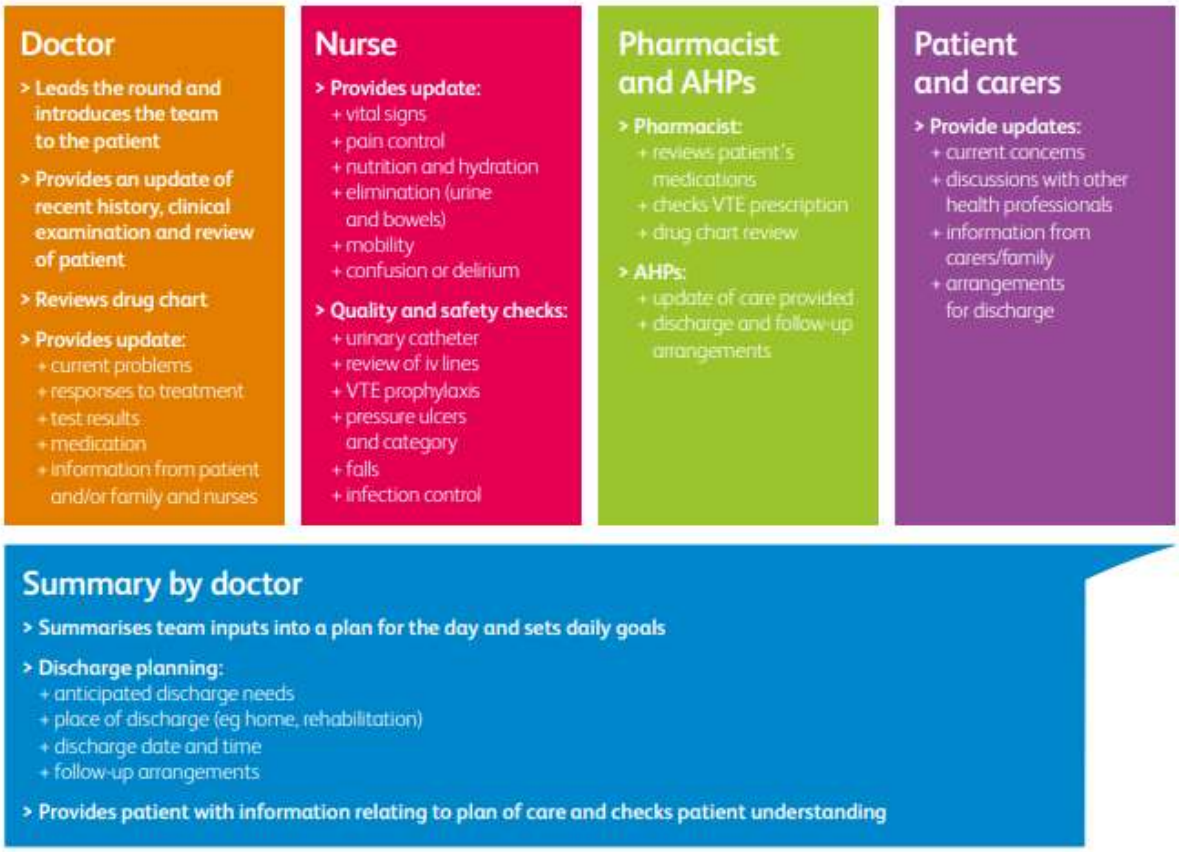
Reviewing a Patient on a Medical Ward Round

Author: Mathew Lyons
Peer Reviewers: Giovana Klefti and Ellen Wisnia

Introduction

Sometimes as an FY1, particularly on medicine, you are asked to do your own ward round of some of the patients. This can be daunting to begin with. This guide aims to cover the basics of what you should consider on your ward round and how you should document it.

The ward round team



Not all of the MDT will be on the ward round, but it's important to involve everyone in the plan:

- Update the **nurses** on any changes/jobs you need done – ideally as the jobs are generated
  - It is also important to find out from the nurses how the patient has been over the last 24hrs before you go on the ward round.
- Keep an eye out for **pharmacy** input in the notes/on Kardex and make appropriate changes
- Get updates on progress/plans from **AHPs** – this is key to progressing discharges
- Always involve the **patient** and **relatives**: Explain plans and check for questions/concerns

Conducting a ward round

If you have a list of patients to see, try to **prioritise** your round. You don't have to go in bed order. You may need to see the person who is sickest first or the person who might be going home.

You won't necessarily have to see every patient every day, particularly on medicine of the elderly wards (each department does this differently – nurses are a great source of information about how a ward is usually run). It may be that you only see people who are sick/unstable/nearing discharge/haven't been seen in a few days.

Remember, FY1s **CANNOT** make discharge decisions. These should always be by someone FY2 or above.

- FY1s can implement criteria led discharges – eg if the consultant's plan is that the patient can go home if their creatinine is <100 then you don't need to ask. If it's 115 but you think they'd probably be fine, then you need to ask!
- However, you can absolutely make discharge recommendations. You are a part of the team and your input will always be valued! Always make sure your plan for discharge is reviewed and the final decision is made by someone more senior.
- This also applies to discharge against medical advice. The patient should **always** be seen by someone more senior than FY1 and sign the form.

How to structure your review/note

Summary

This can be useful to give a very brief introduction to the patient for someone reading the notes for the first time.

Current Issues

Make a list of active current issues, with updates if appropriate. Be careful copying and pasting issues lists – check if anything needs to be updated. Ensure the list is in a sensible order. If they came in with an AKI that was top of the list 4 days ago but that is now resolved and delirium is the main issue, reorder the list and think about including "AKI – resolved" as a lower down item on the list.

Progress

Make a brief summary of your subjective findings from review today. How is the patient? Are they oriented? Any new concerns? Anything you note from nursing/AHP input? Any issues/reviews overnight?

Examination

Summarise your examination findings and review observations/NEWS. You should examine every patient. It only takes a few moments and saves you from missing something. Seniors may not always do this, but follow best practice, not what you see others do! Review the obs chart and document NEWS and reason for scoring.

Investigations

Summarise any investigations that are pertinent or are just back from the lab. This includes negative results (if relevant) eg blood cultures negative, CXR NAD.

Kardex

Review the patient's kardex. Note anything pertinent. Review **withheld medications** (eg consider restarting medicines withheld due to an AKI that has now resolved). Make sure **VTE risk assessment** has been completed. Review **antibiotics** – are they still appropriate? Think about indications, positive microbiology results and appropriate length of treatment – the Antimicrobial Companion app can help with this or the microbiologists if it's more complex!

Impression

It is usually good practice to include an impression. You have just done a detailed review. Your impression summarises this, even if it is simply "Infection improving". This is what makes you a doctor, rather than a person who collates information. You can summarise all the above into an impression that conveys the patient's current status.

Discharge planning

Think about how and when this person will get home. What else needs to be done for that to happen?

Plan

Make a plan! Where possible, try to include a reason for what you are doing

Sign off

Sign your **name**. It is good practice to include a **contact number/bleep.**

Example

WR DOCTOR (NAME)

SUMMARY

- 87M admitted with AKI and delirium on 2/2/20.
- Lives with wife. Independent. No POC, supportive family.

ISSUES

1. AKI – Improving
    a. Likely pre-renal due to dehydration. Stopped IV fluids
    b. Admission Cr 210, baseline 115, yesterday 172
2. Delirium - improving
    a. MOCA on previous admission 25/30
    b. Confusion screen normal
3. Catheterised this admission for urinary incontinence with skin breakdown
4. Reduced mobility
    a. Baseline independent with a stick
5. Colorectal cancer
    a. Not for active management
    b. Known to Mr Surgeon
6. Hearing impairment
7. T2DM – diet controlled
8. Recently bereaved of wife of 55 years

PROGRESS

- Asleep in bed. Easily woken. Feeling well. No new issues or concerns
- Oriented to place but not to time. Appears much less confused than yesterday
-
- Eating and drinking well. Good oral fluid intake
- Good progress with physiotherapy
- Note OT discussion with family yesterday re need for POC

O/E

- Comfortable at rest
- WWP
- Pulse irregular – note no documentation of AF
- Catheter patent and draining good volume of clear urine. Good volume urine output.
- Chest clear
- Abdo SNT
- Nil peripheral oedema
- Skin on groin much improved
- NEWS 1: HR 88, Borderline hypothermia T36.0
- BMs stable

INVESTIGATIONS

- Cr 172 yesterday
- B12/folate/TFTs normal
- Renal USS – NAD

KARDEX

- Withholding lisinopril – AKI
- On 2500 units dalteparin due to AKI with eGFR <30

IMPRESSION

- AKI improving. Delirium resolving. Irregular pulse ?AF

DISCHARGE CRITERIA

- AKI improved close to baseline – not met
- Delirium resolved – not met
- Successful TWOC – TWOC planned for tomorrow
- Physio: Mobilising independently with a stick – currently independent with zimmer
- OT/SW: POC organised as appropriate – ongoing assessment
- Intended discharged destination: Home with new POC
-

PLAN

1. ECG ?AF
2. Increase dalteparin to 5000 units as renal function improved
3. Continue to encourage oral fluid intake – no need for IVI
4. Continue PT/OT – aim back to baseline mobility and continue assessment for POC
5. U+Es tomorrow
6. TWOC tomorrow

A Doctor FY1

#6012

Reviewing a Surgical Patient

Author: Sarah Douglas and Sarah Wordie
Peer reviewers: Angus Wallace and Ellen Wisnia

Surgical ward rounds are often fast, so you'd be lucky to get a full review down during them, but always make sure you clearly document the **plan** if nothing else. Never feel too intimidated to double check the plan with your seniors.

As an FY on a surgical rotation, you may be asked to review patients on your own when they return to the ward after theatre, or even perhaps see patients on your own ward rounds. Below we've outlined the key things to keep in mind when reviewing surgical patients to help you start off, but after a while, you soon grow to understand what your team and seniors are interested in!

Daily Reviews

- **Admission Problem:** e.g Abdominal pain, or infected groin abscess
- **Pre/Post Op?:** Specify the operation and how many days post-op?
  - Remember, the day of the surgery is Day 0, and Day 1 is the first day AFTER surgery – so if surgery happened on the Friday then Saturday is day 1)
- **Ongoing problems:** e.g. Constipation, wound dehiscence
- **Current presenting complaints:** e.g. post-op pain, nausea
- **Examination:** Examine as you feel appropriate based on symptoms/NEWS, specifically look at:
  - Wound site(s) (generally don't remove dressings for this, just look at the surrounding areas and see if anything is soaking through dressing a.k.a. 'strike through'),
  - Drain sites, drain contents and quantity

Important things to ask about in surgical patients

- Bowels opening/passing flatus? – ileus is common after abdominal surgery
- Nausea/vomiting?
- Urine output
- Pain?
- SOB? Chest pain? (think about PE)
- Are they mobilising/sitting out?
- Feeling well? Any worries?

Other important things to consider

- **Appropriate anticoagulation prescribed:** Y/N, any contra-indications?
- **Analgesia:** Is it appropriate? Can it be weaned down? Sometimes you may need the pain team to review if you are struggling to get on top of the patient's pain yourself.
- **Laxatives:** Are they required? Often for patients with large abdominal incisions, you do not want them straining at stool and risking opening up their wounds. Also, patients are often on a cocktail of opiates.
- **Dietary limitations:** NMB/ Sips/ Free fluids/ Soft diet/ Full diet. TPN/ Ensure drinks

Plan

- Consider drain/ clips out in how many days?
- Can they mobilise/ not to lift heavy objects for x number of weeks?
- Driving limitations? Are they able to do a pain free emergency stop?
- Follow up clinic appointments or scans?
- Follow up with other specialties e.g GI/ Urology/ Oncology
- GP to repeat bloods in a few days/ weeks?
- Abx on discharge? Length of treatment?

Example Post-Op Review

Operation: Right Hemicolectomy

Indication: Caecal tumour

Operation date: 22/03/20

Blood loss in theatre: 200ml

Medications given in theatre: ? STAT does Abx, analgesia

A- Maintaining own
B- Oxygen requirement? Sats, RR, Breathing effort
C- BP, HR, Pulse. – are they on monitoring
D- Blood Glucose- do they need a sliding scale whilst NBM? Abdomen tender/ distended
E- Calves, wound dressings?

Fluid input – IVF running? IV Abx?

Fluid output – Catheter In-situ? Surgical Drain? Dressing? NG tube?

Antibiotics- do they require antibiotic cover?

Analgesia – May have PCA in-situ but also requires regular and PRN analgesia

Nausea and Vomiting- Appropriate antiemetics prescribed?

Anticoagulation – often Mini-Hep for evening of and morning after operation then Dalteparin thereafter – weight adjusted.

Plan – as per Op note (below *is example*)

1. Minihep at 2000 and 0800 then Dalteparin thereafter.
2. Pain team r/v tomorrow
3. NMB tonight then free fluids from tomorrow
4. Drain to stay in situ until X

A Doctor
#1234

Tips for reviews

Have a systematic way of writing notes

Some surgical specialties have structured ward rounds on Trak or laying things out as above will help you make sure everything is covered for every patient as it can be easy to miss things when the ward round moves so fast!

Ask lots of questions

Asking questions of the consultant on the ward round will help you have a comprehensive plan particularly if a patient is being discharged. If there are unanswered questions from the ward round the FY1 is usually the one who gets asked about these things later in the day.

Have things with you

Surgeons will often expect you to produce: consent forms, information sheets, fluid prescription charts and other items from thin air (even gloves and lube!) on the ward round. It is handy to have a bunch of the commonly used things on the tray under your portable computer.

How to request scans (and get them accepted by a radiologist)

Author: Agnieszka Janas
Peer reviewers: Marco Mancuso-Marcello and Ellen Wisnia

The key thing to know before requesting a scan is why you it is needed i.e. why will the result of the scan change the management of the patient? If you are ever asked on a ward round to get a patient a scan and you are not sure why, ask then and there! You will thank yourself later when trying to fill out the request!

As an FY1, you should feel comfortable requesting most X-rays without discussing with your team. For other investigations, you should discuss with someone more senior. As you gain experience on a rotation, you will become familiar with common investigations and may feel comfortable requesting, for example, an abdominal ultrasound in a patient with RUQ pain.

Before requesting the scan, you should know the following in order to complete the request properly:

- Check if the patient needs a nursing escort (?confused/falls risk)
- Check if they are on oxygen
- If they are on fluids, can they be disconnected, or do they need to go down attached to them?
- Can the patient go down walking/in a chair/in a bed? Does the scan need to be portable (very sick patients only)?
- Have they had recent U&Es and are they on metformin - important for decisions about contrast
- Check when their most recent scan was that can answer your clinical question; some scans can add useful clinical information (eg CXR for new pneumonia or pulmonary oedema) but others might not (eg a CT scan to look for bowel cancer for a patient who has had a CT CAP less than a month ago for a different reason)
- Are you requesting the right type of scan? AXR can show you bowel obstruction/megacolon but you need an erect CXR to look for free air

Requesting the scan:

- All the requests get read and triaged, so make sure you sell your story
- Give a short but concise story that back-ups your request. Consider on a case-to-case basis what information needs to be included: pre-existing medical conditions/background, current presentation and symptoms, bloods results, previous scan results, what is it that you are trying to find out/exclude
- Eg "79M with BG of COPD. New cough and fever, right basal crepitations ?consolidation"

  Top Tip- include your examination findings in CXR requests- this helps the radiologist interpret the scan.

- or "30F. Known UC. CRP 270 and painful distended abdomen with guarding. ?perforation".

- Abdominal X-Rays will **not** be done for ? constipation or faecal impaction- the main two reasons for an Abdo Xray would be obstruction or colitis.

Situations in which you need to call the on-call radiologist:

- Out of hours (between 5pm - 9am) and the weekends to get urgent CT scans approved as these are a limited resource (eg CT head for ?stroke)
- To chase an important outstanding scan report for MRI/CT/USS (you should be able to read an Xray - if in doubt, ask your FY2/reg for a second opinion; there might be a delay of a couple of days before it gets reported)
- Mon-Fri 9am-5pm - usually important scans will get prioritised, but if your senior thinks your patient needs a scan ASAP, then you can contact the on-call radiologist
- If you have a question about the best type of scan and your seniors are unsure, a phone call to ask the radiologist's advice can be very useful.

Once you have made your request

- Initially the request will read "ordered", which should change to "booked" if your request has been accepted (sometimes with the date and time of the scan listed). If the scan gets cancelled, usually there is a short note saying why. Scans (esp X-rays) can be put "on hold", which is mostly due to the ward staff not picking up the phone to arrange to take the patient down to the department.
- You do not need to speak with an on-call radiologist to request x-rays out of hours, but you may need to call the radiologist to tell them about the request (hospital specific).
- If you need a portable X-ray (for patients with unstable high NEWS who should not leave the ward), discuss this with the radiographer. You will need to be able to justify a portable request, due to the burden on radiographer time, and potential radiation exposure for other patients and staff. Departmental x-rays are generally of better quality too.
- Make sure the patient is cannulated if this is required for the scan. Local guidelines will dictate what gauge cannula is required.

Tips

- When speaking to a radiologist do not say that you have "ordered a scan" - you have requested it!
- Once completed, you can view the pictures under the radiology tab before they are reported.
- In some hospitals (eg SJH) or out of hours you will need to go down with the patient to a CT scanner if contrast is used to provide medical back up in case of anaphylactic shock. Ask where the resus trolley/anaphylaxis box is, so that you are of use, should this occur.
- Make sure you put your bleep number and name on the scan request so the radiologists/radiographers can easily contact you if they need any further information
- When chasing CTs/MRIs out of hours in Lothian, a provisional report by a radiology reg often gets put on the clinical notes on Trak rather than on the radiology section – check here if you're looking

for the report OOH (the report will be moved to the 'radiology' section after a consultant has approved it the next day!). It's important to look at both as sometimes that can differ.

- In peripheral hospitals, out of hours scans may be reported by telereporting services. Be aware of how you should receive these results in your hospital.

How to ask for advice or a review by another speciality

Author: Anna Kolodziejczyk
Peer reviewers: Marianne Smith and Katie McTeir

During your average ward round, the consultant may turn to you and say something along the lines of "perhaps we could just run this past Neurology?", "let's get the surgeons' take on this", or "they need a Diabetes review"... Before you absent-mindedly scribble this down on your "jobs list", ask yourself what it is exactly they want you to discuss and what questions they want to be answered. If the answer is not obvious to you within 10 seconds, ask the question out loud! Also, confirm the time frame your seniors are hoping to get answers by.

General Tips

- Try to be somewhere relatively quiet where you can focus and access relevant information. Have a pen, paper and the patient's name and CHI number ready.
- Gather relevant information and keep it nearby (the key ones are: timeline of symptoms/events, examination, past medical history, recent observation charts, drug charts, relevant investigation reports and what the management has been so far)
- Anticipate certain relevant questions and do some more work before you seek specialist advice. For example, examine the patient yourself if you're not familiar with the case and/or clinical details are poorly documented, take a more detailed history of the problem or obtain a collateral history from relatives.
- Microbiology generally like to know the swab/ blood culture results of this admission plus duration of any Abx they have been on. Trak can take a while to load this information so don't rely on it when you're on the phone - write all the results down prior to calling them.
- Pin down what questions you/your team want to be answered and what you are most concerned about. Write this down.
- If someone requires an urgent review, chances are they are unwell enough to need to be handed over to the evening or night team - think about what you might need them to do when you ask for advice and later document your plan

Phone call for Advice

- Introduce yourself, state your role within the team and say which ward/team you're calling on behalf of as well as the hospital you are in!
- State that you need advice and briefly outline what it's regarding (for example "we would be grateful for your advice on seizure management in a 75 yo man with a recent diagnosis of a brain tumour" or "we wonder what your thoughts are on stopping medication X in a patient with condition Y..."
- Provide patient CHI number and location
- Answer any questions as best you can, using the information you have to hand.

- Try not to get flustered or frustrated when your computer screen freezes, or you can't find the information you need.
- Scribble down key points of the discussion and advice as you go along.
- Ask questions about anything that doesn't make sense to you right now - this may be your only opportunity to clarify it here and now!
- Repeat the advice back to them and ask if they have anything else to add.
- Document their advice - see documenting in notes section

There is excellent advice in the Antimicrobial Companion app for calling microbiology

Request for Urgent Inpatient Review

- Have all relevant patient details ready to refer to quickly in response to any questions
- Introduce yourself and state your role within the team + which speciality you are working for
- State you need them to review your patient urgently and give a brief reason (e.g. you have seen a scan report which requires urgent action, your patient is very unwell and not getting better despite initial management etc…)
- Use SBAR (for example: a 59 yo lady admitted with a flare of ulcerative colitis is currently drowsy, pyrexial, hypotensive and and not responding to your initial management)
- Provide patient CHI number and location
- Listen
- Answer any of their questions as best you can
- Write down advice as you speak
- Ask questions about anything that doesn't make sense to you right now - this may be your only opportunity to clarify it here and now!
- Ask whether there are any alternatives or ways of escalating the treatment they are proposing, in case it doesn't work.
- Repeat the advice back to them
- Confirm their name and grade and contact number + offer your bleep/extension
- Document the conversation, including the name of the person you spoke to and a detailed plan
- Inform the patient and the ward team of the plan

Request for Follow-up

- Sometimes the reason for admission to hospital or the result of an investigation prompt the need for further specialist input, but it doesn't necessarily require them to be seen that day or week and can be sorted out in the outpatient setting.

- To arrange clinic follow up, you can phone switchboard to find out the details of a particular consultant's secretary who can provide you with their email address or tips on how best to book the patient in for follow up.
- You can print an extra copy of the patient's discharge letter and use internal hospital mail to deliver it to the appropriate consultant or their secretary's office. Ask the ward clerk or nurse in charge for advice if you're not sure where to leave it.
- You can call the most relevant ward and ask to speak with one of the doctors who are based there day-to-day and might have an idea of how best to arrange this.

REFERRAL CHEAT SHEET

Created for interns at the Sunshine Coast University Hospital 2019
Charlotte Durand PGY3 Twitter: @char_durand

BEFORE YOU CALL

1. Sit down with the notes in front of you
2. Look at their most recent obs/bloods/imaging
3. Work out your one sentence summary of why you are calling. (consult/ admit /phone advice/take over care)
4. +/- Write down the most important points you want to convey
5. +/- Get the registrar/consutlant's name from switch so you know who you're speaking to

OPENING LINE

"Hi, my name is Charlotte, I'm one of the ED residents. I'm calling to refer a patient that I think has appendicitis, is now a good time?"

If they say yes, then go ahead with the rest of your ISBAR presentation.

Try to start with the diagnosis or top differential (the boxes below come after that first piece of info).

Always make the patient the centre of your conversation and speak kindly. This goes for those taking the referral, too!

Author's Note: This list was created as a guide and should be used to supplement your clinical judgement. Thanks to all those who contributed on behalf of their specialty group. Medicine is a team sport and we do better when we work together :)

GENERAL SURGERY

- Urgency i.e. bleeding/ischaemia/ haemodynamically unstable
- Previous abdominal surgeries (when?)
- If post-op complication- location & surgeon of primary operation
- Last ate/had anything PO (inc. water)
- Last opened bowels/flatus/vomiting
- Imaging results

GENERAL MEDICINE

- Presenting complaint
- Only the relevant PMHX i.e. the system relating to the suspected diagnosis
- Treatment so far & response
- Social Hx/ function i.e ADLs
- Care limits (ARP status)

PAEDIATRICS

- Age + gender (corrected age if preterm)
- Feeding/output/hydration
- Sick or not sick (activity/breathing/colour)
- Birth history
- Immunocompetent? Immunised?
- Developmentally normal?
- Significant history i.e. congenital syndromes, metabolic dx, oncology

CARDIOLOGY

- Cardiovascular risk factors (smoking, T2DM, FHx, HTN, lipids)
- ECG changes
- Troponin
- CXR
- HR & BP
- Management so far + response i.e. GTN/diuresis/antiplatelets/anticoagulants
- Any significant PMHx/renal fxn/Hb/Bleeding risk

ORTHOPAEDICS

- Key injuries
- Mechanism of injury
- Co-morbidities
- Skin integrity
- Sensation
- Pulses
- X-rays
- Social Hx/Premorbid function

OB/GYN

- Gravida/Para status
- Gestation if pregnant / LMP
- Presenting issue
- Ultrasound results
- bHCG / Hb if bleeding
- Urine (dip/MCS)
- Speculum finding
- Last PO intake (if needing operation)

INFECTIOUS DISEASES

- What antibiotic they are on & how long they have been on it
- Have they had source control? (surgery/drainage)
- Blood culture results
- Inflammatory marker trends
- Last fever
- If HIV+ are they on ART? Most recent CD4 count

ACUTE PAIN SERVICE

- Reason for pain
- Underlying disease + control (RA/DM)
- Acute or chronic
- What has been tried so far
- PRNs used in past 24hrs if inpatient
- What they are on in the community
- Allergies

PSYCHIATRY

- Known previous diagnoses
- Current issue/acute stressors
- Previous inpatient admissions

REFERRAL CHEAT SHEET

Created for interns at the Sunshine Coast University Hospital 2019
Charlotte Durand PGY3 Twitter: @char_durand

PALLIATIVE CARE

- Brief disease summary
- Current/proposed treatment options
- Home situation
- Capacity to make medical decisions
- Important family members
- Any family conflicts
- What they have been told
- Current symptoms
- Care limits (ARP status)
- Best estimate of prognosis (days/weeks)

ENDOCRINOLOGY

- Diabetes- type 1 or type 2
- HbA1c if known
- New dx or previously known?
- Home meds + current treatment
- Are they on high dose steroids?
- Current nutrition status

ENT

- Airway status (stridor/foreign body/active bleeding/button batteries = emergency)
- If cancer pt – primary site + treatment to date, complete?
- Immunosuppression?
- Smoker?
- Anticoagulant/antiplatelet meds?

UROLOGY

- Size + location of stone
- Pain level
- Febrile?
- Urine MCS
- Renal function
- One/Two kidneys
- Previous surgeries/stones

RENAL

- Baseline eGFR & Creatinine vs current
- Volume status
- Dialysis – what type? Days per week? Last visit? Missed any?
- Urine output
- Electrolytes (K+, bicarb)

RESPIRATORY

- Current issue
- Who they are known to (consultant)
- Home O2 settings- how many hours/day
- Previous ICU/BiPAP
- Care limits (ARP status) especially if they are for/not for/trial of BiPAP

ICU

- List ICU criteria first (Pressors/dialysis/intubation)
- Timing of last "stable" assessment
- Interventions so far
- Care limits (ARP Status)

NEURO/STROKE

- Details about the incident/cardinal symptom
- Timing of symptoms, sudden vs gradual, LOC? Fall?
- Try to get witness history & document
- Neuro exam findings (GCS/deficits/cauda equina syndrome)
- Imaging results
- Anticoagulants/antiplatelets

GERIATRICS

- Age
- Suburb + living situation
- Current acute medical issues
- Functional & cognitive baseline vs current
- Care limits (ARP status)

DERMATOLOGY

- Duration of rash, location, sparing?
- All medications & recent changes – what has been tried
- Morphology of lesion
- Any systemic symptoms
- Current medical problems
- Try to get clinical photo if able to

GASTRO

- **HEPATOBILIARY**
- Liver enzymes, INR, albumin + trend
- Child Pugh, EtOH Hx, new meds/herbals
- Hepatitis risk factors – tattoo/IVDU/travel
- Orientated? Encephalopathy=emergency
- **LUMINAL**
- GI bleeding – volume/current BP/HR/Hb
- Fasting status
- Melena/haematemesis (volumes)
- Risk factors – EtOH, NSAIDs, previous ulcers, cirrhosis

HAEM/ONC

- Type of disease – stage/grade/when diagnosed?
- Known to which consultant?
- Current + past treatment (last Rx date)
- Curative or palliative intent
- ECOG status
- Previous complications of therapy
- Care limits (ARP status)

Bleeps, switchboard and finding phone numbers

Author: Marianne Smith
Peer Reviewers: Mathew Lyons and Giovana Klefti

Bleeps

Answering bleeps is pretty straight forward. When you get a new message you should hear the bleep go off and then a number will appear on your screen.

You simply dial this number into any phone, and it will ring the person back who was trying to contact you.

Make sure to introduce yourself. "Hello, its X FY1 on call for medicine, I was just bleeped"

If you can't answer it immediately it will be stored on the bleep and you can scroll back through your previous numbers/bleeps if you receive more than one. However, try to answer your bleep as soon as you receive it. The person who bleeped you will usually be sitting at the phone waiting.

What if you are not near a phone?

If you are not near a phone, you can use your own mobile to return a bleep. There are various ways of doing this. In some hospitals you simply put a prefix before the extension number. Other hospitals have a more complicated way of working out the "outside line" number from an internal extension number. The 'Induction app' has a very handy feature called "Quick Dial" that will do this for you – just put in the extension and it will give you the number to dial from your mobile phone.

How to bleep someone

To bleep someone:

1. Dial the bleep switch (110 in Lothian, 58 in BGH etc)
2. When asked, enter the bleep number of the person you are trying to reach
3. When asked, enter the extension number you want them to call you back on (usually on a sticker on the phone)
4. Hang up and wait for them to call you. Try not to use the phone for other things while you are waiting.

Bleeps that start with

In some places, some specialties also carry long range bleeps (eg respiratory in WGH). Bleep numbers for these are usually listed as #1234. To bleep these numbers, simply dial the number, including the #, directly into the hospital landline phone. You will be asked to enter a message or wait for an operator. Just enter the extension you want them to call back on and press # again to bleep.

Specialties that don't have a bleep

Some specialties don't have a bleep but instead the on-call person carries a mobile phone or uses their own mobile phone. To contact these specialties, you often need to go through switchboard who will connect you. Sometimes the mobile number (if it is not a personal number) will be in the induction app.

How to find a phone number

Switchboard

- Dial '0' and you will be put through to an operator who will tell you the person/team's bleep number or they will transfer you through if it is a phone number rather than a bleep.

Induction app

- This is often the quickest route, however, sometimes can be unclear exactly which bleep number to contact or the specialty may not be listed. In this case go through switch.
- The Induction App is available in the app store or google play store. Its logo has a white 'i' on a yellow background, and the tag line of "hospital information sharing".
- To set it up you just need to search for the site in which you are working (eg Royal Infirmary) and it will download the phone directory.
- Use the search function to find the bleeps and numbers you are looking for
- It will only show you specialties at your hospital however so if you are for example at the WGH and want to call Vascular, you will need to change the 'site' to the RIE to find their number.
- The app can be updated by all users - make sure to update it yourself to keep it useful for everyone.

Tips

- Contacting people can change in and out of hours. For example:
  - When ordering a chest-xray out of hours, you bleep the radiographer (not radiology) after you have put in the request and they will ask you about whether it needs to be portable and how urgent it is.
  - To contact the lab in hours you usually just dial an extension, but out of hours you need to bleep the on-call lab technician
- When looking for advice, think about who would have the best answer to your query. Your own senior should be the first line of call, (eg your specialty registrar, or a member of the H@N team depending on your role at the time). Your own senior should also know if you are calling another specialty for help/advice. This includes situations where you put out a 2222 call- the arrest team will want a senior member of your team to attend also.

Chasing bloods

Author: Nadia Salloum
Peer reviewers: Giovana Klefti and David Henshall

Finding blood results

For Trak users, unread results will be indicated by an 'open book' on the patient's bed space on Trak. Clicking on this or the results tab will allow you to view the results.

Checking order status

Select "order details" to check order status. "Ordered" means an order has been placed on track, there is a collection time if the order sticker has been printed, a lab received time if it has arrived at the lab, "in progress" when being analysed and it then changes to "complete" when the results are available to view.

Interpreting the results

Any results that fall out with the standard normal range will be highlighted in red. I find the most useful way to start interpreting results is to compare them to the previous results for that patient (if available) – looking at general trends or sudden changes can be very useful!

List view vs Tabular view

The *list view* of blood results shows an outline of the recent blood tests, for comparison to previous results click along the arrows at the bottom. If you are wanting to view historical results it is best to use the *tabular view* (option at the top of page). *Tabular* view is very useful for searching for results which may not appear on the main panel eg specific IgE, genetic screens etc…

Specific tests

FBC

- *Hb* – any large drop should be further investigated/ look for a potential source of bleeding. I was once told a drop of >10 is when you should start to think about this (unless this was expected post op). Also consider dilutional effects of IV fluids.
  - The rate of fall in Hb will help guide the urgency of investigation. Examine the patient to look for sources of bleeding, including a PR if appropriate to look for melaena.
  - Consider whether transfusion is required- this is a nuanced decision so worth discussing with a senior.
- *MCV* – useful to use in relation to Hb if anaemic to guide diagnosis of underlying cause. A microcytic anaemia is most commonly due to iron deficiency, so send iron studies. Macrocytosis may be due to B12/Folate deficiency, or thyroid dysfunction so check these (alcohol excess/liver disease common too). In most cases, B12/Folate only need to be checked every 3 months, so check for recent results before requesting the test.
- *WCC and neutrophils* – raised in infection, trends are helpful here.
  - Neutrophilia: often suggestive of a bacterial infection

- Neutropenia: If neutrophils are <1 make a senior aware. Think of Neutropenic Sepsis and if evidence of infection urgent medical review and ask for help!
- *Lymphocytes* – Lymphopenia is common in viral infections including COVID-19, however, is often a non-specific finding.
- *Platelets* – be on high alert for bleeding if platelets are low. Look out for clinical signs of thrombocytopenia- purpura, petechiae, epistaxis. Don't forget to check the rest of FBC and the coag screen. Review the medications list and consider whether antiplatelets/LMWH needs to be held (we often hold Dalteparin if platelets are <70). Platelet transfusion is only appropriate in limited circumstances. Discuss with your own senior first before discussing with haematology.
- *Blood film*: If the FBC is very abnormal, a blood film is often carried out by the labs (but you can also request one). In Lothian, this result appears as an alert icon below the serial number of a blood tube on the results page.

U&Es

- *Creatinine* – note that even if results are not 'red', they may still be abnormal for that person (i.e. elderly frail patients). What is the trend? Is it acute or chronic? Are they clinically dehydrated? Low creatinine is generally not a problem, especially in a frail patient with low muscle mass.
- *eGFR* – use in combination with creatinine.

Med Reg Comment

Note that eGFR is not the same as creatinine clearance and tends to be falsely reassuring in frail/elderly patients. You may need to calculate CrCl for medications including gentamicin and apixaban.

- Urea – monitor trend, elevated in dehydration/impaired renal function. If raised in isolation, consider an upper GI bleed!
- *Na* – Many patients will have mild, chronic asymptomatic hyponatraemia. However, you will also see patients with more severe cases. If hyponatraemia has developed slowly, you will need to correct it slowly. Investigation of hyponatraemia begins with accurate assessment of fluid balance, which will guide further investigations. Investigation of hyponatraemia is somewhat nuanced, and availability of tests varies a little across the region, so is probably best discussed with a senior member of your local team.
- K
  - Hyperkalaemia: Follow the hyperkalaemia guidance on Intranet. As general guidance
    - Mild: 5.5-5.9mmol/L – treat underlying cause
    - Moderate: 6.0-6.4mmol/L- note rate of change and if further rise is anticipated- if yes treat as severe
    - Severe: 6.5mmol/L or higher- Urgent A-E assessment, ECG and treatment

Med Reg Comment

If the result is unexpected or in the context of thrombocytosis, consider repeating using lithim-heparin tube or blood gas (VBG) to ensure not falsely elevated due to the artefact or haemolysis.

  - Hypokalaemia – see section on electrolyte replacement
- Magnesium and Phosphate – see electrolyte replacement

LFTs

If LFTs are deranged, consider whether there is an obstructive picture (elevated Bili/ALP predominantly) or hepatitic picture (with a transaminitis, but also likely elevated bili/ALP). Consider whether there are any drug causes, and if the patient is symptomatic. In general, obstructive jaundice will require USS abdomen as first line investigation, whereas a truly hepatitic picture will require a liver screen- discuss with your senior for advice on what is appropriate.

CRP

- Be aware there can be a slight lag compared to WCC and clinical condition
- Consider expected causes for an acute raise (i.e. just been for surgery)
- Trends (again!) are helpful here, but in most cases a daily CRP will not be required (local practice on how frequently CPR can be checked will vary).

Calcium

- Will provide actual and corrected values. Corrected value is corrected for albumin levels and is the result that should be acted on.
- Further details in electrolyte section

Glucose

- Useful in monitoring for refeeding syndrome
- If random glucose elevated in non-diabetic, check for symptoms of diabetes and check HbA1c – you may have identified a new case of diabetes.

Lactate

- An indicator of anaerobic respiration occurring in the body. An elevated lactate is concerning and marker of poor prognosis! Other causes for elevated lactate include dehydrateion, use of salbutamol nebs, and post-seizure.

Iron studies

- Check if the patient is anaemic first.
- Note ferritin is NOT included and has to be requested separately (in Lothian). Ferritin is an acute phase reactant and hence is often raised during illness.

Blood cultures

- Results can be found in the microbiology results tab and often takes 2-3 days to come back. Generally these report antibiotic sensitivities in the results; however, the labs often have extended sensitivities available which is accessible to those with Apex access (micro/ID teams), so if you have a patient with multiple allergies, it may be worth discussing with microbiology. Results sometimes come back in stages with sensitivities being reviewed every few days.

Gentamicin and vancomycin levels

- These can be found in the drug assay tab in Lothian, or microbiology in Borders.
- Interpret these in accordance with guidelines. Be sure to check that the time the sample was taken is accurately recorded when you are sending gent levels. To prescribe the dose, you need to know what time the blood was taken at, not the time the result is released on Trak.

Blood gas

ABGs are useful in the management of an acutely hypoxic patient, however, consider why you are taking one and if it is necessary first- they hurt. If a patient is for ward level care, an ABG is unlikely to change your management even in an acutely hypoxic patient, therefore be guided by their saturations instead. If, however, a patient is for escalation, an ABG can give you a useful picture of whether someone may require NIV, or whether they may require discussion with critical care for HFNO or intubation.

A venous blood gas may also be useful to give you rapid results to guide management before formal laboratory bloods are available- depending on the board you work in, you may be able to get a Hb, lactate, K in addition to your standard values.

Know where your blood gas sample needs to be taken to – is it the labs, ED, or ITU? Do you need to phone first? You only have ten minutes to get the sample to the analyser so have a plan in advance and bring a patient sticker if you are running the sample yourself- you will need the CHI!

Signing off results

Once you have seen and acted on any blood results, you will need to sign them off. To do this, tick the box beneath/beside the result and click review results and “mark as read.” This should cause the ‘open book’ to disappear from the patient bed space on Trak.

Using SBAR to Handover

Authors: Marco Mancuso-Marcello, Bhavya Rajagoplan and Sarah Wordie
Peer reviewers: Agnieszka Janas, Fazila Rasul and Sophie Baldwin
Consultant reviewer: Ailsa Howie – Medical Consultant

Handover

Handover can seem like a daunting experience. It is a very important part of the day. It is important that it is done thoroughly even though it can seem like a big task at the end of a long day. A thorough handover ensures that nothing is missed and that the person taking over from you has all of the necessary information to look after your patients safely. The person you are handing over to should have enough information to allow them to make decisions about a patient's care, and to do so efficiently and safely.

But it is honestly not as scary as it sounds!

Here are a few tips to get you going:

- Don't be afraid to handover jobs that you didn't have time to do. The whole point of handover is to allow you to get away on time so you can go home and rest.
- There are usually a variety of different tasks to handover. These include the following: Reviewing a sick patient, Being aware of a sick patient, Clerking in new patients, Tasks (chasing investigation results, prescribing medication, etc).
- Before you go to handover, make a list of patients and jobs to handover. Make sure you have important details about patients i.e. ward, bed, CHI number.
- Consider whether it is a job that needs to be done out of hours – chasing a HbA1c is unlikely to be a job for an OOH team!
- Try to have as much information to hand as possible when you're handing over a sick patient. You don't need to spend excessive amounts of time gathering this information – just focus on what is relevant and important.
- Some handovers have more of a casual format than others. However, whether you are handing over to your FY1 colleague or to the HAN team, ensure that you are handing over all relevant information.
- Try to use the SBAR format (Situation, Background, Assessment, Recommendation). To break this down: start off by saying what is needed (eg there is one man who needs a review please). State the name of the patient, CHI number and ward. Next, talk about the current clinical concern, their current issues, relevant past medical history and relevant investigation results. State what you have done for the patient. Finish off by asking the team what you would like them to do for the patient i.e. jobs, chasing investigations, review, be aware. Thank the team and then leave. (Please see the SBAR section below for more information.)
- Don't forget to let the person you hand over to know about the escalation status of your patient – if they deteriorate, are they for ward-level care, ITU, do they have a DNACPR form?

- Handover is a really good place to ask any quick questions/get advice about patients even if it's not something that needs handed over!

Med Reg Comment

While handover is a really useful place to discuss a patient with a senior, please try to discuss with your own team first- they will know the patient best and will be able to help make escalation decisions too.

- Everyone should be friendly at handover, however, sometimes it can be daunting when you are asked questions to clarify things. It is ok to say that you do not know the answer. The H@N team will also understand that sometimes plans are not as clear as one would ideally like but understand that this is not your fault. Equally, when you are receiving handover, try not to be critical of the person handing over to you, they have probably had a rough evening too.

SBAR Explained

'SBAR' is a communication tool which stands for 'situation, background, assessment, recommendation'.

One of the biggest jumps from transitioning from the final year of medicine to being an FY1 doctor is having responsibility for your own patients. A good SBAR will organise the scenario in both your and the receiver's thoughts which will facilitate a safe and efficient handover.

Some common situations in which you should use SBAR:

- Escalating a sick patient
- Referring to a different speciality/profession
- Formal handover to hospital at night
- Handing over to your FY1 colleagues at shift change

Generally speaking, things you may want to include under each heading are:

S - situation: Your name, your role and where you are, what you are after – A review, advice or discussion - and a brief summary of the immediate situation. Also, it is a very good idea to make a statement at this stage about your biggest concern or what you would like to ultimately get from the person you are talking to (the headline).

B- background: What is the context in which the situation is happening? This might include the course of a patient's deterioration, any important co-morbidities and medications, or salient details about their admission.

A- assessment: this is what you think is going on and what you have done about it so far. This might include a differential diagnosis in order of likelihood or seriousness, observations examination findings, any initial treatment you have given and any investigations.

R- recommendation: finally, you can give a recommendation of what you think should be the next step; of course, that could well be 'please come and help me'.

If you are handing over a patient awaiting the results of an investigation, it is good practice to include your own management plan and steps that need to be taken based on the outcomes of the investigation.

Worked example

Patient JH is an 80-year-old gentleman who you see in MAU on an evening shift. He's come in directly from the podiatrist appointment for his diabetic foot. He was sent in because he's not feeling well, and he has a wound on his right foot that is weeping pus. The nurses have already started oxygen and he is saturating 94% on 4L. He reports chest pain, he is febrile at 39°C, he has a tense, red painful right calf. His heart rate is 90 bpm, his BP is 100/80 and his RR is 24. His blood tests have come back with a WCC of 13, a CRP of 201 and a troponin of 300. His chest is clear on examination. Past medical history includes T2DM and severe LVSD. His ECG shows no acute changes. He normally mobilises with 2 sticks and has an exercise tolerance of <50m.

You feel like you need help, so after doing your ABCDE you call your med reg with SBAR:

S- Hello I'm Jim an FY1 from MAU. I would like your help reviewing and managing Mr JH who is an 80 year old Gentleman who I think is septic.

B- He was referred in from the podiatrist this afternoon as he had a severe diabetic foot ulcer. He has a background of severe LVSD and T2DM. He is a frail gentleman who mobilises with 2 sticks and has an exercise tolerance of less than 50m.

Tonight, he has a new oxygen requirement of 4L with saturations 94%. He is complaining of chest pain. Clinically, his chest is clear. His left calf is swollen and cellulitic.

A- His other observations are: HR 95, RR24, BP 100/80, Temp 39. His white cells are 13 and his CRP is 200. He has a troponin of 300, but his ECG shows no acute changes.

I'm concerned that he is septic from his wound. I've given him some IV co-amoxiclav based on his last wound swab, sent cultures and requested a chest x-ray. An MSU has been sent.

I'm also worried about his chest pain with his elevated troponin. I'm not sure whether to give full ACS treatment as his ECG is normal, and I'm also wondering if he might have a PE given his swollen leg and new oxygen requirement. I'm a bit worried about giving him fluids too, as I'm not sure whether his hypoxia could be due to heart failure rather than infection, although his chest does sound clear.

R- This is quite a complicated patient – could you please come to see him with me? Is there anything you would like me to do while you are on your way?

Hopefully this is an example of how SBAR can clarify a very complicated patient in your head and allow you to ask for help when you've done everything you can think of. The med reg will almost certainly come and see this patient and have a list of many other things you can be getting on with in the meantime. Moreover, the handover does not have to be perfect; they will know the extra information that they need and ask for it. An SBAR structure will go a very long way to getting the key messages across though.

Med Reg Comment

As you can see from the SBAR above, it's absolutely ok to not be sure what to do for a complex patient. What is really helpful is to have some idea what you are unsure about so that you can ask for targeted advice. This may also mean that someone can give you advice about what to do until they come to see the patient.

When you call for advice, the person you call may ask lots of questions. This is just because they are trying to get a picture of the patient in their head too!

Documenting procedures and discussions

Author: Mathew Lyons
Peer reviewers: Hannah McManus and Anna Kolodziejczyk

As an FY1 (or any level above), you will have to complete procedures and have discussions with other specialties and families. A very important part of these tasks is recording what was done/said in the notes. Specifically, we will look at:

- Documenting procedures e.g. PR examination, catheterisation
- Documenting specialty discussions
- Documenting family discussions
- Documenting mistakes

The basics of clinical documentation

Some of these things (e.g. date and time) will be automatically done in electronic health records. Being aware of them is especially important for people not used to handwritten notes.

- Date, time and sign every entry.
- Write your name and role as a heading and the names and roles of all others present at the encounter.
- Make entries immediately or as soon as possible after care is given.
  - Prompt documentation reduces the risk of you forgetting key details.
  - It ensures all other team members are aware of any changes to a patient's condition or management plan.
  - In reality, this isn't always possible. If you are returning to the patient's notes later, document clearly in the heading that it was written in retrospect, with the current date and time.
- Be legible.
  - There's no point documenting well if no one can decipher it.
- Be thorough, accurate, and objective.
- Maintain a professional tone
  - Sarcasm, attempted joking or a casual tone may reflect badly on you.
- Only use approved abbreviations, if you must, but it is better to use no abbreviations at all to avoid confusion.
- Addenda.
  - If an addendum is made, this should also be verbally communicated to other teams and nursing staff.
  - Sign off any addenda with the time and your full details.
- Mistakes.
  - If a mistake is made, correct it with a single strikethrough.
  - Follow that by clearly signing and dating the correction.

Read lots of other people's notes when you get the chance. You will identify things that they did well and things you would do differently.

Procedures

Think of your note as first setting the scene, then saying what you did/found, and then saying how you plan to act and what needs to be done. Specifically you should be documenting:

1. What procedure was done and why
2. Was there a chaperone
3. What sort of consent did you obtain (note if an AWI is in place)?
4. Specifics of the procedure/finding of examination
5. Any complications
6. Follow up plan

Example: PR Exam

PR EXAMINATION

Indication:? impacted stool

Chaperone: SN Smith

Procedure explained and verbal consent obtained

Positioned in left lateral position with knees up to chest

Normal external anal appearance. No haemorrhoids, skin tags or fissures

Hard impacted stool in rectum

Prostate not palpable due to impacted stool

Normal anal tone

Nil blood

2 x glycerine supps inserted

Findings explained

PLAN

1. Stool chart started
2. Oral laxatives prescribed

A Doctor FY1

#1234

Example: Catheter Insertion

CATHETER INSERTION

Indication: Urinary retention. >999mL in bladder on bladder scan

Chaperone and assistant: Dr P Leaks

Procedure explained and verbal consent obtained. AWI in place

Aseptic non-touch technique. Cleaned with normasol. 11mL instillagel instilled.

14Ch short term catheter inserted on first pass with minimal resistance at prostate

LOT: 124BD14. EXP 12/2022

10mL in balloon

Leg bag attached. Clear straw-coloured urine flowing

Foreskin replaced

No complications

1200mL residual

Catheter to be changed or removed on or before 30/04/2020 (two weeks)

PLAN

1. Add PSA to admission bloods
2. Renal USS ?hydronephrosis
3. Monitor fluid balance – risk of diuresis

A Doctor FY1
#1234

Specialty Discussions

Consider documenting:

- Who you phoned/discussed with
  - Their name, specialty and grade (even just Reg/Cons etc)
  - How you contacted them (bleep no, via switch, in person etc) – useful if someone else needs to get back in touch with the same person
- What did you explain to them
  - This is really useful for putting the advice received in context for someone who reads the notes later
- What question(s) did you ask – ie what was the purpose of the call
- The advice they gave
- Your plan based on the advice (may be the same thing)

Often a bullet pointed list is helpful for this rather than writing verbatim what was said. It is ok to paraphrase but do not document your inferences as their advice. If you are forming an opinion or making a plan document this after their advice

Example: Phone call to haematology

Please do not take any clinical advice below as correct – it is purely illustrative

Phone call to haematology reg on call, Dr Smith, called via switch
Explained

- 72F on Warfarin for AF.
- INR 10.1
- Recent course of clarithromycin in community
- Fall at home, head injury, acute subdural with neurological changes

?reversal advice
Advised

- Should give IV vitamin K 10mg IV and beriplex 30units/kg
- Full guideline and flowchart on haematology intranet page
- Check INR immediately after.
  - If <4.5 monitor
  - If still >4.5 rediscuss
- Should seek neurosurgical opinion

A Doctor
#1234

Family discussions

Similar to specialty discussions this should be factual.

Documenting a family meeting can be challenging due to the unstructured and conversational format. However, clear documentation is especially crucial in this setting as key management discussions often take place. These conversations can change the course of a patient's care.

Begin by documenting exactly who is present in the meeting, and their roles. For example, family members, medical staff, social workers. Document if a translator is present for the meeting. List each point as it is raised, and the general decisions that are made about each point. Use quotations where relevant, using quotation marks. Summarise the key agreements that were made at the conclusion of the meeting. Then, clearly document a plan, whether there is to be a change in the patient's treatment plan, or whether it is for ongoing discussion at a later stage.

Documenting a mistake

We are human and mistakes do happen. Rather than brushing over them or attempting to hide them, all mistakes should be formally documented. This allows us to maintain transparency and ensures that the appropriate action can be taken.

Document exactly what happened, including all people involved. Document your assessment of the patient immediately afterward if appropriate. This is particularly relevant in the case of medication errors. Make a note of who was informed about the mistake - for example, the patient themselves, the relatives, and the treating consultant. Lastly, document if you lodged an incident report (Datix) along with the Datix reference number.

Discharge Letters

Author: Mary Flinn
Peer reviewers: Phillip Holt and Eilidh Clark

A discharge letter (IDL=immediate discharge letter) is a summary of a patient's stay in hospital and communicates information to future healthcare providers and GPs. Discharge letters will vary between settings and specialties, but most have the same basic principles. The aim is to communicate all necessary information while not making the letter too long. You will find a recent, well written IDL can be very useful when clerking a patient in.

In NHS Lothian, on Trak type \idl to load the discharge letter template. Alternatively, if you are on shift in MAU in WGH and have a patient who has been in hospital for <48 hrs with ≤3 medication changes then use \48idl. There are lots of rules about when you can use 48hr IDLs, make sure you have spoken to the pharmacist about these rules before you use one. Some specialties have their own modified IDL codes, eg surgery uses \idlgs – you will find out at induction what you should use.

Remember you are writing a letter; it is rarely done but it is very good practice to address the person you are writing to. You can find the GP's name in the MPI on Trak or at the bottom of every patient label. Start your IDL with Dear Dr Smith,

Patient details:

Most electronic letters will automatically deal with this but make sure you check it is the right patient!

Discharge details

Check the name of the consultant and specialty is correct. This should usually be the consultant who was responsible for the patient at time of discharge.

Presentation

Include a brief description of the patient's presenting symptoms, signs and context of admission (e.g. if they were admitted for an elective procedure).

Past medical history

Mention any relevant past medical history! Some aspects of the patient's social circumstances may also be important so document those if appropriate.

Investigations

Summarise relevant investigations findings including blood tests, imaging, ECGs, biopsies etc. You do not need to copy and paste the full reports as this can be too much text and obscure the important points. Include any investigations with results still pending.

Diagnosis

Describe all diagnoses the patient received while in hospital. If there was no clear diagnosis, try to explain why. Be as specific as you can.

Management

Detail how the patient was managed during their admission, including short term and long-term management. If the patient has undergone procedures, specify exactly what was done and any issues. If they had surgery, mention any relevant information from the operation note including whether it was under local or general anaesthetic.

Complications

Describe any complications which occurred during the admission (e.g. post-op complications, hospital acquired infections) and how these were managed.

Future / Follow-Up

List all plans for the patient after discharge including: follow up clinic appointments arranged, pathology results to be sent in the post, referrals awaited and changes to care arrangements.

Medications

It is very important to clearly document all changes to medications during admission. This should include all medications started, stopped or doses changed and the reason why this was done. It is also important to state how long these changes are for (for example, starting a short course of antibiotics compared to changing long term diuretics).

GP actions

This where you, politely and clearly, write anything you would like the GP to do for the patient going forward. If there are a few things it is useful to itemise them in a list to make it clear.

Often requests will include rechecking bloods or checking in with patient following medications changes so you need to be clear exactly what needs to be done, when and why – "Please recheck electrolytes in one week to ensure potassium levels have remained stable" not "Please recheck electrolytes".

Do not ask the GP to chase results. These will be chased up by the team responsible for the patient during admission (usually the consultant).

Med Reg Comment

During the COVID pandemic, please make sure that all the things you ask of a GP are absolutely essential, especially if they are required in the near future. Primary care is also under massive pressure.

Medications

Often this is done in a different section of the IDL. It should be a list of all medications the patient is currently taking, both regular and as required. List: name, form, dose, frequency, duration, indication and any extra instructions for the patient

NB: Patients going home with dosette boxes or controlled drugs often need their letters to go to the pharmacy early. In this case it is appropriate to write at the top **draft for pharmacy** and send an incomplete IDL with the drugs attached. This prevents delays in discharge while waiting for meds.

Allergies

Make sure to document any allergies previously known about (including from the ECS) and any new ones noted during admission. You can communicate to the GP about allergies which should now be removed

from their ECS (e.g. historic penicillin allergy but received amoxicillin this admission with no adverse effects).

Finishing

Note your name, grade and specialty at the end of the letter. It is also helpful to suggest where to contact for further information if needed (e.g. MAU, Western General Hospital).

If you are preparing a discharge letter in advance, clearly document DRAFT at the top of the letter to be sure that nobody mistakes it for the final copy. If you are writing a letter which was started by someone else, make sure you proofread it.

Often you will find that a surgical IDL is significantly shorter than a medical one, and MOE discharge letters are much more in-depth. Keep your letters succinct, but with all the most valuable information from that admission. It can be very useful for doctors in the future who might be trying to look up a specific detail – particularly medication changes.

Example:

DRAFT

Dear Dr Smith,
Mr X was admitted to Medicine on **/**/****.

PRINCIPAL DIAGNOSIS/PROCEDURE
1) Catheter associated UTI

2) Delirium

3) Falls

Mr X was admitted with confusion following a fall at home. He as a long-term catheter for BPH. On admission he was septic and inflammatory markers were raised. CT Head showed no intracranial pathology and Mr X sustained no injury in his fall. A CSU grew E Coli sensitive to amoxicillin, gentamicin and trimethoprim. Mr X was treated with IV antibiotics and his catheter was changed.
Mr X's delirium gradually resolved over the course of his admission. He was seen by the physiotherapy team who have given him a zimmer frame to assist his mobility. The occupational therapy team have provided a bed leaver and a shower seat and started a BD package of care in the mornings and evenings to help Mr X get up and go to bed.
Mr X wishes to consider more definitive management of his BPH, and we have discussed his case with the urology team. They will kindly see him in their outpatient clinic.

TREATMENT
1) Antibiotics for CAUTI – now finished
2) Long term catheter changed – next due in 3 months on **/**/****
3) Physio and occupational therapy

FUTURE INVESTIGATIONS AND FOLLOW-UP BEING ARRANGED BY HOSPITAL

- Catheter change by the district nurses in 12 weeks

- Referral to urology for consideration of definitive management of BPH

CHANGES TO DRUGS SINCE ADMISSION
Stopped:
- Tamsulosin – increased risk of falls.

ALLERGIES / ADVERSE DRUG REACTIONS
Nil

SIGNIFICANT CHANGES MADE TO CARE ARRANGEMENTS
BD POC morning and night for getting up and going to bed

GP to please consider the following: Nil. Thank you for your ongoing care of this patient.

Should you need further information please contact: *********

Information contained in this letter has been discussed with the patient/carer.

Yours sincerely,
Dr **********
FY1, Specialty, Hospital

Patient/Carer Signature.....

This is an immediate discharge letter and a further letter may follow.

Prescribing

Fluid Prescribing

Author: Hannah Preston

Peer reviewers: Giovana Klefti and Lex Tan

You will often be asked to review or prescribe fluids for patients, more likely than not, for patients you do not know. It is vital that each patient is properly assessed; it should not be too long a procedure to undertake, but equally needs careful consideration.

Indications for IV fluids:

NBM on a surgical ward most often e.g waiting for surgery, bowel obstruction, ileus etc- therefore maintenance +/- replacement if output is high

Replacement is needed- hypovolaemia from vomiting, diarrhoea, sepsis, bleeding (note will need blood products also) etc

Where at all possible the patient should be on oral fluids

Types of fluids:

- Crystalloids- most common
  - NaCl 0.9%, Hartmanns, Plasmalyte
- Colloids- less common and you shouldn't be prescribing these
  - Albumin, Gelofusin

Fluid type	Tonicity	Na	K	Cl	HCO3	Glucose g/dl
Human plasma	n/a	135-145	3.5-5	100-110	22-26	3.5-7.8
NaCl 0.9%	Isotonic Used in resus and maintenance	154		154		
Plasmalyte	Isotonic Used in resuscitation	140	5	98		
NaCl 0.18% /Dextrose 4%	Hypotonic Used in maintenance	30		30		40
5% Dextrose	Iso and hypotonic Used if hypoglycaemic, hypernatraemic					50
Hartmann's	Isotonic Used in resus and maintenance	131	5	111	29	

Notes

- Do not use 5% Dextrose as maintenance- dilutes electrolytes
- Do not prescribe hypotonic solutions to patients with Na <132 or at a rate >100ml/hour unless discussed with a senior- there is a risk of osmotic demyelination.

Assess the need for IV fluids

1. HR, CRT, skin tugor, mucous membranes, listen to the chest, check for pitting oedema, BP, RR, JVP, passive leg raise etc
2. Look at trends on the NEWS score
3. Check urine output. Check intake vs output
4. Look for abnormal losses
5. Check bloods- Urea, Hb, Na, K, Cr
6. Can the patient meet their needs orally?
7. Does the patient need:
    i. Maintenance?
    ii. Resuscitation?
    iii. Resuscitation then maintenance?

Find the Fluid prescription chart which also helps as guidance in prescribing

Maintenance fluids

- Normal daily intake:
  - 30ml/kg/d water
  - 1mmol/kg/d Na, Cl, K
  - 50-100g/d glucose
- Reassess and monitor the patient when no longer needed, stop IVF
- If the patient is known NBM for 24hrs make sure enough is written up
- Surgical patients often need a lot of fluids post op if they have extra losses from drain sites, ileostomies etc which you should be replacing. It can be normal in the first day post op for patients to have a positive fluid balance and then they will diuresis once the bowel starts working normally again.
- South East Scotland now uses 0.18%Nacl/4% dextrose to reduce risk of Na overload

Resuscitation fluids

- Identify cause of deficit and respond
- Ask for help if needed
- Give a fluid bolus of crystalloid- 250-500ml (cautious if cardiac disease or elderly) STAT or up to over 15 minutes
- Always review the patient after and see the effect using A-E approach
- If no response give another bolus
- Get help if approaching 2000ml IVF- earlier if concerns or higher risk patient.
- If signs of shock- get help early

Hypovolaemia signs

- SBP <90-100
- HR >90bpm
- CRT >2seconds
- RR >20
- NEWS >5
- Passive leg raise positive to increase SBP

Fluid overload signs

- Breathless
- Increased RR
- Bilateral chest crepitations
- Bilateral pitting oedema
- Sacral oedema
- Pulmonary oedema on CXR

Be careful in more complex patients

- Elderly- greater risk of overload
- Cardiac patients with poor cardiac function
- Malnourished patients and risk of re-feeding
- Renal impairment
- Complex surgical patients with electrolyte losses

**** NOTE- COVID patients have a risk of ARDS and Fluid overload if too much fluid is given, and many of these patients will need to 'run dry'. Please ask for help and do not over prescribe fluids****

Gentamicin Prescribing

Author: Giovana Klefti
Peer reviewer: Hannah Preston, Felix Torrance

Check for contra-indications and cautions

- Absolute CI:
  - Hypersensitivity
  - Myasthenia Gravis
- Cautions
  - Impaired NMJ transmission and other conditions causing muscular weakness
  - Impaired renal function:
  - CKD 4; AKI in last 48h –Micro advice recommended
  - Use of other nephrotoxics (e.g. ACEi, NSAIDs)

Online dose calculator

- Search for gentamicin calculator on the Intranet
- If Intranet not available, you can find the calculator on Antimicrobial Companion app on your phone

Information you will need:

1. Age and gender
2. Weight and height
   a. if using Trak go under observation and measurements tab
   b. NHS Fife go to PATIENTRACK then under MUST tab
   c. if no measurements available ask nursing staff to record them prior to prescribing
   d. <40kg or >120kg: dose adjustment might be needed. Ask Pharmacy for advice.
3. Creatinine
   a. if impossible to check creatinine prior to prescribing, check with seniors first

Gentamicin prescription chart

- NHS Lothian Intranet: excel document contains both a dose calculator and a chart you can print out
- If there is no online chart, clarify with your ward where they keep printouts of gentamicin charts
- Prescribe gentamicin on <u>BOTH</u> on the prescription chart <u>AND</u> on the Kardex or HEPMA.
- On the prescription chart write the indication for gentamicin.
- On a paper Kardex, denote that a gentamicin chart is used on the front page under the 'Other charts' section. Prescribe gentamicin in the regular medication section and for dose write 'APC' (As per Chart). In the notes box, write the indication for gentamicin. Draw a review box around the dose due on day 3.
- Communicate to nursing staff when dose is due to avoid missed doses.

Gentamicin Level

- 6-14 hours after start of first dose or at 24 hours if poor creatinine clearance
- Handover to the person on the late shift if the level is due after the end of your shift. If due overnight, fill in a HAN request form for NHS Lothian and make sure it is handed over to the night team.

Dose adjustments

- Record gentamicin level on the chart
- Use the graph on the back of the gentamicin chart to plot the gentamicin concentration against the time that the sample was taken, after the first dose.
- The graph will indicate whether you should:
  - Continue at a 24hourly regime
  - Increase interval to a 48hourly regime
  - Withhold and resample after 24h if level is too high

Monitoring

- Daily U+Es to monitor for nephrotoxicity. If the renal function deteriorates, review ALL medication.
- If there is a big change in creatinine you may need to recalculate the dose
- Daily monitoring for ototoxicity e.g. dizziness, tinnitus, vertigo. Stop at earliest sign of toxicity and seek advice.
- Avoid use for >72h. If a prolonged course is required seek Micro advice.

Vancomycin Prescribing

Author: Giovana Klefti
Peer reviewers: Hannah Preston and Yoxin Chin

Check for contraindications and cautions

- Absolute CI:
  - Hypersensitivity
- Cautions:
  - Co-administration with nephrotoxics. Avoid use with gentamicin, NSAIDs or ACEi
  - Previous hearing loss due to risk of ototoxicity
  - Max infusion rate 500mg/h to avoid 'red man syndrome' and muscle spams

Online dose calculator

- Search for vancomycin calculator on Intranet
- If Intranet is not available, you can find the calculator on Antimicrobial Companion app on your phone:
- Information you will need:
  - Age and gender
  - Weight and height (see gentamicin prescribing above)
  - Creatinine
- Vancomycin loading dose is based on actual body weight alone and NOT on renal function, so you can still prescribe it if no creatinine is available. Then maintenance dose can be calculated once creatinine is known.

Vancomycin prescription chart

- NHS Lothian Intranet: excel document contains both a dose calculator and a chart you can print
- If no online chart, clarify with your ward where they keep printouts of vancomycin charts.

STEP 1: Loading dose

- Generated automatically on online calculator. Otherwise, follow the relevant table showing loading dose based on actual body weight
- Prescribe the loading dose as once off.
- If patient is on sodium restriction, then 5% glucose instead of saline could be used

STEP 2: Maintenance dose

- Prescribe maintenance dose at the calculated dose interval in the Regular medication section of the Kardex.

Vancomycin Level

- BEFORE the 3rd <u>maintenance</u> dose for 12 hourly regimes
- BEFORE the 2nd <u>maintenance</u> dose for 24 hourly regimes
- BEFORE the 1st <u>maintenance</u> dose for 48 hourly regimes
  - Draw a box around the maintenance dose prior to which a level is due and note on the Kardex that a trough level needs to be taken
  - Trough levels must be taken immediately **<u>before</u>** the dose is given

  - The prescribed dose is then **given** and the result of the level changes the next dose (ie in 12 or 24hrs)
- Handover vancomycin levels due after the end of your shift. If due overnight, then fill in a H@N request form (NHS Lothian) and ensure it is handed over to the night team.

Dose adjustment

- Target dose: 10-20mg/L
- Severe/deep-seated infection: 15-20mg/L (e.g. osteomyelitis, endocarditis)
- If not within the target range, then follow guidance and go up/down a dosing band as advised. Score off the current maintenance dose on the Kardex and re-prescribe the new dose. Do not forget to mark when a level is due.

Monitoring

- Daily U+Es. If deteriorating renal function, consider Micro advice

Warfarin Prescribing

Author: Giovana Klefti
Peer reviewer: Yoxin Chin, Jenny Houston

Relatively few patients are now on warfarin as most will be on DOACs. However, some patients cannot have NOACs for a variety of reasons and so you will still prescribe warfarin occasionally.

On admission

- Clarify with patient, check previous medical notes and check the 'yellow book'. If unclear, phone the patient's GP to provide you with the relevant information. What you need to know:
  - Indication and target INR
  - Normal warfarin dose taken and any special instructions (e.g. patient taking different dose on alternating days)
  - Recent INR readings
- Check patient's other medications for potential interaction. Be especially careful of recent antibiotic courses which usually cause INR derangement
- Check INR on admission and also check FBC (evidence of bleeding?) and LFTs

Prescribing Warfarin

Indication and target INR

Clarify why the patient is on warfarin and what is there target INR. For most patients, the INR target is 2.5 (indications: VTE prophylaxis/treatment and AF). Patients with recurrent VTE or mechanical valves will have a higher target.

Contraindications

Should the warfarin be withheld or reversed? Is the patient bleeding, do they have an elevated INR? Are they coagulopathic for another reason? Have they had an acute stroke? If you are unsure, check with a senior.

Warfarin prescription charts

- Warfarin should be prescribed BOTH on the normal Kardex and on a separate warfarin chart
- On the first page of the Kardex, write on the front page of the Kardex under the 'Other Charts' section that a warfarin chart is used. On the regular medication section, prescribe Warfarin for dose write 'APC' and write on the notes section the indication, target INR and duration of treatment.
- On the Warfarin Chart, make sure you also write the indication, target INR and treatment duration. If there are special instruction regarding administration write them down.
- For prescribing on HEPMA, you will still use the paper charts as above – but remember to prescribe warfarin "as per chart" on HEPMA too!

Prescribing warfarin dose

- If a patient's INR is in their target range, prescribe their usual dose. Be aware that these may vary depending on the day of the week.
- If they are out of range, clarify if they have been taking as usual. If they are slightly out of range, they may require an increase or decrease in their warfarin. Beware that there is usually a lag time of about 48 hours to see the effect of a change in dose.
- If a patient is below target, consider whether they need cover with LMWH. This is vital for patients with mechanical valves and VTE but may also be considered for other patients.

Initiating warfarin

This is a decision that will be made by someone more senior. You should initiate warfarin in line with local guidelines. There are two ways to initiate warfarin. Most commonly in hospital, you will use the rapid anticoagulation regime with the Fennerty Regimen. Remember that patients will still require LMWH cover until anticoagulation has been achieved.

In the community, a slower loading regime is typically used. This may be appropriate for a patient with atrial fibrillation. Again, see local guidelines and discuss with your seniors.

- It is good practice to note which loading regime is being used. This should also be documented in the notes.
- When starting warfarin, ensure that the patient is consulted and that a 'Yellow book' is provided. Depending on the department/workload, the ward pharmacist is involved in offering counselling. Also, make sure that decision to start warfarin is being communicated to the nursing staff.

INR Monitoring

- Where warfarin is being initiated, the guideline will advise you how frequently to check INR.
- Inpatients will often require more frequent INR monitoring than in the community due to changes in medication and diet. This would usually mean checking every 2-3 days initially if the patient is in range, and daily if out of range or on, eg clarithromycin. This is even more important for those with metallic valves.
- For stable inpatients, eg those receiving rehabilitation, you could then gradually reduce frequency of monitoring.

Reversing anticoagulation

Even if INR is supratherapeutic, patients may not require reversal of anticoagulation if asymptomatic. There are very clear guidelines available on the intranet of all Boards to keep you right.

Obviously, if a patient is bleeding, you may require to reverse warfarin, again, local guidelines will be clear on this. Be cautious if the patient has an underlying pro-thrombotic risk factor, eg has had a PE recently. Discuss this with a senior.

Med Reg Comment

If you are getting to the point that the guidelines are suggesting beriplex, please ensure you are having senior input to deal with the situation!

1. **Warfarin and Surgery**

Peri-operative warfarin management

Depending on the procedure, patients may continue on their warfarin, discontinue it prior to surgery or have it reversed. There should be a clear plan regarding this from pre-assessment clinic for elective patients, or the registrar or consultant for emergency patients. If you are unsure- check!

Post-op, when to restart will depend on the procedure and risk of bleeding vs risk of thrombosis- check with your team. This may be stated in the op note or anaesthetic note.

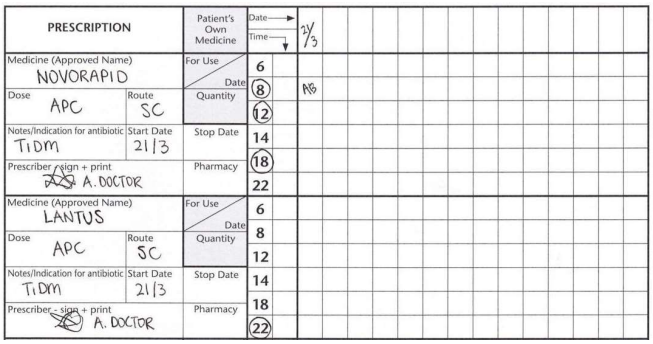
Insulin Prescribing

Author: Yoxin Chin

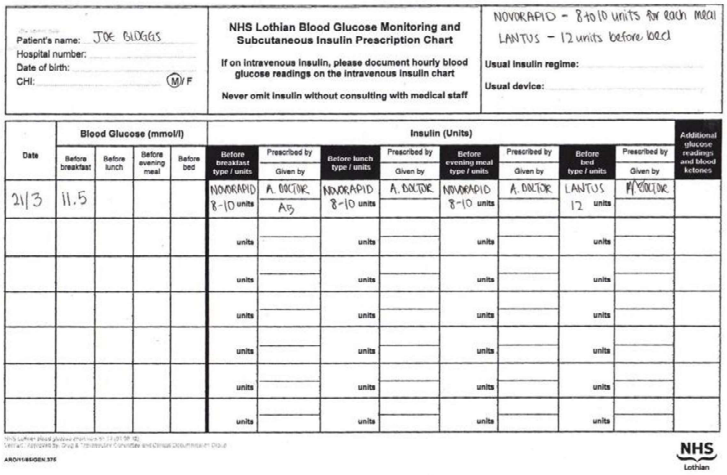
Peer reviewers: Marta Kedziora and Jenny Houston

Principles of Prescribing Insulin

- Always prescribe short acting insulin at mealtimes
- Depending on patient's regime, long acting insulin may be taken at any time
  - CHECK with patients as to what time they usually take their insulin
- Allow self-management of insulin if possible. So, in the insulin chart, it can be prescribed as a dose range or 'as per patient'.
- ALWAYS prescribe NAME of insulin, not just 'insulin' on both the kardex and insulin chart. Put 'APC' (as per chart), under the dose section in the kardex. Remember to note down the insulin chart in the 'Other Charts' section in front of the kardex.



PRESCRIPTION		Patient's Own Medicine	Date → / Time ↓	21/3
Medicine (Approved Name): NOVORAPID		For Use / Date	6	
Dose: APC	Route: SC	Quantity	8	NS
			12	
Notes/Indication for antibiotic: TiDM	Start Date: 21/3	Stop Date	14	
Prescriber - sign + print: A. DOCTOR		Pharmacy	18	
			22	
Medicine (Approved Name): LANTUS		For Use / Date	6	
Dose: APC	Route: SC	Quantity	8	
			12	
Notes/Indication for antibiotic: TiDM	Start Date: 21/3	Stop Date	14	
Prescriber - sign + print: A. DOCTOR		Pharmacy	18	
			22	



Patient's name: JOE GLOGGS
Hospital number:
Date of birth:
CHI: M/F

NHS Lothian Blood Glucose Monitoring and Subcutaneous Insulin Prescription Chart

If on intravenous insulin, please document hourly blood glucose readings on the intravenous insulin chart

Never omit insulin without consulting with medical staff

NOVORAPID - 8-10 units for each meal
LANTUS - 12 units before bed

Usual insulin regime:
Usual device:

Date	Blood Glucose (mmol/l): Before breakfast	Before lunch	Before evening meal	Before bed	Insulin (Units): Before breakfast type / units	Prescribed by / Given by	Before lunch type / units	Prescribed by / Given by	Before evening meal type / units	Prescribed by / Given by	Before bed type / units	Prescribed by / Given by	Additional glucose readings and blood ketones
21/3	11.5				NOVORAPID 8-10 units	A. DOCTOR / AB	NOVORAPID 8-10 units	A. DOCTOR	NOVORAPID 8-10 units	A. DOCTOR	LANTUS 12 units	A. DOCTOR	
					units		units		units		units		
					units		units		units		units		
					units		units		units		units		
					units		units		units		units		
					units		units		units		units		
					units		units		units		units		

NHS Lothian

- Be careful when prescribing insulin, as they can have very similar names.
  - E.g. Humulin S (short acting insulin before meals) vs. Humulin I (intermediate acting) vs Humulin M3 (fixed mixture)
  - E.g. Humalog vs. Humalog Mix 25 vs. Humalog Mix 50
- ***Always*** continue long acting insulin unless specifically advised not to be a senior (preferably from the diabetes team). It is safer to prescribe it than not.

Med Rec on Admission

- This is usually done on admission into hospital.
- Points to bear in mind:
  - Doses will NOT be found on the ECS. The units you see on the ECS is just the amount of insulin within a cartridge that is supplied to the patient.
  - Patients usually know the doses/dose range that they take. Ask them!
  - It can be helpful to cross check this against Trak documentation. Within Trak, go into 'correspondence (all)' and look for diabetes letters. This is especially helpful if they take 2 different types of insulin, or have a recent change in their regime, or are unable to provide the relevant information.

Insulin Alternative in Hospital

- Hospitals do not always carry all the different insulin brands. So, it is always really helpful to know what the alternative insulin prescriptions are.
- The document below can be found in some doctor's rooms, but also on edinburghdiabetes.com.

Hyperglycaemia

- Often at times you might be told by a nurse that a patient's blood glucose level (BGL or BM) is high. Do they require additional insulin?
- Firstly, find out if the patient is T1DM or insulin dependent T2DM
- T1DM:
  - If BGL is >14, ***always*** remember to check ketones. Have DKA in your mind!
  - If the patient is well with only a high BGL reading, check with the patient what they would do in this situation. Then consider a correction dose. The patient may know how many mmol one unit of insulin will bring them down by. Do not aim to bring them down to 6- aim for 10-14.
  - If there are any concerns, seek help. The patient may need to be started on an insulin sliding scale.
- Insulin dependent T2DM:
  - Avoid stat doses/starting sliding scale if possible.
  - If BGL is slightly high and asymptomatic, no action is required. Review the BM chart to see if regular insulin doses need to be increased.
  - If BGL is >20 or the patient is symptomatic/feeling unwell, assess the patient and escalate if necessary. Check ketones even in T2DM! Always have HHS (and DKA) in your mind.
- You can always ask nurses to increase the frequency of monitoring of BMs if there are any concerns
- If you are unsure, always seek help!

Adjusting Insulin Doses

- When to adjust insulin doses?
  - Increase insulin dose if blood glucose level PATTERN is consistently high
  - Reduce insulin dose if blood glucose level PATTERN is consistently low
  - In older and frailer patients, higher blood glucose levels can be tolerated.
- Which dose should be adjusted?

  - Twice daily fixed insulin mixture (e.g. Novomix 30 / Humulin M3 / Humalog Mix 25)
    - If glucose high / low before breakfast, increase / decrease EVENING insulin dose
    - If glucose high / low before evening meal, increase / decrease MORNING insulin dose
  - Basal-bolus regimen (e.g. Novorapid / Humalog and Insulatard / Levemir / Lantus)
    - If glucose high / low before breakfast, increase / decrease EVENING long-acting insulin
    - If glucose high / low before lunch, increase / decrease MORNING short-acting insulin
    - If glucose high / low before evening meal, increase / decrease LUNCHTIME short-acting insulin
    - If glucose high / low before bed, increase / decrease EVENING short-acting insulin
- How much to adjust insulin doses by?
  - Adjust doses by 10-20%
  - Reduce insulin dose everyday if required
  - But only increase dose every 2 days if readings are consistently high

When to call for help

- Insulin prescribing can be confusing at times, so don't be afraid to ask for help.
- During working hours, you can ask your seniors on the ward, or you can always phone the diabetes specialist nurse for advice.
- During out of hours, there should be a senior that you can always ask advice from. If not, always remember that you can phone the medical registrar.
- Remember, we all started from somewhere!

Other helpful guidelines

- There should be hypo boxes available in all the wards
- Edinburgh Centre for Endocrinology and Diabetes (Diabetes Protocols) including for HHS, Hypoglylcaemia and DKA.

Med Reg Comment

Try to avoid stat doses of short acting insulin where possible. If you do have to give one at bedtime, make sure the nurses are aware that they will need to check a BM overnight to ensure the patient is not becoming hypoglycaemic.

NHS Lothian

Clinical Guidance Document

In-patient Insulin Use and Supply

The majority of patients with diabetes are treated using a small number of insulin preparations. Patients admitted as emergencies to in-patient sites may not have their usual prescribed insulin on their person.

To facilitate safe insulin use, the following advice is provided:

- Patients bringing their own supply, and who are able to administer their own insulin, should do so.
- Patients who do not bring, or who cannot administer their own insulin, should receive ward stock alternative as follows:

Duration of action and time given	**Rapid** 10 -15 minutes before food	**Short** 15 - 30 minutes before food	**Intermediate** Same time every day	**Long** Same time every day	**Fixed Mixture** 15 - 30 minutes before food
Patient's usual insulin	Novorapid Apidra Fiasp Humalog	Actrapid Humulin S Insuman Rapid	Insulatard Humulin I Insuman Basal Levemir	Lantus Abasaglar Tresiba	Humulin M3 Humalog Mix 25 Humalog Mix 50 Novomix 30 Insuman Comb (15,25,50)
Ward stock alternative (10ml vial)	**Novorapid**	**Actrapid**	**Insulatard**	**Lantus**	**Humulin M3**

The appropriate ward stock insulin can be prescribed and substituted on a unit-for-unit basis (except Toujeo and Xultophy – see below) with the patients usual insulin, until this can be supplied or the patient can self administer their own insulin.

- **Toujeo:** can be changed to Lantus but the **dose should be reduced by 20%** to reduce the risk of hypoglycaemia, with close monitoring of blood glucose.
- **Xultophy:** administered as dose steps, e.g. one dose step will contain 1 unit of insulin Degludec and 0.036 mg of the GLP-1 Liraglutide. Patients on Xultophy can be prescribed Lantus on a one dose step to one unit basis.
- **Humalog 200 units/ml:** can be changed unit for unit to Novorapid.
- **Non-human insulin preparations**: acceptable to receive a dose of the human equivalent insulin with close monitoring of blood glucose. However, the patient should get their normal non-human insulin preparation prescribed as soon as available.

Points to remember:

- **Insulin must be prescribed by BRAND name.**
- **If patients require a supply of their own insulin, order on an Individualised Patient Supply Form (IPS) from Pharmacy; this should be sent home with the patient on discharge. Until available follow above guidelines.**
- **There is NO need to write 'UNITS' after the dose on the insulin prescribing chart. NEVER use the abbreviation 'U' or 'IU'.**
- **Before opening all insulin preparations should be stored in the fridge. Once open they are stable at normal room temperature. All insulin vials/pens should be marked with the date of first use and disposed of 4 weeks after opening.**
- **Under no circumstances should insulin be administered by nursing staff or district nurses via a pen device.**
- **Under no circumstances should insulin be drawn up into a syringe from an insulin cartridge.**
- **Please note at time of document review – Fiasp, Humalog 200units/ml, Tresiba, Toujeo and Xultophy are non-formulary and therefore not stocked by pharmacy.**
- **PLEASE REMEMBER TO DISCHARGE THE PATIENT ON THEIR USUAL INSULIN IF THEY HAVE BEEN GIVEN A TEMPORARY ALTERNATIVE DURING THEIR IN-PATIENT STAY.**

Adapted with kind permission from NHS Fife.
Authors: MR/JB/GF
Approved by: NHS Lothian Drug and Therapeutics Committee, Sept 2017
Minimum review date after approval: Sept 2019

Analgesia

Author: Angus Wallace
Peer Reviewers: Jenny Houston and Fazila Rasul

Pain reviews are one of the most common things you will need to do as an FY1, and they can seem quite a daunting task. However, it is generally straightforward: the WHO analgesic ladder is a useful tool. However, sometimes it may be more complex if patients have pre-existing pain or comorbidities which preclude use of some medications.

New patients in acute pain

These patients might be in severe pain, particularly if they haven't had access to any analgesia or haven't had any whilst sitting in A&E. This may lead to patients jumping a few rungs on the analgesic ladder and often A&E will prescribe IV morphine as a first line stat dose of analgesia.

You won't often be asked to do that as an FY1, however getting on top of severe pain is important. Starting people on paracetamol along with a weak opioid with a breakthrough shorter acting opioid is often acceptable for young patients without co-morbidities. This is very much a judgement call and until you have more experience, starting low and titrating up is often the safest way to go.

For older patients and patients with renal impairment, be even more cautious and check if your department has a protocol for the management of acute pain.

Complex pain patients

Managing complex pain can be challenging. Patients have often tried multiple painkillers prior to the ones they are on, and will therefore have thoughts and feelings on what will work for them. Or, patients may have chronic pain (normally managed well) but have an acute episode on top of this pain, therefore it is important to discuss your plan with patients so that you are both on the same page.

A few tips to deal with these patients:

- **Read the notes**: particularly any pain team notes as these often can tell you what has been tried before, if there is any scope for increasing analgesia or if patients should continue on their current analgesia. They often also leave a note of who to escalate to if required.
- **Talk to the patient:** They may know their usual regimen. Be sure to correlate this with your own clinical acumen and don't prescribe things you are not comfortable with. For instance, if there are clear plans laid out in the notes or if you don’t think that increasing their analgesia is appropriate - for instance, if they have just had a recent increase. Most patients are understanding if you explain to them your reasoning behind your decision. Make sure you document these conversations fully as they can be very useful to the pain team when deciding if they are going to adjust analgesia further.
- **Talk to the nurses:** They will often have been looking after the patient and able to tell you how much analgesia they have been using, if they have been asking for more, how they are managing to mobilise on the ward or if pain is limiting their abilities. This is also very important for older patients who may not express pain.

- **Look at the PRN:** Understanding how much breakthrough pain relief a patient has been using will give you a good idea of how much to increase their regular medication by.

Common tools in your arsenal

- **Paracetamol:** Almost everyone in pain is prescribed this. Check the dosage based on weight.
- **Ibuprofen:** NSAIDs are generally well tolerated by younger people, but should be avoided in renal impairment, ischemic heart disease and stroke. Be very cautious in older patients - NSAIDs are generally to be avoided. Always try to encourage it to be taken with food.
- **Codeine or dihydrocodeine:** Either can be used as PRN analgesia or regular medication. Try to pick one of these, not both!
- **Oramorph:** Commonly used as breakthrough analgaesia
- **Subcut morphine:** Usually used when no oral route available or the patient is vomiting acutely

For a frailer patient in acute pain, consider regular paracetamol as your first line, followed by regular short acting oxycodone at a low dose (e.g. oxycodone IR 2mg QDS), with breakthrough oxycodone on top.

Oxycodone is generally perceived to be associated with fewer side effects and a lower risk of delirium than morphine in this group.

Med Reg Comment

Whenever you prescribe opiates, especially regular opiates, please prescribe a laxative too. Macrogol and senna will help keep bowels moving and make the patient more comfortable.

Remember to review how much PRN medication a patient is requiring and convert to long-acting alternatives where this is appropriate.

Things that you will be asked to prescribe or change by seniors:

- Longer term analgesia such as MST or MR oxycodone (remember oxycodone and morphine are not equivalent – palliative care guidelines on the intranet have a very handy table to convert between opioids). As a rough rule of thumb, any form of oxycodone is about twice as potent as the same form of morphine.
- PCA's - most of this is done by nursing staff from a separate prescription chart.
- In most hospitals there is a pain team that can provide advice for complex pain issues (acute or chronic) that cannot be managed by the ward team.
- Syringe pumps in palliative care - palliative care on call are always available and very friendly if you feel out of your depth (in fact, your own registrar might be able too)

Drug (what you should prescribe)	Brand Names (avoid prescribing these)	Notes
Morphine sulfate	Oral: Oramorph, Sevredol IV/SC: None	Start low and go slow. You can always give a bit more! Give oral route time to work
Morphine sulfate modified release	Oral: MST, Zomorph Other routes not possible	Usually BD dosing every 12hrs 5mg increments available
Oxycodone immediate release	Oral: Shortec, Oxynorm IV/SC: No brands	Double the strength of morphine
Oxycodone modified release	Oral: Longtec, OxyContin, OxyPro Other routes not possible	

Takeaway points

- Start low and titrate up
- If you're not sure, ask for advice: talk to colleagues and make use of all sources of information
- Discuss your decisions with the patient and try and explain to them why you have chosen this course of action.

Prescribing laxatives, antiemetics and creams

Author: Mathew Lyons
Peer Reviewers: Giovana Klefti and Daniel Lynch

This section is about common prescribing requests that you are asked about regularly as an FY1 but don't really learn much about as a medical student. It will cover anti-emetics and laxatives and briefly cover emollients.

Anti-emetics

Common requests

- You are asked to prescribe an antiemetic for a patient feeling nauseated
- You are asked to see a patient with a bowel obstruction who is vomiting

Consider what is causing the nausea/vomiting

- Generally unwell (e.g. viral illness) – likely gastric emptying/slow GI transit
- Bowel obstruction – mechanical
  - Signs include vomiting, abdo distension, tinkling bowel sounds, not passing flatus
  - NG tube essential for relief, but cyclizine also useful
- Drugs/hormones/toxins– either central or side effect (e.g. morphine)
- Higher neurological centres (vertigo, smell) – central

Antiemetics to consider (always treat cause)

Cyclizine 50mg TDS oral/IV/IM/subcut

- Centrally acting, good for central causes.
- Some antimuscarinic action leading to side effect profile
  - Dry mouth, retention, vision, confusion, rarely hypotension
- Beware the "high" from IV bolus - often given as slow infusion

Metoclopramide 10mg TDS oral/IV/IM/subcut;Domperidone 10mg TDS oral

- Dopamine antagonists
- Caution in young people (esp women <30) and Parkinson's
- Metoclopramide has some GI tract motility action – caution in obstruction
- Caution in ↑QTc
- Domperidone does not cross BBB leading to less central side effects
- Avoid co-prescribing with cyclizine due to antagonistic effects

Ondansetron 4-16mg approx BD oral/IV/IM

- Licensed only for post-op and chemotherapy N+V
- $5HT_3$ receptor blocker centrally and in gut
- Expensive
- Caution in ↑QTc
- Side effects include headache, constipation, flushing

Prochlorperazine/Chlorpromazine/Haloperidol dose as per BNF

- More specialist use
- Good for vertigo
- SE include: sedation, extrapyramidal side effects, dystonic reactions

Levomepromazine 2.5mg BD oral/subcut

- Typically palliative use
- Sedating/anxiolytic effects useful at end of life

Dexamethasone 8-16mg daily oral/IV/subcut

- Weak anti-emetic but adjunct with $5HT_3$ and dopamine blockade
- Mainly specialist use (ask a senior)
- Helpful in bad post-op and chemo nausea

Laxatives

Common requests

- Not moved bowels in 3 days – could you write something up?
- Massive faecal loading on CT in ascending and transverse colon
- Faecal impaction causing urinary retention

Laxatives to consider

Macrogol 3350 = Laxido = Movicol, 1-2 sachets BD (can have more e.g. for bowel prep)

- Mainly osmotic – draws water into stool
- Some gut motility/stimulation effects
- Need good fluid intake – it is osmotic. If not drinking well, will not work and will dehydrate!
- Could take up to 3 days to have effect

Lactulose 15mL 1-2x per day

- Mainly osmotic – as above need good fluid intake, can take a few days
- Some breakdown products in colon cause stimulation (+flatulence)
- Only 15mL dose, some find it easier than drinking a large glass of macrogol
- Also has important uses in liver cirrhosis and hepatic encephalopathy

Senna 7.5-15mg nocte / Bisacodyl 5-10mg nocte

- Stimulant - encourages colonic peristalsis
- Taken at night (prescribe at 10pm), effect takes number of hours, bowels open in morning
- Tolerance develops, should not be on long term
- Useful in conjunction with osmotic

Docusate approx 100mg once/twice per day

- Stool softener - useful when wish to avoid straining on toilet
- Not a laxative for someone constipated

Ispaghula Husk = Fybogel – not a laxative, 1-2 sachets once a day

- Bulk forming - encourages motility and regular bowel motion to prevent constipation

Glycerine supps/ Bisacodyl supps 1-2 supps

- Useful for impaction asonly have effect if stool in rectum (i.e. on PR)
- Stimulant and hyperosmotic (glycerine) effect
- Immediate effect

Phosphate/Arachis oil enema – do not use arachis oil in nut allergy

- Useful for impaction as only have effect if stool in rectum (i.e. on PR)
- Stimulant and hyperosmotic effect
- Immediate effect
- Messy!!

Top Tips

- Think about mechanism of action of drug and what you want to achieve
- Don't be shy with macrogol. If constipated give 2 sachets BD!! You can give up to 8 sachets a day.
- If expecting impaction on PR, bring supps/enema with you to give at time of PR exam

Creams

Dermabase

- Ointment based, non-greasy emollient

Diprobase, Doublebase and Zerobase

- Thick, paraffin based, greasy emollients

Dermol

- Moisturiser
- Can be used as a soap substitute
- The 500 in "Dermol 500" just means 500mL!!

Dermacool

- Menthol aqueous cream
- Cooling sensation from menthol
- Good for itch

E45

- Non greasy, easily absorbed moisturiser

50:50

- Mixed 50% liquid paraffin, 50% yellow soft paraffin
  - Basically, half Vaseline, half diprobase

Yellow soft paraffin

- Generic for Vaseline
- Cannot be used for dry mouth/nose in someone on oxygen – risk of irritation/ulceration

Top Tips

- Ask the nurses what they have in stock on the ward
- If you need long lasting moisturising, use something paraffin based (it will be greasy)

Overall common prescriptions

- Laxatives for constipation: Senna at night and BD macrogol
- Laxatives for impaction on PR: Glycerol supps or phosphate enema plus macrogol
- Antiemetic for general nausea with intercurrent illness: Metoclopramide or cyclizine
- Antiemetic for bowel obstruction: Cyclizine
- Antiemetic post-op: Ondansetron
- Dry skin: Dermabase, E45, Dermol – i.e. ointment based
- Resistant dry skin, especially varicose eczema: Something paraffin based

Blood products

Author: Mohammad Abul

Peer reviewers: Marta Kedziora and Felix Torrance

Blood transfusion is the transfer of blood, or blood components, from one person (the donor) into the bloodstream of another (the recipient). It relies on blood donation and involves risks to any recipient. Blood transfusions should therefore only occur when clinically necessary. This is a rough guide to blood transfusion.

Please do consult your local Trust's protocols, including the Major Haemorrhage protocol.

Note: An FY1 should never decide to transfuse on their own. You should **always consult a senior**.

Blood products

Product	When to transfuse	Target	Notes
Packed red cells	Hb level of 70g/L or below	Hb level of 70-90g/L	Generally, 1 unit of packed red cells increases Hb levels by 10g/L Consider 1 unit of packed red cells for anaemic adults who have no active bleeding Re-check Hb levels and clinically assess following each single-unit transfusion Transfusion must start within 30 mins of delivery of red cells.
	Hb level of 80g/L or below in patients with ACS	Hb level of 80-100g/L	
	Individuals with chronic anaemia - individual thresholds set	Individualised	
Platelets	Patients with a platelet count below $10X10^9$ per litre and do NOT have chronic bone marrow failure, autoimmune thrombocytopaenia, heparin-induced thrombocytopaenia, TTP	Individualised	Platelet transfusions almost always need to be discussed with haematology first. Do not routinely transfuse more than a single dose of platelets

FFP	Used to correct abnormal coagulation	Used in specialist guidance such as some Major Haemorrhages	Should not be used in patients who are not bleeding, and patients who need the reversal of a vitamin K antagonist e.g. Warfarin
Cryoprecipitate	Specialist guided		
Prothrombin complex			

Remember to consider why you are transfusing a patient. If unsure, consult your senior and nursing staff.
Do NOT prescribe blindly!

Preparing for blood transfusions

Patient identification	You must ensure you have identified the correct patient by: Asking their full name + DoB Check against their hospital wrist band Ensure correct patient, their wrist band, and CHI numbers on your bottles + forms match	
Check reasons for transfusion. Check Hb levels. Ask about symptoms.		
Consent	Explain to patient +/- family members: Reason for transfusion Risks e.g. small risks of infection, allergic reactions etc. Benefits The process of transfusion Alternatives That they are no longer able to donate blood It is important to let staff know if they feel anything is amiss Provide transfusion leaflet	
Ensure patient has cannula sited (ideally pink or bigger)		
Both G&S + Cross Match needed for Transfusion	**Bottles** Usually need two samples **Must** be taken at two separate points in time if patient has not had a previous sample.	**Forms** Fill in patient's details, amount of product needed and any special requirements e.g. CMV -ve, irradiated

Group & Save	A sample for labs to use in determining a patient's blood type + antibody screen.	Both require a bottle sent to BTS. Bottles must be hand-written. Any mistakes mean the sample will be rejected. Ask someone to help you double check both bottles against patient + form!	Group and save will notify lab patient will need blood.
Cross Match	A sample used to verify the group & save sample. A cross match means blood will be prepared for the patient. You must specify the amount of product, in units, you will need.		Cross match will notify lab to prepare blood + send it for the time requested on the form.
+/- phone BTS/local blood bank to order/confirm order			
Prescribe blood products			
Document reason for transfusion + patient consent			

Transfusion Processes

Following prescription and cross matching +/- phoning the blood bank, products will be transported to the ward. Nursing staff will usually perform pre-transfusion checks.

Product	**Packed red cells**	**Platelets**
Transfusion times	Typically 2-3 hours May be transfused faster - seek senior guidance	30-60 mins

Monitor vital signs + patients' condition before, during, and after transfusion. Each hospital/health board has its local policy. Following transfusion, repeat blood tests to monitor progress.

Transfusion Reactions

Local hospital/Trust guidance varies.

If you suspect a transfusion reaction, always stop the transfusion; double-check the correct blood is up for the correct patient; and remember ABCDE.

Top Tip

If a patient needs a transfusion, ring the lab to see if they have a valid sample on file. They will tell you how many samples you need to send. Remember, each sample **must** be taken separately.

A skeleton algorithm for assessing/treating transfusion reactions.

Acute transfusion reactions (ATR)

NHS
East of England Regional Tranfusion Committee

Safe transfusion practice – **Be careful, be vigilant**

All patients who have a blood component transfusion are at risk of an ATR

- Patients receiving a transfusion must be in a clinical area monitored by trained staff competent to manage transfusion and ATR
- **Check** 'Right patient, right blood'. **Confirm** patient identity with patient, **check** patient ID band **check** component compatibility label

Inspect: **Examine** component bag for abnormal appearance (clumps, particles or discolouration). **Check** IV cannula site for infection

Monitor: **Measure** patient's vital signs before transfusion, during transfusion and after transfusion

Inform: **Ask** patient to report any new symptoms or signs during transfusion and within **24 hours** of transfusion

Signs and symptoms of ATR

- Fever, chills, rigors
- Hypotension
- Pain
- Myalgia
- Hypoxia
- Signs of analphylaxis
- Nausea
- Acute bleeding from mouth, rectum, bladder, wounds
- Severe anxiety or sense of impending doom
- Mouth or throat tingling or swelling (angioedema)
- Breathlessness or noisy breathing (stridor or wheeze)
- Skin rashes or itch

Management

Stop transfusion immediately • ABC • Oxygen • Get medical help urgently

If symptoms of	Suspect	Treat	Investigate
• Wheeze • Hypotension • Swelling • Collapse • Pain	Anaphylaxis	Anaphylaxis pathway Give intramuscular adrenaline **Consider** Chlorpheniramine • Hydrocortisone • Salbutamol	• FBC, U&E, LFT, coagulation screen • First urine sample (haemoglobin) • Repeat blood group screen and save • IgA level (EDTA) • Serial mast cell tryptase at time 0, 3h, 24h (plain tube) • Blood cultures (if sepsis suspected) • Consider CXR if breathlessness present • Discuss with consultant haemotologist as required
• Fever • Anxiety • Rigors • Pain • Tachycardia • Breathlessness • Hypotension	ABO incompatibility or sepsis (infection)	IV saline Sepsis pathway (if sepsis) IV broad spectrum antibiotics (if sepsis)	
• Acute breathlessness • Hypoxia	TACO or TRALI	Furosemide (if TACO)	

• Report reactions to laboratory according to hospital policy • Return component and giving set to laboratory if required • Complete report/incident form

"Doctor could you please…"

Falls Review

Author: Hannah McManus
Peer reviewers: Lei Hua and Agnieszka Janas

Getting asked to review a patient who has had a fall can lead you to the bedside of almost anyone in the hospital; from the 95 year old man with dementia who mounted the bedrails to escape confinement and tumbled onto the floor, to the 30 year old woman who tripped over her dressing gown cord and only hurt her pride. Not to mention the fits, faints and funny turns!

A good place to start when you are called to review a patient who has had a fall is to try to work out why the patient is in hospital and roughly what their current issues are. This might sound obvious, but it's easily missed, and can really help to guide your history and examination.

History

The phrase 'mechanical fall' is generally disliked, so best to avoid this and try to get to the bottom of why the fall has happened in terms of intrinsic and extrinsic risk factors.

Key things to cover

- Before the fall
  - How were they feeling? Did they feel pre-syncopal? Did their legs go weak? Did they feel generally unwell?
  - Preceding symptoms e.g. chest pain, dyspnoea, palpitations
- During the fall
  - Why do they think they fell?
  - Do they remember the fall?
  - Did they lose consciousness?
  - What did they fall on to, did their head take any impact?
  - Any signs of a seizure? Tongue biting or incontinence?
- After the fall
  - Did they injure themselves?
  - Did they get up on their own or did they need help?
  - Did they seem post-ictal afterwards?
  - Any signs of head injury e.g. headache, confusion, nausea or vomiting
- **Collateral history!**
  - Probably the most important bit, especially in your elderly, delirious patient who doesn't actually remember falling at all! Other patients in the bay may even be able to help a bit here.

Examination (/ttt – a very useful falls proforma on Trak in Lothian)

- Observations, including lying and standing BP
- General examination covering cardio, respiratory and abdominal systems
- Basic neuro exam which can be expanded as necessary depending on the situation

  - Document their GCS and ensure neuro obs are completed by nursing staff as per local falls policy if concerned about head injury, and if their baseline GCS is known ensure that is documented!
- Top to toe examination looking for evidence of injury
  - Look especially carefully on the head for evidence of cuts/bruising or lumps which might be suggestive of head injury
  - Palpate over hips for evidence of pain and inspect for deformity e.g. shortened and externally rotated

Anything else?

- Review their Kardex
  - Did they have any medication immediately prior to falling which could have triggered the event?
    - Antihypertensives
    - Diabetic medications
    - Sedatives like benzo's, Z drugs, opiates
  - Are they anticoagulated?
    - Helpful to evaluate their risk and whether a CT head might be required
- Get a blood glucose to make sure you're not missing something obvious!
- Review their bed space, are there any extrinsic risk factors here?
  - Is the bedside cluttered and are there any obvious trip or slip hazards?
  - Is the patient wearing their glasses? (if needed)
  - Is the patient wearing grippy footwear or socks?
  - Are the bedrails down when they should be up?
  - Is the area well lit?

Further investigations?

The need for any of these would be completely dependent on the situation and the assessment you have made up to this point. Some people might need quite a thorough work up whilst others may need nothing at all.

Bloods	Blood sugar Hb Inflammatory markers Delirium bloods if concerned about confusion INR/coag
ECG	Possible cardiac cause
Neuro obs	Done by nursing staff to monitor if head injury or possible head injury
Imaging	X-rays of any injured bones CT head if meeting NICE criteria - https://www.nice.org.uk/guidance/cg176/resources/imaging-algorithm-pdf-498950893
Lying and standing bloods pressures	Also known as an "active stand" in some health boards.

Anything else?

- If they are anticoagulated, does their anticoagulant need to be withheld?
- Can any other medications be withheld, dose reduced or stopped?
  - Is the patient an ongoing falls risk who might require 1:1 supervision?
    - This can be quite difficult to manage, particularly overnight when staff are often short and might struggle to accommodate this, so other measures such as moving them to a bed easily monitored from the nursing station might be an acceptable interim measure
- Do you need to phone for help or advice?
  - This is often a sensible thing to do, especially if the patient has sustained a head injury, and discussion with a senior often highlights something that you haven't thought to check. Furthermore, this might be an appropriate time to think about DNACPR/escalation planning. Never be afraid to pick up the phone!

Lastly, check that a DATIX has been completed for the incident (this is usually completed by the nursing staff) and that someone has informed the next of kin.

Capacity assessments

Author: Eilidh Clark
Peer reviewer: Lei Hua, Kate Eldred

It is unlikely you'll make it through FY1 without being asked to assess a patient's capacity in some form or another. This section will cover:

- Deciding whether a patient needs an AWI
- Assessing a patient's capacity for discharge planning
- Dealing with a patient who wants to self-discharge against medical advice

Deciding whether a patient needs an AWI

If you did not study in Scotland, it's important to first understand a little bit about Scottish law surrounding capacity as it differs slightly from elsewhere in the UK.

- In Scotland, all adults (>16yrs) are presumed to have the capacity to make decisions about their medical care.
- The Adults with Incapacity (AWI) act defines incapacity as when an adult is incapable of:
  - **Acting** on decisions; or
  - **Making** decisions; or
  - **Communicating** decisions; or
  - **Understanding** decisions; or
  - **Retaining** the memory of decisions
- Incapacity can be due to mental disorder (including delirium/dementia) or inability to communicate because of physical disability. It can be temporary or permanent.
- Capacity relates to a **specific decision** and is not "all or nothing". It is possible for an adult to retain capacity to make decisions about some aspects of their care, but not others.

Basically, if a patient is deemed to lack capacity, an AWI form should be completed with an annex 5 which highlights what specific interventions this patient does or does not have capacity to consent to. FY1s are **NOT** allowed to sign these (similar to Emergency Detention Certificates and DNACPRs).

When conducting a capacity assessment, it is always important to think about what question you are actually asking, in order to ensure it is "decision-specific". However, in the context of AWIs for inpatients, you will need to consider whether the patient has capacity to consent to basic nursing care, medications, procedures or sedation. While many patients may lack capacity for all of these things, there should not be a blanket presumption that as they lack capacity to engage in discharge planning that they are unable to consent to basic nursing care or vice versa.

Things to consider to help you form an impression:

- Orientation to time/place/person (you can also ask them to do months of the year backwards to test attention)
- Do they know why they are in hospital?
- Do they understand their diagnosis/treatment so far?

- If they do not know what has been happening remember they may have been delirious on admission - explain in basic terms what has happened so far and see if the patient retains this by the end of the conversation.

Always make sure to document your discussion and impression, even if you are unable to come to a conclusion! Noting down why you are unsure is in itself helpful, and it's always ok to ask a senior for a 2nd opinion.

Assessing a patient's capacity for discharge planning

With regards to more complex capacity assessments, discharge planning is probably the commonest question asked, usually in the context of an elderly patient who does not want to go to a care home. In these cases, it is important you are familiar with the patient's case so that you can challenge the patient appropriately. Read the entries from PT/OT - these can be extremely helpful in spelling out exactly why the patient has been deemed unsafe at home. You can then use this information to test if the patient understands the issues and is willing to accept the risks.

Med Reg Comment

As an FY1, you should not be making the final decision about whether a patient has capacity for discharge planning. Senior members of your team should be involved, though you should of course participate in the assessment.

Again, actually conducting your capacity assessment is usually done in the form of an informal chat with the patient, but with more complex or important decisions such as discharge planning, it is vital that you document this in a coherent way. If you are working in Lothian, there is a very useful Trak proforma to help you: **\capacity**.

Dealing with a patient who wants to self-discharge against medical advice

The first time you get asked to speak to a patient who is asking to self-discharge is always very daunting! It is best practice to take a nurse involved in the case with you as often they troubleshoot issues too. The basic principles remain the same as above.

- Make sure you are familiar with the patient's case, so **you** understand the risks if the patient was to self-discharge. There is no point in challenging them if you yourself do not know why they have to stay in hospital!
- Assess the patient's understanding of their own condition and treatment.
- Ask why they want to leave! If they are just frustrated because they haven't had a cigarette in 3 days, letting them go downstairs with a nurse escort or prescribing them a nicotine patch may be enough to diffuse the situation. If they are worried about a family member, try and get hold of them on the phone. It is amazing how much can be resolved by just understanding the patient's agenda and working in line with it.
- If you cannot persuade a patient to stay, at this point you should be seeking the support of a doctor FY2+ to review the patient to help to plan a safe discharge where this is at all possible.

- If the patient is firm that they want to go home, a helpful question can be "Why would I be worried about you if you were to leave?" This allows you to assess whether they understand the risks and are willing to take them.
- **If a patient has the capacity to self-discharge, they should be supplied with medications and follow up as any other patient would be to ensure their safety. This includes antibiotics. Out of hours, it may not be possible to supply them with all of their usual medications, however, patients should be made aware of where they can receive these from. Patients should also be made aware of any appointments they need to make with their GP etc. Pragmatic decisions may need to be made about the appropriate supply of analgaesia. Essential medications such as insulin should be supplied if at all possible.**
- A patient does, however, have the option to choose to leave before their medications are ready. In this case, you cannot really do very much about it.
- **All patients who self-discharge should have a discharge letter completed. They are at high risk of representing and the next team and GP will need to know what has happened.**
- If you deem the patient to **lack** capacity, even if they have an AWI you cannot legally keep them in hospital against their will. To do this, the patient must be detained, either under an Emergency Detention by an FY2 or above (which means the patient is detained for 72 hours), or if time permits, have the Liaison Psychiatry team assess them with a Mental Health Officer (MHO) for a Short Term Detention (STDC - 4 weeks and this gives the patient more rights and the authority to treat under this section). As an FY1, **you do not have the power to detain a patient**, so if you are in this situation it is important to seek senior support early +/- security if appropriate.

Balancing your Electrolytes

Author: Phillip Holt
Peer reviewers: Marta Kedziora and Heather Fuller

Electrolyte balance, along with IV fluids, are quite possibly the most frequent tasks an FY1 doctor will have to deal with on a daily basis. Some more than other departments – in General Medicine, you are likely to deal with all of the following, but in the likes of Urology, hyperkalaemia is very frequent. There are various guidelines available throughout the BNF andthe Intranet, and there are also various protocols available on the *Edinburgh Diabetes* website.

Calcium

Hypercalcaemia

Oncology patients are most at risk of hypercalcaemia – particularly if they have bone metastasis or myeloma. Symptoms include polydipsia, polyuria, confusion, constipation, anorexia, muscle weakness, shortened QT and dysrhythmias. **Check serum calcium + serum albumin**.

Decision for management is based on *corrected serum calcium levels.*

Initial management will be with IV fluids - use 0.9% normal saline. Once the patient is rehydrated, then you may be advised to give a bisphosphonate. It is generally worth checking U+Es and calcium on a daily basis while you are in the process of correcting calcium. Check local guidelines for advice on choice of bisphosphonate.

Hypocalcaemia

5 common causes:

- Failure to correct for low albumin
- Hypoparathyroidisim, surgical
- Renal failure
- Vitamin D deficiency
- Hypomagnesaemia

See local guidelines for replacement. Generally mild hypocalcaemia will be replaced orally (sandocal, adcal, calcit or calcichew) while more severe or symptomatic patients may require IV replacement with calcium gluconate. Note that IV replacement generally needs to be given with cardiac monitoring in situ.

Magnesium

Hypomagnesaemia

- Can occur due to dietary reasons (malnutrition), diarrhoea, some medications, having part of their small intestine removed, or inherited kidney issues
- Often asymptomatic but may cause muscle weakness, tremors, seizures and irregular heart rhythms
- See local guidelines for the specifics of what to do.

- Oral replacement options include magnesium aspartate and magnesium glycerophosphate. Both of these give rise to diarrhoea and different teams will prefer one over the other. There is local variation in the dosing of IV replacement.

Phosphate

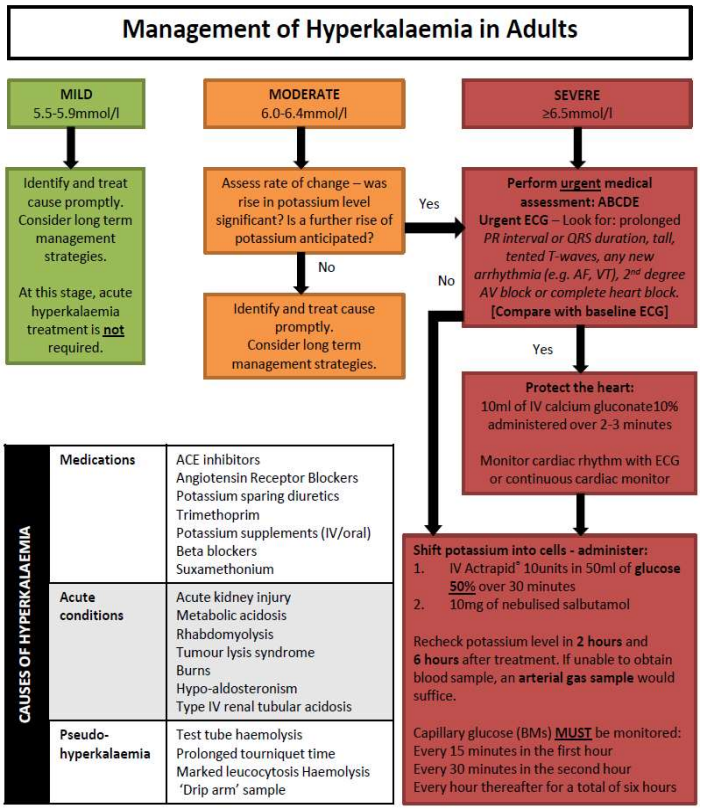
Hypophosphataemia

- You will most commonly come across this in a malnourished patient. It is generally asymptomatic.
- For mild cases, oral replacement will be with Sando Phos
- In more severe cases, you will require an IV polyfusor - this is generally a low dose given very slowly. Again, practice varies across the region so check local guidelines.

Potassium

Hyperkalaemia

Hyperkalaemia is quite common on medical and surgical wards. Generally, a result below 5.9 is not concerning, but you should consider what may be causing the hyperkalaemia (as below) [NB this can commonly occur with patients on Trimethoprim]. For moderate hyperkalaemia, look at the clinical picture. If you think it is likely to increase or the patient has ECG changes, then don't be afraid to commence treatment. If a patient has had continuous hyperkalaemia with renal impairment, it is not unheard of to start Salbutamol nebs regular instead of stat doses. Repeat U+Es and monitor BMs.



Hypokalaemia

Much like hyperkalaemia, hypo- can cause arrhythmias and should be corrected. This may be caused by poor nutrition, gastric losses or potassium-wasting diuretics.

Med Reg Comment

If a patient is hypokalaemic without clear cause, or if K not correcting with replacement,check their magnesium - if it's low, you'll need to replace it first. It may also be worth checking a venous bicarb.

For mild cases, Sando K (2 tabs TDS for 3 days) should be sufficient. Ensure you put a stop date or review date on the prescription. For cases where the patient cannot tolerate it or has ongoing losses, IV replacement will be necessary. This is generally in the form of 40mmol KCL in 1L 0.9% saline.

NB: IV potassium cannot be given at a rate quicker than 10mmol/hour!

Sodium

As an FY1 you are not likely to be deciding on treatments for anything above mild hyponatraemia. Usually this would be cases of diarrhoea/vomiting where there is a combined water, sodium and potassium deficit. You could give **0.9% Saline + 40mmol K+** at an appropriate rate.

As a rule of thumb, we try not to correct anything too rapidly. We always want changes of less than 10mmol/L per day so as not to cause problematic fluid shifts & demyelination of cerebral neurons.

You may, however, be involved in the investigations of hyponatraemia – this is nuanced, and the availability of tests varies across the region. It is probably best learnt about through discussion with senior team members.

Hypernatraemia

Serum sodium > 146 mmol/L generally reflects dehydration, though in rare cases may reflect something such as diabetes insipidus. Usually diagnosed incidentally, also check other clinical indices, such as, renal failure, hyperglycaemia and hypercalcaemia.

- Mild cases – replace missing body water with **oral water** (not electrolytes) or **glucose 5% IV**
- Severe (>170 mmol/L) – give **5% glucose IV*** unless the patient is volume depleted & hypotensive – then give **0.9% saline IV**. It is important that the rate of reduction does not exceed 10mmol/L per day
- *If a diabetic then monitor BMs

Concluding remarks

Although electrolyte balancing can be daunting in the beginning, do not panic and consult a senior when in doubt. Also, a lot of the day to day sodium and potassium management can be corrected with daily fluid replacement. Good luck!

Reviewing a sick patient

Author: Lei Hua and Sarah Douglas
Peer Reviewers: Kate Eldred and Eilidh Clark

Introduction

As an FY1 on the ward you will often be the first doctor to see an acutely unwell inpatient. It is worth brushing up on the recognition and initial management of common acute presentations, however, know that you will not be expected to manage these alone without senior advice/input! Some tips:

- Familiarise yourself with the charts used in your hospital – Fife uses the FEWS score which differs in several parameters to the NEWS score.
- Don't panic and ALWAYS A-E!
- The 'Structured Response Tool' is a useful aid to help gather your thoughts.

Airway

Check

- Look and listen for any airway obstruction. Is the patient talking?

Potential interventions

- Suction secretions
- Use basic airway manoeuvres (head tilt/chin lift/jaw thrust) + adjuncts + oxygen if appropriate
- If you need to do these then you definitely need to call for help!!!

Breathing

Check

- Respiratory rate
- Saturations
- Work of breathing
- Auscultate chest

Potential interventions

- Give oxygen/nebulisers
- Consider chest x-ray
- Consider ABG

NB: If a patient has COPD but has extremely low sats – give high flow O2 in the first instance then switch to O2 via Venturi when available. Not all COPD patients will be CO2 retainers, and this can be checked via previous ABG results on Trak. Hypoxia will kill much faster than hypercapnia!

Circulation

Check

- Capillary refill, pulse, heart rate, heart sounds
- Fluid status including urine output and JVP

- Fluid/blood loss (chest, abdomen, pelvis, long bones, the floor)

Potential interventions:

- IV access
- Take bloods +/- cultures - specific ones to remember include:
  - Troponin in chest pain
  - Lactate in sepsis
  - G+S if any signs of bleeding
  - Potassium for 4 H's and 4 T's in cardiac arrests
- Fluid bolus if hypotensive/tachycardic (start with 250-500ml Plasmalyte and re-review)

If in doubt, you can't go wrong if you take a red, brown, yellow and green (and blue if bleeding)! (Although note that tube colours differ in Fife). A VBG will get you some results quicker too so a good thing to consider.

Disability

Check

- Temperature
- BM
- Brief neuro exam: GCS, pupils, are they moving all 4 limbs?

Potential interventions:

- Hypo/hyperglycaemia management
- Does the patient need a CT head?
- Review drug Kardex and fluid chart. Some things to look out for include:
  - Drugs related to underlying health conditions e.g. heart failure, diabetes, asthma, Parkinson's, COPD - this can give you a clue as to what is wrong!
  - Opioids (regular/PRN) - are they opiotoxic? Are they on methadone and could they have taken more than they should have? Is naloxone needed?
  - Medication patches (can OD if patient has been pyrexial or in hot shower)
  - Anticoagulation - is this appropriate? Could this be contributing to bleeding?
  - Potassium replacement (Sando K) – have they had too much or too little?

Exposure

Check

- Abdo exam
- Top to toe review
- Recent blood/micro/imaging results

*****GO BACK TO A and START AGAIN*****

Questions to ask yourself

- What do I know about this patient already? What is their relevant background and why are they in hospital?
- What investigations do I need?
- And most importantly - AM I OUT OF MY DEPTH?

Remember to work with your nursing colleagues (they are invaluable sources of information about your patient) and that no one will judge you for calling for help early. It is easier and better to step down a medical emergency call if it is not needed than have help arrive too late.

Escalating your concerns

- Exact pathway depends on your individual teams/wards
- Generally, escalate to FY2 (if available) or registrar. If a medical issue and the surgical registrar is not available, you can contact the med reg on call.
- If the patient is extremely unwell, call 2222 and put out a medical emergency/cardiac arrest if necessary - it's best to get help sooner, especially if more hands will be needed.
- Ensure to specify if it is a cardiac arrest or a medical emergency as this will cause a different cohort of doctors to be bleeped.
- Each hospital has a different response to a major haemorrhage call. In some places it only brings blood products and a porter, so you also need to put out a medical emergency call to get help.

Documenting

After you've seen the patient, started the necessary interventions and called for help, it's important to sit down and document what you did.

Good documentation is key to help assess changes in clinical status in later re-reviews and to help your colleagues. Having a systematic way of documenting a review can also help remind you of anything that you've forgotten to do!

I've always found the most useful way to document a review of an unwell patient is:

- Your name, role, time of seeing patient if written in retrospect
- Why you were asked to see the patient ("ATSP – NEWS 8")
- A bit of their background, what their issues are during this admission, any relevant PMH
- History taken from patient - however limited this is!
- Examination in A-E format (this makes it easier to re-review the patient and see if they have clinically improved or deteriorated)
- Recent blood/micro/radiology results
- Your clinical impression/differential diagnoses
- Your plan/what you have done already (this doesn't have to be extensive and may just be oxygen, bloods, fluid bolus and call for senior help!)
- Who you discussed with and any advice they gave
- Any subsequent re-reviews/changes etc

*** Document any discussions you've had with family and advice from other specialties ***

Once the patient has been stabilised and things settle down it can be useful to discuss the case with your senior and get some feedback on what you did well and how you can improve your reviews in the future. This can also be an opportunity to get a Mini-CEX/CBD for your portfolio. The first few sick patients you see as an FY1 will be scary but as your experience increases so will your confidence!

It can also be good to have a debrief with the team involved - both to allow for a learning experience where different team members can ask questions they may have or explain why certain things were done, but also for a wellbeing perspective to check everyone's doing okay.

Key messages

- A-E!
- Call for help early
- Thorough documentation
- Discuss and debrief

Cardiac Arrests as an FY1

Author: Catriona Groom
Peer reviewers: Lei Hua and Lex Tan

A reminder:

- This document was written before the changes in the protocol due to COVID
- Your first source of guidance should therefore be the resuscitation council's guidance for COVID patients
- Cardiac arrests, especially in relation to COVID-19 will be covered fully in induction

Introduction

You have had training in Basic and Advanced Life Support, so this chapter won't go over all the specific details of the algorithms. Have a look at the **Resuscitation Council Guidelines** to refresh your memory – it is also useful to have them screenshotted and saved in your phone.

Below are a variety of tips and what might be expected of you as an FY1 at a cardiac arrest.

Initiating resuscitation

Someone is having a cardiac arrest if you **cannot detect their pulse** and you do not think they are breathing. If the patient in front of you is having a cardiac arrest:

- Pull the **emergency buzzer** or shout for help
- Call **2222** (or ask someone else to do it) - say *'cardiac arrest'* and state your location
- Start **chest compressions**

As an FY1 you won't be expected to be in charge of the arrest from start to finish. Someone more senior than you WILL arrive eventually and take over control. However, there are some important things you and the team can do before someone else arrives:

- **Secure the airway** - ideally two people and use any adjuncts you need
- Get the **crash trolley** – each drawer is dedicated to each aspect of ABCDE
- Flatten the bed and move to appropriate height (a lot of the beds have a red CPR button on the remote which does this for you)
- **Attach self-adhesive defibrillator pads** to the patient's chest
- Obtain **venous access** and take bloods off the back of the cannula (full set ideally, one of each colour including a G+S if you can manage)

<u>Remember</u> - if you are the only doctor present this does not mean you HAVE to be in charge - a senior nurse may feel more comfortable being the leader of the arrest than you.

If you think someone maybe has a DNACPR form but you are not 100% certain then always start resuscitation but ask someone else to find the physical form to show you.

The cardiac arrest bleep

In some jobs you may carry the cardiac arrest bleep which means that you have to attend any arrest in the hospital. Normally at night, the whole team will attend the arrest. It bleeps REALLY loudly (in a different rhythm to a normal bleep) and it has a speaker which calls out 'cardiac arrest: location X'.

Beware - most days at the same time of day there is also a test call which does the same loud bleep but the speaker just says, 'test call, call XXXXX'. Just call that number or press 0 to get through to switchboard and just let them know your bleep number.

The cardiac arrest team

The composition of the team is different at different hospitals but there is almost always (at least) the med reg, anaesthetic support (they secure the airway), middle grade doctor/FY1/ANP. The Resuscitation Officer for that hospital also attends in-hours arrests - they have attended many arrests so have a huge amount of knowledge and bring a calm atmosphere.

Getting to the arrest

Quite often the message gets sent out to the FY1 last out of the team so you won't be the first there.

An arrest is the one time you can run in a hospital, but you should do so safely - there is no need to sprint.

Grab gloves on the way and put them on as you approach the patient.

The rest of the arrest

It is quite common to turn up while the arrest is in full swing. Ask someone if there's anything you can do to help, or you can do any of the following which are really helpful:

- Find patient notes/log on to a computer-on-wheels to gather information
- Run bloods/ABG to the lab (always wear a pair of gloves and bring a patient sticker with you)
- Offer to rotate in to do chest compressions
- Time-keep: start a stopwatch, make a note of the cycles of CPR and medications given etc.
- Prescribe any fluids or drugs used in the arrest

Note – it is always good to familiarise yourself with the defibrillators used at your hospital. It may be manual or automated; but ask someone who knows and will gladly show you how it works. It is also important to know which are the shockable rhythms: refer to the Resus guidelines for these.

Be wary of other patients in the area - an arrest can be quite traumatic for them to witness. You may want to pull the curtains around the other beds in the bay or close doors or blinds. Also be mindful of the volume and language you use so as to communicate clearly with those on the arrest team but not to unnecessarily terrify other patients.

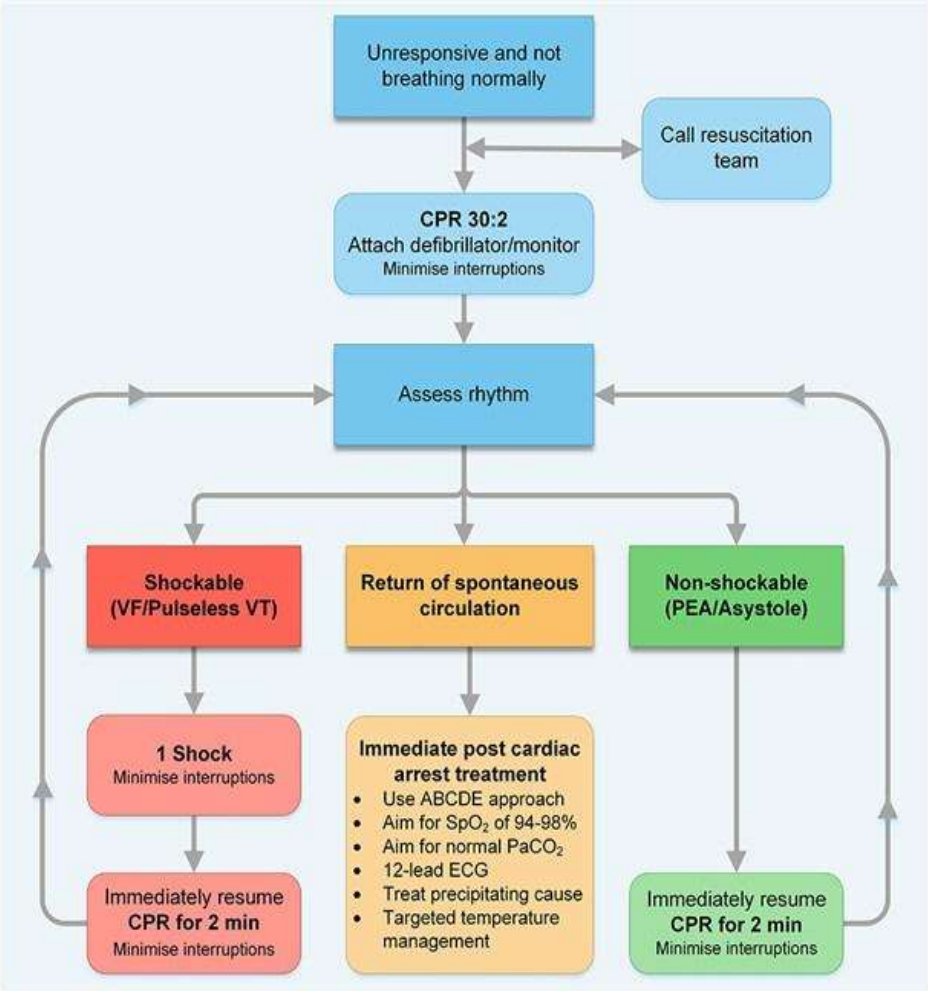
If there are plenty of people already present at the arrest your help might not even be needed and the person running the arrest may tell you to step down. I would stick around the area (but try not to get in the way) until you have been officially told to step down just in case you are needed.

After the arrest

Debriefing after an arrest can be a really valuable exercise especially if it is your first time, you knew the patient well or it was unexpected. You can request a group meeting to debrief at the time/later on or ask for a debrief via email to discuss where the arrest went well, how it could be improved and also as an opportunity to express emotions.

As well as talking to the team there, you could also talk to your educational supervisor or another member of staff you trust. It is important to reflect and talk about difficult experiences.

Importantly, take a break afterwards. Get a cup of tea, talk to your colleague about it, and take as much time out as you need before getting back to work.



During CPR
- Ensure high quality chest compressions
- Minimise interruptions to compressions
- Give oxygen
- Use waveform capnography
- Continuous compressions when advanced airway in place
- Vascular access (intravenous or intraosseous)
- Give adrenaline every 3-5 min
- Give amiodarone after 3 shocks

Treat Reversible Causes
- Hypoxia
- Hypovolaemia
- Hypo-/hyperkalaemia/metabolic
- Hypothermia
- Thrombosis - coronary or pulmonary
- Tension pneumothorax
- Tamponade – cardiac
- Toxins

Consider
- Ultrasound imaging
- Mechanical chest compressions to facilitate transfer/treatment
- Coronary angiography and percutaneous coronary intervention
- Extracorporeal CPR

Management of acute agitation

Author: Aoife Duignan
Peer Reviewers: Mathew Lyons and Eilidh Clark

Introduction

Managing an agitated patient can be challenging and require strong leadership. This section will cover the key aspects of assessment and management of an agitated patient that you may be called to as a doctor on call or on a ward.

Initial response

When you are called to a patient who is acutely agitated, first consider your own safety, that of other staff present, other patients and the patient themselves. Move other patients out of the reach of harm. Consider requesting security to attend.

De-escalation

Ask any unnecessary staff to leave the room. Try to establish if any staff member is trusted by the patient. If possible, attempt to gain rapport with the patient. Try to ensure any dangerous objects are removed from the room (drip stands, walking frames, sharp objects). Does the patient have a close family member who may be able to speak to them on the phone or visit to calm them down?

If you are not able to de-escalate at this point, ask for someone more senior to come and help you.

Information gathering

Take a history from the patient and collateral from staff if possible. Try to establish what has led to this episode. What is this patient's background? Are they withdrawing from a substance? Have they had bad news and reacting to this? Are they delirious or psychotic? Useful things to consider might be:

- Pain – do they have optimal analgesia including regular medications prescribed?
- Any new medications which may have precipitated this/any omitted medications?
- Electrolyte imbalance - any recent bloods? Is calcium ok?
- Constipation
- Infection
- Urinary retention - if possible, consider PR/bladder scan and catheter if appropriate
- New environments
- Substance withdrawal - alcohol/opiates/benzodiazepines
- Hypoxia

You may not be able to take obs or examine the patient but try to make a good general inspection from a distance if you can. See if the patient has any recent bloods. Has this been happening recurrently through the admission and what has worked before?

Non-pharmacological management

This will be unique to each patient. Firstly, see if there is a reversible cause or issue which can be addressed. Is the patient frightened of another patient in the bay, for example? Does a patient just wish to get up and go for a walk? For many older patients, gentle reassurance and reorientation may be sufficient. Regular staff members who know the patient will be of help here. Some CSWs have incredible skill at calming a patient, chatting with them and bringing them for a walk around the ward to settle them.

Try to find a quiet area for patient, or consider moving them into a side room if one is available.

If a patient is nicotine dependent, sometimes, you might consider allowing them to smoke with supervision outside, alternatively, nicotine inhalers can help acutely (patch in the background).

"Twiddlemuffs" and activity boxes are available in some hospitals and may allow a patient to fidget and be distracted. Clocks and calendars will help orientation.

Use of medication

Medication may be required where there is a risk of harm to the patient or others, or when the patient is severely distressed. In general, it is better to start with lower doses of medication and then escalate from there. It is also very important to give sufficient time for medication to work.

For adults under 65, your first line medication may be a benzodiazepine (e.g. lorazepam), with second line as an antipsychotic (see local guidelines). Ideally give by oral route where possible (lorazepam 0.5-2mg, haloperidol 2-5mg), but you may need to give IM medications if a patient does not wish to take oral medications. Check QTc before prescribing if possible (e.g. on admission ECG).

For older adults, be even more cautious in your dosing. First line would usually be an antipsychotic (e.g. 0.5mg haloperidol), followed by a benzodiazepine (e.g. 0.5mg lorazepam) - but beware risk of paradoxical agitation. Repeated doses may be necessary, **but ensure you give enough time for medications to work (ideally an hour between doses)**. There is a massively increased risk of falls after sedation, but also a risk of death, so start low and go slow.

More caution is needed where there is risk of extrapyramidal side effects, e.g. in Parkinson's or in young women. Use benzodiazepines first line in this instance and discuss with a senior if no response.

Medicolegal aspects

Where an adult does not have capacity to consent to treatment that is required, they will require an AWI certificate, which must be completed by a doctor FY2 or above. This may not be immediately available but should be completed as soon as possible in an emergency.

Where a patient wishes to leave the ward and does not have the capacity to make that decision, or would be at risk of harm to self or others due to mental illness, and they are being restrained either physically or chemically, they will require assessment for an Emergency Detention Certificate. This must be completed by a doctor FY2 or above, should be discussed with the MHO if time permits and the paperwork must be signed by the on-call manager. The psychiatry team must be informed as soon as possible thereafter to allow review.

Security may decline to restrain a patient before they are detained. As you are not able to detain a patient as an FY1, it is important to request senior support early.

Restraint

Only those who have received appropriate training should physically restrain a patient due to the risk of harm to patient and staff. This will include some members of nursing staff and the security team.

Leadership

Remember that even when these team members are present, you can take leadership of the situation as other staff members may not have the same understanding of conditions such as delirium and may need reassurance regarding comments made by a distressed patient.

If you have given medication, you will likely need to reassure staff that they will work if you give them time, and avoid the temptation to give further doses too early – the accumulated effects may cause much more significant sedation than you had intended and be detrimental for the patient.

Breaking bad news

Author: Anna Kolodziejczyk
Peer Reviewers: Felix Torrance and Aoife Duignan

Introduction

There is no single best way of communicating bad news. It's never a pleasant task, but it can be very rewarding when as a result of your interaction, even the messiest of situations begin to gain clarity and direction. What you say, as well as when, where and how you say it will all have an impact on the overall outcome. Here are a few tips to help make the experience go as smoothly as possible.

Before

- Find out what is actually happening/what has happened and what is likely to happen next. Take 5-10 minutes to read through the relevant medical/social history, previous correspondence with relevant specialties and investigation results to gain an overview of the situation.
- Find out what the patient/relative is already likely to know (read through notes and look for the latest documented meeting or phone call with family to get an idea of their expectations *before* you go into the consultation).
- Think about what questions they might want answers to, for example "...so, what's next?" or "...how long is it going to take?". Whilst you might not have an immediate answer, think about whose advice you can seek and what other resources may be available to hand in the meantime.
- Let someone in your team know that you're about to be having this conversation. They might have valuable insights potentially having dealt with a similar case before, or it may be more appropriate for someone else to deliver the news if they are more senior, or more familiar with the patient and their family.
- Find a quiet place. This may be challenging in busy settings like MAU or A+E but very, very important. Ask your nurse in charge or ward clerk for advice if you're not familiar with the surroundings!
- Consider asking another member of staff to accompany you, not just for moral support but to be witness to the discussion, especially if you suspect the discussion is likely to be challenging for some reason. Check that the patient/relative is OK with someone else being present.
- Set the scene: make sure there are enough seats, ensure as much privacy as possible (close the door/curtains). Avoid distractions (leave your bleep/phone with someone else).
- Ask the patient/relative if they want anyone else to be present with them.

During

Introduce yourself and make sure your name badge is in sight. Also, bear in mind that you may not be the doctor the patient/relatives are used to dealing with.

Explain your role in the team and the reason for wanting to speak with them.

Ask whether they are happy to discuss the matter with you - consider the fact that they may not wish to know any details or may want to wait until a more convenient time.

Establish what they already know and what they would like to know.

Use information you have gathered earlier to lay the ground and build a foundation for the news you are about to deliver.

- Use warning shots like “We were all hoping for better news” (or anything you would prefer - just an example)
- Don’t rush. Allow plenty of time and space for the news to sink in and be processed. Time and silence are your best friends. Be prepared for a variety of initial reactions.
- Deliver the information in small chunks and avoid convoluted explanations. Accept that you don’t have to outline every little detail and you, or others, may want to revisit the subject at a later date and expand on what you are discussing now.
- Check the person’s understanding, offer clarification and multiple opportunities to ask questions.
- Be honest! Never, ever be afraid to say, “I don’t know”. Instead, offer to try to find out more by consulting others in your team or directing the query to the next most appropriate person (this could be your consultant, the nursing staff, pharmacists, PT, OT, Palliative Care team, etc...)
- Reassure them that they are going to/have been referred to the appropriate team of specialists who are best equipped to come up with a plan going forward, especially if this is palliative care. There is always something we can do to ease a patient’s suffering.
- Offer time to think and an opportunity to meet again and discuss plans going forward, or any new information that may become available.
- Ensure the patient/relative knows how best to contact your team/the ward in the future (ward location and ward phone number/extension will suffice. Do not give away your personal email or mobile number).

After

- Document everything as soon as possible. Include the details of who was present, where and when the meeting took place. Summarise any questions or concerns the discussion may have raised and outline how you addressed them.
- Speak to your team and let them know the outcome of your discussion - be it good or bad! This will help you reflect on what happened and will be a good opportunity to find out more about how to address the patient’s/relative’s concerns.

Common breaking bad news scenarios

- It’s late in the evening and a patient has deteriorated significantly. You have been asked to contact the family/friends. (Tip: think about what you are trying to convey here - are you telling them this because you think the patient may die in the next few minutes or hours? Are you hoping to discuss next steps, e.g. DNACPR/ escalation?)

- There has been an expected death, but no friends or family were present at bedside at the time and you are asked to call them to let them know.
- There has been an unexpected death on the ward, and you are the only doctor available to inform the patient's family (by phone or in person).
- It's 16:45 and you have just seen an investigation report which reveals an unexpected and/or potentially life-changing diagnosis (e.g. malignancy, stroke, bowel obstruction). Tip: if the news is unexpected and your seniors (registrar or consultant) are not aware of the result, discuss it with them first. If your seniors are no longer around, speak to the on-call team for the most relevant speciality and seek their advice on what should happen next. If you're unable to get a hold of anybody, hand the case over to the evening team along with information about whose advice you would like to seek and why. If possible, refrain from speaking to the patient and/or relatives until you have an idea of what will need to happen next.
- A long awaited operation/appointment/investigation needs to be postponed/cancelled due to unforeseen circumstances (another emergency has taken priority etc…). Tip: It can be difficult to manage your own emotions, especially when you've had nothing to do with the delay and the patient/relative is venting their frustration at you. Try to be constructive in your approach - acknowledge and validate their frustration, offer to find out the reason behind the delay, escalate the issue to someone else who might be able to address it and explain what steps you are going to take to minimise the risk of it happening again.

Helpful Link: https://geekymedics.com/breaking-bad-news/

Med Reg Comment

During the COVID pandemic, we will be breaking bad news frequently on the phone. This is really challenging as you miss out on normal non-verbal cues. Situations are also complicated by family members being in self-isolation or shielding. This will make bad news conversations more difficult. Don't feel you have to take on these conversations at an early stage - listen in to more experienced members of your team to begin with.

Comfort review of a dying patient

Author: Mathew Lyons
Peer Reviewers: Giovana Klefti and Ellen Wisnia

Reviewing a dying patient, particularly at the very end of life when all active input has stopped, is somewhat different to reviewing a patient receiving active treatment. You note will obviously vary a bit compared to the example below. It is still worth starting with a summary especially including what condition the patient is dying of.

Thing to consider on review of a dying patient

- Pain
  - Are they in pain? Is analgaesia appropriate?
- Agitation/distress
  - As pain
- Breathing/secretions
  - As pain for secretions
  - Has breathing changed? – Cheyne-Stokes may indicate imminent death
  - Is oxygen required for comfort? – likely not checking SpO_2
    - It is ok to use oxygen at the end of life, but it should be titrated to comfort.
- Nausea/vomiting
  - As pain
- Nutrition/hydration
  - Is the patient eating and drinking?
  - Are they comfortable with oral intake?
  - Have pragmatic decisions been made about swallow safety and NBM?
  - Are they very thirsty? Could mouth care be considered to relieve this?
  - Are they receiving sub cut fluids? – Often not required at the very end of life but may relieve some dehydration while patient still conscious but not managing to drink
    - Usually 0.9%NaCl at 50mL/hr.
- Bladder/bowels
  - Has continence been considered?
  - Is there any distress related to this (from family or patient)?
- Medications
  - As below (Kardex review of dying patient)
  - Any need for crisis doses – see other handbook section on death and dying
- Comfort care
  - Anything else related to comfort
- Spiritual care and wellbeing
  - Any desire for chaplaincy service or other wellbeing (volunteer visitors?)
- Care of family
  - Family are very important too
  - Anything we can do to help them with grief? Even a simple cup of tea?

  - They know the person best and often spend the most time with them – they are likely to notice agitation/pain/discomfort – tell them to make staff aware of any concerns
  - Do they know/want to know what to expect in the process of dying?
    - See other section on death and dying

Kardex review of dying patient

- Look at use of anticipatory medicines. Is there a need to increase or start a syringe driver?
- Use Scottish Palliative Care Guidelines to help with medication decisions
- See section on death and dying for more palliative prescribing tips.
- Be pragmatic about other medication – do they still need the daily folic acid?

Other considerations for dying patients

- Have observations been stopped? The intrusion will be distressing, and the result will not change anything – consider crossing off the obs chart and telling nursing staff to stop obs
- Make sure any other unnecessary tests are not being done (e.g. blood tests)

Death and Dying on the Ward

Author: Mathew Lyons
Peer reviewers: Hannah McManus and Angus Wallace

Regardless of where in the UK (or world!) you work, the Scottish palliative care guidelines are a fantastic resource and I won't attempt to recreate them here. What I will try to summarise is the basics of looking after a dying patient on your ward. Please see the section on doing your own reviews of patients for more advice on how to review a palliative patient.

- Always make sure a patient who is receiving palliative care has a DNACPR form in place.
- Make sure to stop observations by writing on the obs chart and stop all blood tests etc
  - The results of these will not change anything and the intrusion will only cause the patient and family distress.
- If a decision is made to stop active treatment, ensure IV antibiotics and fluids etc are scored off. Fluids can be a contentious and emotional issue with families at the end of life and one which should be discussed at an appropriate time.
  - Risks generally outweigh benefits
  - Risks include discomfort around the line, peripheral and pulmonary oedema, intractable secretions (whilst buscopan can be given for secretions, these are the most challenging palliative symptom to control)
  - Benefits **may** include improved thirst, better renal function, reduced opiate toxicity and reduced sedation
  - No evidence that fluids improve quality or quantity of life at end of life.
- If a diagnosis of dying is made, do your best to organise a side room for the patient as a priority.
- Ensure the relatives know what to expect
  - Dying is a process
  - It is likely that the patient will become more and more sleepy
  - We will give medicines to treat any symptoms they have (explain these)
  - Breathing will likely change but patients are rarely distressed by this – it is usually more distressing for the family
  - If the patient is unconscious, still talk to them, they will likely be comforted by familiar voices
  - Familiarise yourself with the process of dying (lots of good resources on google) so you can explain to a family what to expect
  - Remember nothing in death is certain. Eg It is impossible to tell how long it will take someone to die. It is impossible to know if they will wake up and converse again.

  - Explain this clearly. It is very important. Families can become very upset and distressed if they are not expecting uncertainty.
  - Don’t make promises or guarantees as these will only cause difficulty further down the line when things don’t work out the way you have predicted.
- Always consider offering support from the chaplaincy service – the patient does not have to be religious. They offer a support, care and advice for people of all faiths and none.

Basic palliative care prescribing

Author: Mathew Lyons
Peer reviewers: Hannah McManus and Angus Wallace

This is an invaluable resource: https://www.palliativecareguidelines.scot.nhs.uk/

Standard anticipatory meds to prescribe in first instance. For opiate naive patients with normal renal and liver function

- Morphine 2mg S/C hourly
- Midazolam 2mg S/C hourly
- Levomepromazine 2.5mg S/C 8hourly
- Hyoscine butylbromide 20mg S/C hourly max 120mg/24hrs

Syringe driver prescription is usually based on PRN requirement after 12-24hrs

- You need to check medication compatibility for a driver
- You should only usually start a driver on senior advice and with their support
- Typically, you put what was used in the last 24hrs (approx.) in a driver to be given over 24 hrs and prescribe a breakthrough PRN of approx. 1/6th the driver dose.
- Try to use sensible doses. If they've used 12mg morphine in 24hrs then put 10mg in the driver and a breakthrough dose of 2mg PRN hourly.
- Remember, starting a driver from the outset (ie before any PRNs given) will not provide relief. Giving 10mg/24hrs is a tiny dose every hour. If you are starting a driver on senior advice at the start of palliation, ensure a PRN has been given as a loading dose.

If appropriate, have a discussion with the patient and their family about the pros and cons of increasing medication. Do they prioritise absolute comfort and not needing breakthrough doses? This may mean they will be drowsier and more sedate. Or do they value being more awake and alert but needing more breakthrough – all your decisions at the end of life should be pragmatic and patient centred.

Consider palliative care input for complex cases - The Palliative care team are an exceptionally supportive service and are usually very happy to offer advice.

Think about the rest of the patient's Kardex – can you be pragmatic about crossing off medicines that they no longer require (eg folic acid)

Consider prescribing a crisis dose of midazolam in situations where it might be required (eg head and neck tumour invading towards carotids – may result in catastrophic terminal bleeding and terminal agitation).

- Midazolam PRN 10mg buccal/SC/IM/IV (IV route unlikely to be available in most cases)

Death Verification

Author: Mathew Lyons
Peer reviewers: Hannah McManus and Angus Wallace

Notes

- Nursing staff/family will usually be first to notice death
- Staff usually inform doctors immediately, but doctors do not need to attend straight away
- Let the family spend some time saying goodbye. Ask nursing colleagues to let you know when they have left.
- If family are present when you go to verify a death, it is best to ask them to step out for 5-10 mins. Try to find a place for them to sit (eg relatives' room) and don't have them stand outside the room grieving in the corridor.
- A useful resource for death verification and documentation is the geeky medics page: https://geekymedics.com/death-confirmation/

Things to check on verification

1. Identify the patient using their wristband, and check for a verbal response
2. Feel for central pulse for 2 mins
3. Auscultate for breath sounds for 2 mins
4. Auscultate for heart sounds for 2 mins
5. Check pupillary response to light
6. Check for response to pain (eg supra-orbital pressure)
7. Check for pacemaker box (or if you forget you can check a recent CXR)
8. It is also your responsibility to be aware of anything suspicious surrounding the death. This is highly unlikely to ever be an issue but should always be in the back of your mind. If you ever have any concerns in this regard immediately contact a senior.

Document your verification

Asked to see patient – Verification of death

Patient identified using wrist band

No respiratory effort noted

Nil central pulse for 2mins

Nil breath sounds for 2mins

Nil heart sounds for 2mins

Nil pupillary response to light

Nil response to voice or supra-orbital pressure

Pacemaker box in left anterior chest

Time of death as reported by nursing staff: 0937

Time of verification: 1105

Rest in Peace

A Doctor FY1

Completing a death certificate

Author: Mathew Lyons
Peer reviewers: Hannah McManus and Angus Wallace

Notes

- Technically the Medical Certificate of the Cause of Death (MCCD)
- Complete the certificate in full
- It is usually easiest to find a quiet place where you will not be disturbed
- Do not to make mistakes, especially spelling mistakes
- Never use any abbreviations – they are not allowed
- Be exact- eg state adenocarcinoma, not just tumour/ cancer.
  - Certificates with errors/abbreviations will be rejected. The family will have to return to the ward, and you will have to write a new one. This is very upsetting for a grieving family.

Your address should be the hospital address (inc department). Your phone number should be the hospital phone number with a note of your bleep or extension number. If you work in a few wards, it is ok to give a list of a couple of possible extensions. This helps them get hold of you easily if needed (see below re death cert review)

Record the time of death as when they were found to be dead, not when they were verified (note in England this is the other way around).

Always discuss with consultant or senior reg re what to put on as cause of death

- An FY1/2 should never make this decision alone (however it can be a good learning exercise to jot down on a seperate piece of paper what you think the death certificate should say and then compare and discuss this with the consultant).
- The consultant may have already documented the cause for an expected death– if this seems reasonable it can be used but use your judgement. If you feel it is not quite right, always ask.

Tick the appropriate boxes (pacemaker etc)

- A post-mortem is hardly ever required
- The person rarely has radioactive material or poses an infection risk
  - Think brachytherapy, radioactive rods for cancer, Ebola, COVID-19 etc
- You do not need to tick the box saying you can give more information
- Certain deaths need to be discussed with the procurator fiscal (aka Coroner in England) – if you are unsure ask a senior
- **If COVID-19 is a possible cause of death or contributing cause, tick the DH1 Hazard box**

If you haven't checked for a pacemaker when verifying death, or it is not documented by the person who verified, look at a recent CXR

Procedure most commonly used prior to the COVID pandemic

- Put the certificate in an envelope (in Edinburgh, the council produce envelopes, but any envelope is fine)
- In Scotland, put the envelope in the "When someone dies" information booklet

- Leave the booklet with nursing staff to give to family – they will often call to say it's ready.
- Make sure to fill in the record on the inside cover of the certificate pack with the corresponding serial number to the death cert you have written. This keeps a record on the ward of what the cert said and who it was for.
- Make sure to write the IDL for the patient detailing the clinical course and what was on the death cert. In Lothian and BGH the Trak code is \deathcert instead of \idl. This is really important to do immediately so there is a clear record in the notes of what was put on the death certificate.
- It is worth reading the "when someone dies" information booklet yourself so you understand the process of registering a death. You may be asked questions by the family and it is helpful to have some of the information.

Procedure used during the pandemic

- Complete the \deathcert and inform the GP as above
- Phone the family to discuss the death, ask which registry office they wish to use and obtain their address. There is a specific form for this, there is also a section for their email address if they wish to receive a scanned copy.
- Take the certificate and the family form to the appropriate person to be scanned and sent to the relatives and the registry office. (In the Western, this is the Medicine Service team, in other places this can be the morgue)
- The hard copy should be posted to the same office.
- The preferred cause of death terminology for COVID deaths is COVID-19 DISEASE if confirmed by swab or PRESUMED COVID-19 DISEASE if no swab has been done.
- See here for more information: http://www.healthcareimprovementscotland.org/our_work/governance_and_assurance/death_certification/questions_and_answers.aspx

Death Certificate Review Process

A small number of death certificates will be randomly selected for a quality control review. This may be a simple phone call review or a more detailed review where the death certification office requests the patients notes. For the former, you may get a phone call to discuss the patient. They are very very friendly, the doctor doing the review is not trying to catch you out. It is purely to ensure the accuracy of the death certification process. Discuss the patient with them and answer their questions fully and to the best of your knowledge (they will give you the CHI so you can look the patient up!).

Few special points to note

- Some ANPs can verify expected deaths – useful on H@N
- In Scotland, time of death is recorded as time the nurse found the person dead.
- In England, time of death is time of verification of death
  - Only time this makes a difference in England is if someone dies late at night and they are not verified until after midnight – technically the date of death is the date of verification which will

be the day after the person actually died. This can very occasionally cause some families distress.

There is lots of good information here if you want to read more
https://www.sehd.scot.nhs.uk/cmo/CMO(2018)11.pdf

There is a brilliant presentation here from NHS Scotland that explains exactly how to compete one:

https://www.nes.scot.nhs.uk/media/2736701/mccd_power_point.pdf

Finally

Death and dying can bring about many difficult scenarios and discussions which may affect you emotionally- this is natural. As you progress through your career, they may still affect you, but you will develop ways to cope with these situations better. If you have been in a situation like this, do not be embarrassed to ask to chat it through with someone afterwards. We have all been there at some point and it is amazing what a 10-minute break with a cup of tea and a chat can do for your own wellbeing!

Hospital specific information

Royal Infirmary of Edinburgh

Author: Lei Hua
Peer reviewers: Lauren Sleep and Lex Tan

A reminder:

- These documents were written before the reorganisation of hospitals due to COVID.
- We have continued to update them but the pandemic and the hospitals response to them remains fluid, nonetheless we hope you find some of this useful!

The Labs/Blood bank

- 2nd floor, between wards 204 and 205

The elusive Day Surgery/Medical Day Case Centre…

There aren't any allocated Doctors in Day Surgery/Medical Day Case so as an FY1 you may be bleeped/called for a number of different tasks, the most common being:

- Prescribing insulin/meds/fluids
- Discharge letters

The easiest way to get there and avoid getting lost is to walk towards Chancellor's Building, exit the hospital via the rotating doors facing the new RHSC building/taxi ranks and enter through the main Day Surgery/Medical Day Case entrance down from Primary PCI. At the entrance there are signs showing you where to go.

The Doctor's Mess

Located on the 1st floor between Ward 104 and 105. Requires initial swipe access, door code is 3-1-2. Microwave, kettle, sofa, blankets, pillows and TV available. Toilets and showers also available along that corridor. Nap here during the 4am lull on your night shift!

There is now a second doctors space with hot food machines, reclining chairs and (unlike the original mess) windows! This can be found in the Braid's room in the post-graduate education centre.

Food

Canteen opening times: Breakfast 7.30 – 11am. Lunch 12 – 2.15pm. Dinner 4 – 7.30pm.

Other food outlets: WHSmith, Aroma, Café opposite M&S, M&S (does good reductions around 6/7pm…)

Microwaves: located in the Mess, Braid's room, most staff rooms/kitchens on wards

Sources of caffeine (Vital to ensure maximum functionality)

Aroma (<3): 7.30 – 7.30pm, limited opening times at weekends. *Bring your own cup and get 25p off your coffee.*

The Cafe opposite M&S: open @ weekends (and also does good smoothies in the summer)

Canteen coffee machine

Link Bridge: 8 – 4pm. Between main building and Chancellors (access via 2nd floor of Chancellor's Building)

2nd floor café: 8 – 4pm. By ward 208

Nights

If you are part of HAN overnight, meet at the HAN office just before 9pm. This is located down the corridor opposite the cash machines (just past WHSmith) but the main double doors are usually locked from 2000/2030. Take the left corridor just before the double doors and this will lead you around onto the other side of the main corridor. You'll need swipe access!

Parking and transport

For nights and weekend shifts you can apply for a yellow decremental parking card. This allows you to park in the Staff car park for £3 instead of the usual £7.20. You need to fill out a form and get your line manager (usually your rota co-ordinator) to sign this.

Buses are regular and there is ample bike parking near Simpsons (the maternity centre)/behind Chancellor's building and at the main entrance to the hospital.

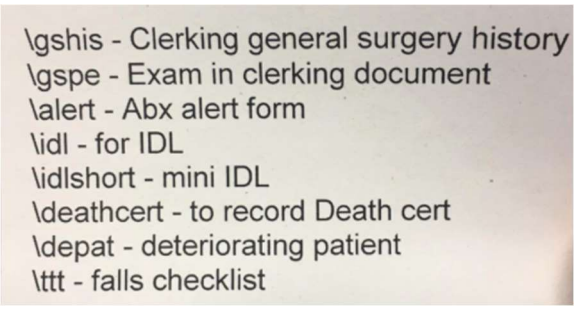
Calling labs/ your ward/ relevant specialties:

The "induction" app is amazing for having a directory of people you can phone. On the app, you can also make outgoing calls and answer your bleep on "Quick Dial" by entering the 5-digit number that appears on your bleep.

Trak

TRAK is a wonderful thing. Here are some tips to use it:

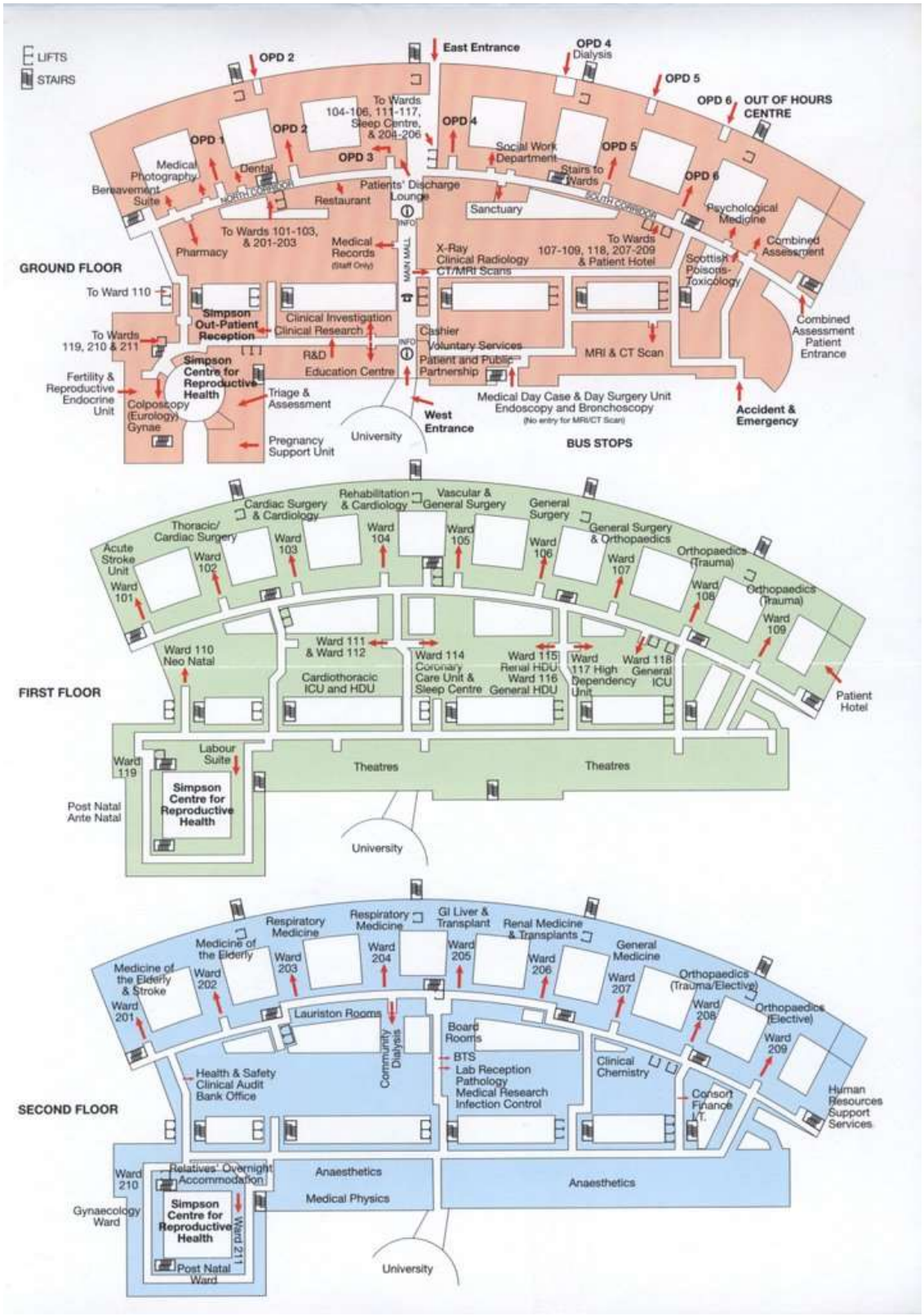
- /BACKSLASHESAREGREAT
  - There are a number of backslashes that automatically propagate a proforma right in front of your eyes. They include (this list is non-exhaustive):


\gshis - Clerking general surgery history
\gspe - Exam in clerking document
\alert - Abx alert form
\idl - for IDL
\idlshort - mini IDL
\deathcert - to record Death cert
\depat - deteriorating patient
\ttt - falls checklist

- Doing your IDL on a word document
  - When doing an IDL, it is useful to have information like admission bloods, scan results and the name of your patient's cat (I kid). But sometimes navigating the system can cause your IDL page to exit WITHOUT saving that beautifully drafted IDL. To avoid this, draft your IDLs on a word document, then copy it over to the system before printing it out.

- The best kept secret for IDLs is that you could tick the choices for “previous medications” and then select “admin -> repeat order”. This prevents you from having to painstakingly enter in every medication the patient has been on for years! Always remember to check them before printing them out though in case any have changed since they were stored on Trak!
- To access the computer systems, you need your Sunray ID card. These tricky fellows do have a way of disappearing, however. It is best to write your phone number or email on it, so whoever picks it up can give it back to you. If you need to quickly jump on and use someone else’s card, but it is locked to their name, use Ctrl + Shift + C to change the name.

Lots of useful additional info on https://www.med.scot.nhs.uk/hospitals/rie. There are induction videos + documents and handbooks


LIFTS
STAIRS
GROUND FLOOR
OPD 2
East Entrance
OPD 4
Dialysis
OPD 5
OPD 6
OUT OF HOURS CENTRE
To Wards 104-106, 111-117, Sleep Centre, & 208-206
OPD 1
OPD 2
OPD 3
OPD 4
OPD 5
OPD 6
Medical Photography
Dental
Bereavement Suite
North Corridor
Restaurant
Patients' Discharge Lounge
Social Work Department
Stairs to Wards
South Corridor
Sanctuary
Psychological Medicine
To Wards 101-103, & 201-203
Pharmacy
Medical Records (Staff Only)
MAIN MALL
X-Ray Clinical Radiology CT/MRI Scans
To Wards 107-109, 118, 207-209 & Patient Hotel
Combined Assessment
Scottish Poisons-Toxicology
To Ward 110
Simpson Out-Patient Reception
Clinical Investigation
Clinical Research
Cashier
Voluntary Services
Patient and Public Partnership
To Wards 119, 210 & 211
Simpson Centre for Reproductive Health
R&D
Education Centre
MRI & CT Scan
Combined Assessment Patient Entrance
Fertility & Reproductive Endocrine Unit
Colposcopy (Eurology) Gynae
Triage & Assessment
Medical Day Case & Day Surgery Unit
Endoscopy and Bronchoscopy
(No entry for MRI/CT Scan)
West Entrance
Accident & Emergency
Pregnancy Support Unit
University
BUS STOPS
FIRST FLOOR
Cardiac Surgery & Cardiology
Rehabilitation & Cardiology
Vascular & General Surgery
General Surgery
Thoracic/ Cardiac Surgery
General Surgery & Orthopaedics
Acute Stroke Unit
Ward 101
Ward 102
Ward 103
Ward 104
Ward 105
Ward 106
Ward 107
Orthopaedics (Trauma)
Ward 108
Orthopaedics (Trauma)
Ward 109
Ward 110 Neo Natal
Ward 111 & Ward 112
Cardiothoracic ICU and HDU
Ward 114 Coronary Care Unit & Sleep Centre
Ward 115 Renal HDU
Ward 116 General HDU
Ward 117 High Dependency Unit
Ward 118 General ICU
Patient Hotel
Ward 119
Labour Suite
Theatres
Theatres
Simpson Centre for Reproductive Health
Post Natal Ante Natal
University
SECOND FLOOR
Respiratory Medicine
Respiratory Medicine
GI Liver & Transplant
Renal Medicine & Transplants
Medicine of the Elderly
General Medicine
Medicine of the Elderly & Stroke
Ward 201
Ward 202
Ward 203
Ward 204
Ward 205
Ward 206
Ward 207
Orthopaedics (Trauma/Elective)
Ward 208
Orthopaedics (Elective)
Ward 209
Lauriston Rooms
Community Dialysis
Board Rooms
BTS
Lab Reception
Pathology
Medical Research
Infection Control
Clinical Chemistry
Health & Safety
Clinical Audit
Bank Office
Consort Finance I.T.
Human Resources Support Services
Ward 210
Relatives' Overnight Accommodation
Anaesthetics
Medical Physics
Anaesthetics
Gynaecology Ward
Simpson Centre for Reproductive Health
Ward 211
Post Natal Ward
University

Western General

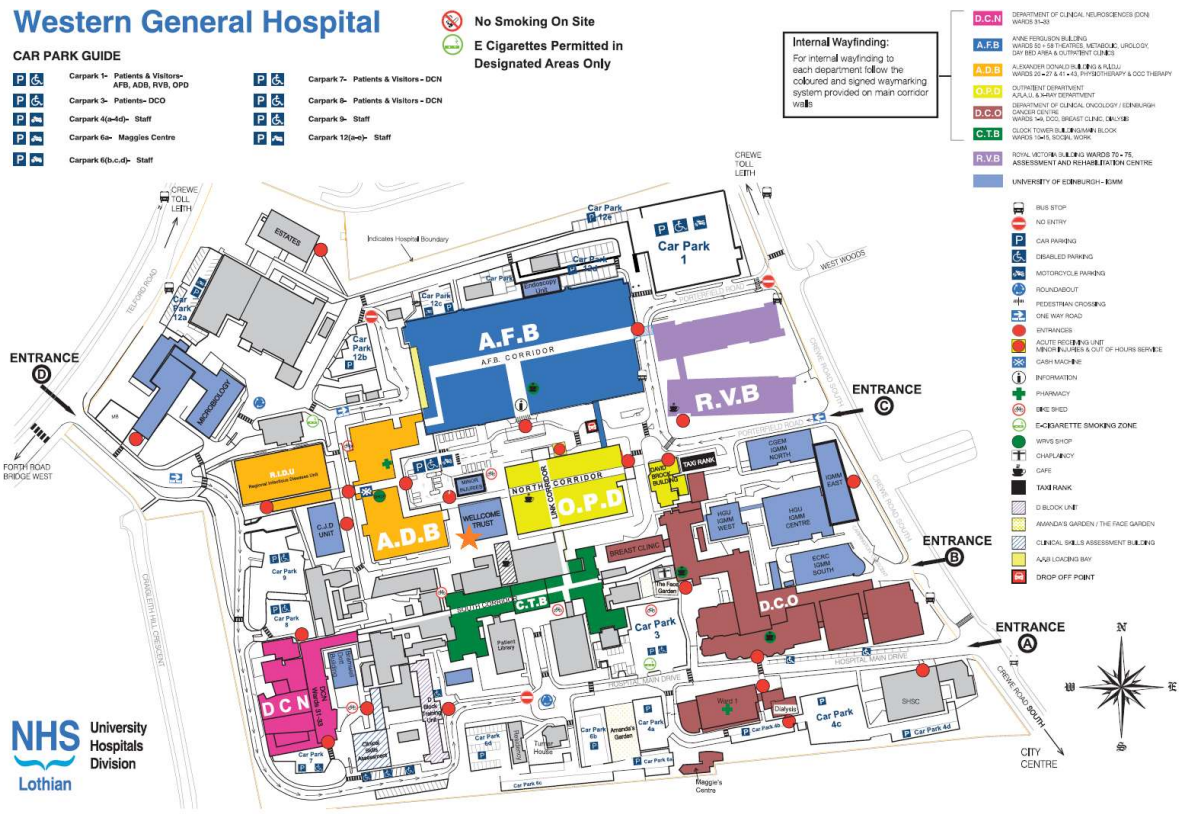
Author: Sarah Douglas

Peer Reviewers: Philip Holt and Mary Flinn

A reminder:

- These documents were written before the reorganisation of hospitals due to COVID.
- We have continued to update them but the pandemic and the hospitals response to them remains fluid, nonetheless we hope you find some of this useful!

MAP



- **CTB**- Clock Tower Building – Oncology, Haematology,
- **ADB**- Anne Donaldson Building – Gen Med, Colorectal
- **AFB** – Anne Ferguson Building – Urology, Rheumatology, Dermatology, Colorectal, MOE, Respiratory
- **RVB**- Royal Victoria Building – Moe
- **DCN**- Neurology

How to get to the…

- **Labs/ Bloods bank** – In the CTB. (Green on map) underneath the stairs that lead to oncology wards, off of the link corridor.

- **MAU Green**: O.P.D building, main entrance, first right through the double doors just after the staircase.
- **MAU Red:** – On the Right when you walk into O.P.D through the ambulance entrance.
- **MAU** – On the Left when you walk into O.P.D through the ambulance entrance
- **Lecture Theatre** – in O.P.D on the top floor.
- **Radiology/ US** – in O.P.D on the 2nd floor- you may need to go here to discuss radiology requests with the consultant.
- **ECG/Echo department** - in AFB, off the corridor to ADB
- **Pharmacy** - in ADB to right of main doors

Food and Drink.

Unfortunately, the WGH does not have a doctor's mess however many of the FY1's use the Medical Education Centre, co-owned by the University and NHS Lothian, on the 3rd floor of the OPD (above MAU). It has a microwave, sink and fridge with many seats and tables and lovely views of the city. It is however only open 9-5 during the weekdays unless you have a university ID card with swipe access. There is also a small library, some computer rooms and toilets located here.

However watch this space – a Doctor's mess is planned to come to the WGH in August 2021!

Shop	Location	Opening Times (pre-covid)
Canteen	In CTB, on link corridor near university library. Has water fountain and Vending machines in foyer + food is cheap.	0700-1030; 1130-1400 (1145-1400 @ Weekend) 1630-1915
Aroma	RBV on the left as you enter the main door (serves the best coffee)	0800-1700. Not open at the weekends.
RVS	Main one in AFB ground floor with separate shop Smaller one in ADB and next to MAU in O.P.D. Shop near Pharmacy 3rd in Oncology	0800-2000 7 days a week. 0800-1600 midweek and 1300-1630 at weekends. 0800-2000 weekends and 1330-1630 at weekends.

Catering facilities at WGH during Covid19 – as of 09/04/20

Staff canteen –

Open 07.00 to 19.30 (7 days)

Hot drinks, cold food and snacks are available all day.

Hot food is available from:

- Breakfast: 07:00 -10:00
- Lunch: 11:45 – 14:00

- Supper: 16:30 – 19:00

RVS (subject to staffing)

RVS shop, Alexander Donald Building 09.00- 16.00 (Monday to Friday)

RVS cafe, OP building near MAU 08.00 – 16.00 (Monday to Friday)

RVS cafe, Anne Ferguson Building 08.00 – 20.00 (Monday to Friday) & 09.30 – 17.00 ((Saturday and Sunday)

RVS shop, Anne Ferguson Building – 08.00 – 16.00 (Monday to Friday) & 09.30 – 17.00 ((Saturday and Sunday) ask at AFB cafe re stock if not open

RVS Oncology Out-patients cafe 09.00 – 15.00 (Monday to Friday)

RVS Shop Oncology entrance 08.00 – 16.00 (Monday to Friday)

Aroma (subject to staffing)

Aroma coffee bar (RVB) – 09.00 – 16.00 (7 days)

Tea & coffee making facilities

CSAC – open 24/7

Wellbeing space (old medical library) – open 24/7

MEC lounge – open 09.00-17.00

Hospital @ Night

- HAN is situated on the first floor of the OPB, behind the reception desk and to the right as you walk up from the main stairwell.
- HAN runs from 2100-0900 with hand over from specialities between 2100 and 2130.
- Tea and coffee and occasionally snacks are provided (£1 donation is asked)
- The only Fy1's to do HAN are Colorectal and they act as part of HAN but are slightly separate as do 2000-0800 with hand over from their own team first and often escalate issues to their own SHO and Reg who are not part of the HAN team.

Parking and transport

- There is free parking at the WGH, however the staff car park is allocated with a permit based on an online application form.

- The patient and visitor car park is manned from 5am to 2pm so is not suitable for staff parking (however can be used for late shifts, nights and weekend shifts and usually has spaces) – This is the multi-story behind the RVB
- Surrounding housing estates and roads have some free parking spots (look up the permit zones to see where the boundaries end). Make sure you park legally. Police enforce this strictly.
- There are bus stops at the front of the hospital where many buses go: 19, 21, 24, 27, 29, X29, 37, X37, 38, 42, 47, 113
- There are bike racks and locked bike garages at the front of the AFB and the OPD. You can get the code for secure bike lockups from security in the AFB.

Victoria Hospital, Kirkaldy

Authors: Bhavya Rajagopalan and Sophie Baldwin
Peer reviewer: Sarah Wordie

A reminder:

- These documents were written before the reorganisation of hospitals due to COVID.
- Unfortunately, it is likely some of this has therefore changed but they have been left in as they may still be able to provide some wisdom to orientate yourself around the hospitals.

Getting there

Although the hospital is a bit of a commute for those who do not live in Fife, the drive there is beautiful and public transport links are excellent!

Most people seem to be based in Edinburgh and either drive there/ catch a ride with their mates/ take the train. It is usually around a 45-minute drive from the centre of Edinburgh. There is free parking at the hospital. You can usually find a space in the staff car park/ overflow car park. Failing that, there are lots of parking spaces in the estate directly opposite the hospital.

For those who do not drive, the train is pretty good and runs quite regularly. Depending on which train you take (normal/ fast-track) it usually takes around 30-45 minutes on the train. You can either walk from Kirkcaldy train station to the hospital (which takes around 30 minutes) or there is a direct bus which goes from the station to the hospital (this takes around 5-10 minutes and runs very regularly!) There are also usually enough people who do drive/ start work at the same time as you that you could get a lift in with. To note the trains do not run early enough on Sunday so try and plan a lift with another FY1 for that day.

Phones

Every surgical FY1 gets their own work pone. You can find your phone in AU2 in the charging dock. Pick it up before your shift and make sure you put it back to charge overnight! If you forget to do this, don't panic- there are always spare charged batteries in several wards.

All of your seniors will have their own work phones too. You can find the phone numbers for everyone in the surgical department in all of the Ward Doctor's rooms.

We don't normally use bleeps to contact people in VHK. There are some exceptions, for example, your cardiac arrest bleep (see section on On-Call ward shifts/ Cardiac arrest calls.)

Doctor's Mess

Make sure you take your breaks! There are very few circumstances during which taking your break would be inappropriate/ not possible. The doctor's mess is located just outside AU2 on the ground floor. It's a great place to go to get away from the ward for a bit. It has comfy sofas, a fridge, a hot water tap, toilets, lockers and most importantly- a TV with Netflix!

Surgical FY1 Life

On- Call Day shifts: 8am – 8:30pm

During these shifts, you will be based in the Surgical Admissions Unit (AU2).

Your team will comprise of the following people: On-Call Consultant, On-Call Registrar, On-Call SHO, Advanced Nurse Practitioner.

Your Consultant will be 'on take', which means they will be in charge of the care for all General Surgical patients who are admitted to the Surgical Admissions Unit for that week.

Your job: Go to handover in AU2 at 8am. Go on the ward round every morning. Scribe during the ward round in their folders (Fife uses paper notes). Make a list of jobs for each patient.

Once the ward round is done, you will split the jobs with your ANP. In the meantime, patients will be arriving in the Admissions Unit. Your job is to clerk these patients into the department (see section on How to Clerk). The ANP and SHO will also divide up the clerking with you.

After these patients are clerked in, they will be reviewed by your Registrar who will put in place a management plan for these patients. You will then do the jobs required for these patients. Usually several On-Call patients will be taken to theatre for emergency operations. These will usually be conducted by the Consultant On-Call and the Registrar On-Call, and the SHO may be required to assist.

One of the most important jobs for you during these weeks is to update the list of On-Call patients. This will be saved as an Excel document in the "Surgery" drive when you log into the computer. When patients come in add them to the list along with the following details: CHI number, date of arrival, up to date blood tests, up to date investigation results, up to date plan. It is important to note that urology patients (marked with a green dot against their names on the board) DO NOT go on this list. The SHO is responsible for urology patients and urology list.

You will continue to do this until 8:00pm which is when you handover patients and outstanding jobs to the Night On-call team.

During On-Call shifts, you will also be carrying the Cardiac Arrest Bleep. You will attend a Cardiac Arrest huddle in the morning. The medical Registrar On-call, Resus Officer, Anaesthetist and the Medical FY1 will also attend. During this huddle, everyone in the Cardiac arrest team will be assigned roles. The FY1 is usually assigned to either IV access or Defibrillation. If your Cardiac Arrest bleep goes off, listen to where the location of the Cardiac Arrest/ Medical Emergency is and drop everything you are doing and go to the Cardiac Arrest. If the bleep goes – it takes priority over everything.

On-Call Night Shifts: 8pm to 8:30am

These are almost the same as On-Call Day shifts. Report to AU2 at 8pm for handover. Your team will consist of: On-Call SHO, On-Call Registrar. Then do any remaining jobs from handover. Clerk any new patients coming into the department. Update the list. Take bloods from anyone in AU2 that needs 6am bloods in the morning. Print the list in time for handover. Handover new patients/ any remaining jobs to the day team.

All patients who are admitted will remain under the Day On-Call Consultant.

During this nightshift you carry the surgical FY1 cardiac arrest bleep as well.

Post On-Call Shifts: 8am to 5pm

You will do a set of post On-call shifts directly after your on-call shifts. Basically, the On-Call Consultant who was on-take during your On-call shifts will be in charge of all of the patients that were admitted during the take. All of these patients will have now moved from AU2 up to the wards. Any new patients coming in will now be admitted under the new On-Call Consultant.

You meet in the post on-call room in AU2 (ask which room this is) and then you will go on the Ward Round at 8am with the Post On-Call Consultant and Registrar. You will do all of the jobs for these patients. You will continue to update the list. Handover any remaining jobs to the Ward Lates FY1.

Ward shifts

Every FY1 will be assigned to a particular ward for a duration of 6 weeks. These wards could be any of the following: Ward 52, Ward 53, Ward 54, Ward 31, Ward 33, ENT Unit. During this time, you will do a combination of short ward days, long ward days and weekend ward days.

Short Ward Shifts: 8am to 4pm

Go to handover (see handover section) before going to your designated ward at 8am. Some wards/ registrars like you to keep an up to date list of ward patients along with their latest blood test and investigation results. This will be stored in the Surgery drive. Try to print this list off before starting the ward round. Don't worry- your team will wait for you to do this (there is no need to arrive earlier than the start of your shift!) The ward 33 FY1 is the only FY1 who does NOT go to handover, instead go straight to the trauma meeting in ward 33 which starts at 8am. The ward 31 FY1 will get all of the orthopaedic handover and will call the ward 33 FY1 to update them later.

Go on the ward round with your team. Scribe in every patent's notes during the ward round. Make a list of jobs as you go along. Spent the day doing these jobs. Some wards have an ANP who will also help to do these jobs. If you have any concerns or questions, you can phone your FY2 or you Registrar. Update the list throughout the day. At 4pm, if there are any outstanding jobs, handover to the Long Shift FY1.

For the ward 33 trauma ward round, complete the surgical proforma sheet. Do not write in the patients notes. The sheets are kept in a purple folder in the trauma room. Take this with you and complete a sheet for each patient. After the ward round has finished go back round and file in the patients notes (you don't have time to do this on the main ward round).

Long Ward shifts: 8am to 8:30pm

The first 8 hours of your shift will be your normal shift on your designated ward. When you finish this at 4pm, find the Short Day FY1s and get handover from them. You will spend the next 4 hours doing the jobs from handover as well as ward cover for either Ward 52, 53 and 54 OR 31 and 33.

At 8pm, go to the Hospital at Night handover room and handover any sick patients/ outstanding jobs to the HAN FY1.

Weekend ward shifts

During weekend ward shifts you will either be looking after Wards 52, 53 and 54 OR Wards 31 and 33. Care of the ENT Unit will be shared by yourself and the other Surgical Ward FY1.

You will do a combined ward round in the morning of all the wards you are looking after. Scribe and make a list of jobs during this. You will spend the rest of the day looking after any sick patients and doing these

jobs. At the end of the day, go to Hospital at Night handover and handover any remaining jobs/ sick patient to the Hospital at Night FY1.

Hospital at Night shifts: 8pm to 8:30am

The HAN team consists of 2 HAN ANPs, Medical Registrar, 2 Medical FY1s and 1 Surgical FY1.

The Surgical FY1 looks after all of the Surgical wards at night.

Go to HAN handover and make a list of any jobs/ sick patients on the surgical wards. See the sick patients first. If they require escalation, contact the General Surgical Registrar On-Call. The orthopaedic registrar cannot be called between midnight and 6am unless it is a life or limb threatening emergency – they have protected sleep. If it is a medical problem, contact the Medical Registrar On-Call. The Surgical FY2 On-Call and the HAN ANPs can be contacted for any other advice that you require.

At 8am, go to the HAN handover room and hand over any remaining jobs/ sick patients to the corresponding ward FY1.

Surgical HDU shifts: 8am to 4pm

You will be based on SHDU for 1 week. You will be based there along with a Consultant Anaesthetist. Arrive at 8am for the SHDU handover. The nursing staff will chat you through all of the patients. Fill out the SHDU review form for every patient. The Anaesthetist will also divide these patients with you. Once you have both individually reviewed the patients, chat through your patients with the Anaesthetist. Together, you will develop a management plan for each patient. Surgical teams will also round and give their surgical input. All of the ward rounds will finish around midday. You will then do the jobs for all of the SHDU patients. At 4pm, handover any remaining jobs/sick patients to the Surgical FY2 On-Call in AU2.

Float Shifts: 8am to 4pm

Arrive at 8am. Help out on any wards that require help. Message your FY1 pals to see who needs help.

Emergency late shifts: 2pm to 8pm

Arrive at 2pm and report to AU2. Help out the On-Call FY1 with jobs. Also contact the ward 33 FY1 who also has priority to get help from the emergency late FY. Ask other ward FY1s if they require help. At 4pm, take handover from the ENT FY1. You will provide evening cover for ENT from 4pm to 8pm. Usually, ENT will not have many jobs to do. So, continue to help out your FY1 colleagues. Handover any remaining ENT jobs to the HAN FY1 at handover.

Escalation Policy

- Ward days: Team Registrar -> Team Consultant
- Evenings: On-Call FY2 -> On-call Registrar -> On-Call Consultant
- HAN: HAN ANPs / Surgical SHO On-Call -> On-Call Surgical Registrar/ Medical registrar -> On-Call Surgical Consultant
- On-Call Days: On-Call SHO -> On-Call Registrar -> On-call Consultant
- On-Call Nights: On-call SHO -> On-Call Registrar -> On-call Consultant
- Weekend Ward Days: On-call SHO -> On-Call Registrar -> Ward Consultant/ On-call Consultant

Take Home Messages:

- General Surgery at Kirkcaldy is a great job to start off with!

- You will make some really good friends, especially your fellow FY1s. There is a good community spirit there.
- This is a quick intro, but the Surgical Department should give you an Induction Booklet with much more information!

General Medicine at VHK

The rota is rolling. We tend to talk about our rota in terms of 'ward block' and 'on-call block´.

Ward block

You get a base ward - Medicine of the Elderly, Stroke, Renal, Cardio, Gastroenterology, Endocrinology, and of course, Resp. One day a week you'll work a long day and you may carry the arrest bleep. There are 2 FY1s on call in the evenings and you split the wards evenly.

A normal ward day is from 8:30 to 17:00. It varies depending on which ward or which Consultant, but generally, you'll go on the ward round, scribbling down everything the Consultant says, and create a list of jobs to get done afterwards. Often, you'll have a couple of middle grades with you and you can roughly split the jobs. If a discharge pops up on the ward round, it's good to sneak off and get that letter done as soon as possible. The only ward that works differently is ward 23 (cardiology) where you start at 8am and finish at 4pm (apart from your long day) and there are no middle grades/registrars, it's just you as the FY1 and the consultant.

From 16:30, the FY1s on call will head around all wards to collect handover - jobs that need to be done today but won't be managed before home-time. If you're unsure, go through the jobs with one of the other ward doctors; they have more experience and know what can be left for tomorrow. If there is something handed over, they are usually fairly simple jobs; an ascitic tap to chase to make sure there are no signs of SBP, U&Es to chase in someone with hyperkalaemia - that kind of thing.

If you're on call you'll spend the next few hours taking calls from staff on the wards with fluid reviews and forgotten warfarin prescriptions (we're all guilty of it), an occasional clerk in on CCU. You'll get called about patients with high FEWS (Fife early warning score) - remember to stay calm and use your A to E, take their current admission and past history into account and note their escalation plan. You can always call the middle-grade who is usually working away on MHDU, and the Med Reg is also there to give you advice or come to save you. Your jobs list only seems to get longer as the evening goes on, and you inevitably have things to hand over to the night team. Don't feel guilty - Hospital at Night have 12 hours to do the jobs you were trying to do in 4.

On-call block

A blurry few weeks of nights on the wards and days in AU1. Hospital at Night is a team of you, your fellow medical and surgical FY1s, the med reg and the ANPs. There are also clinical support workers who are absolute life savers when it comes to bloods and cannulas. You'll pick up handover from 20:00 where you'll be made aware of sick patients and outstanding jobs, and then head into the night. Again, you cover the same wards you usually cover when you're on a ward late. You plod along, sweeping the wards of their jobs and occasionally getting caught up with sick patients. Again, always contact the Med Reg for advice if you're not sure. The ANPs are often saviours overnight and by the time you get to a ward most of the jobs have already been done. Once everything has calmed down, get yourself some food, then head over to

AU1. There are always people to clerk in and it often gets busy at night with patients coming from A&E and GP out of hours.

Weekdays on AU1 consist of going on the Frailty or Respiratory ward rounds at 09:00 (though the respiratory one usually starts later - prepare by collecting FEWS scores of patients and grab yourself a coffee if nobody has turned up by 09:45). Similar to on the wards, you tag along with the consultant and then race to get the jobs done by the 4 o'clock pause. It's difficult because there is a very high turnover of patients down in AU1 - if your patient has disappeared that does NOT mean you don't have to do the jobs, as they probably won't be seen by a Doctor until the next day. If you don't have the time to chase after your patients, do call their new ward to handover important jobs.

AU1 weekends you start at 08:00 for handover and the ANP will divide juniors into groups for the ward rounds. Once you've finished the ward round, as always, clerk clerk clerk. Be careful not to start clerking in too late when you're in AU1 - you're supposed to finish at 18:30. If you do end up having a few things left to do, make sure you hand it over to someone.

Take home messages:

- Have a great time, it's a great job!
- There is lots of senior support – never be afraid to ask for help.

St John's Hospital, Livingston

Author: Sophie Marriot
Peer reviewers: Catriona Groom and Dan Garner

A reminder:

- These documents were written before the reorganisation of hospitals due to COVID.
- Unfortunately, it is likely some of this has therefore changed but they have been left in as they may still be able to provide some wisdom to orientate yourself around the hospitals.

Introduction

- SJH is a bit far out if you live in central Edinburgh, and it runs a little differently to the central larger hospitals. But it is generally very friendly, and we've been made to feel very welcome as part of the team here. And we're looking forward to meeting you and working with you if you're about to join us!

Commuting

Train

- There are quite regular trains (at least every 30 minutes) from Edinburgh Waverly to Livingston **North (**takes about 20 minutes) - from there it's about a 20 minute walk to St Johns however there is a bus that runs from the station to the hospital (however most people take the walk). It can be tricky for an late evening finish as the trains don't run very late and additionally Sunday trains make a 8am start not feasible, however there are plenty of people in the hospital at that time of night and most will be more than happy to offer lifts if they can.

Drive

- The M8 and the Edinburgh City by-pass can get quite busy in the mornings so try and factor this is when you're planning your journey. I tend to have a quick look on google maps each morning just before I leave so I can try and avoid any really congested areas.

Parking

Hospital Parking

- You can apply for a permit for hospital parking, but these are very few and far between and you are unlikely to get one for the time you'll be with us. Sometimes, though the barrier is down, and no one is manning it, and you can just park in the staff car park anyway, if this is the case. Otherwise you can generally only park in the staff carpark without a permit, after 3pm, on nights or weekends.

Almondvale Stadium

- A 10-15-minute walk from the hospital. Be careful walking to and from there on your own in the dark. There is a shuttle bus which is supposed to run in between. You can get a pass to park in the stadium part, although there's lots of free parking just to the left.

Out-of-hours

- You can get a temporary pass from the Medical Administrators if you go to them the day before you work an OOH shift, and this should let you park in the hospital car park freely.

Handovers

Wards

- **Morning** (08:45-09:00) - HAN Office - An FY1 from each ward accepts a handover from the nights team of any sick patients from overnight or anything the day team need to be aware of.
- **Afternoon** (16:30-17:00) - FY1 Handover. Middle Graders room near Ward 25. - An FY1 from each ward hands over to the lates FY1s (Bleeps 3709, 3075) for any outstanding jobs, results to be chased, patient reviews, patients to be aware of, or anything to be handed over to the night team later.
- **Evening** (21:00-21:30) - HAN Office - The lates FY1s hand over anything outstanding from their shift, any patients to be aware of overnight, or anything that the day team wanted to be handed over.

MAU

- **Morning** (08:00-09:00) - MAU Doctors Office - The night team handover all the patients that have been clerked in overnight and anyone else to be aware of on the unit.
- **Safety Huddle** (11:30, 14:15, 16:15) - MAU Doctors Office - Meetings throughout the day involving all the medical staff, the consultants on call, the nurse in charge and also management. The bed situation, numbers of admission and any patient safety or staffing concerns are discussed. These are taken pretty seriously and they like people to stop what they are doing/finish phone calls and be present for the huddle.
- **Evening** (21:00-21:30) - HAN Office. Usually one of the registrars from MAU goes down to HAN to handover any patients yet to be seen, outstanding jobs or anyone ill and to be aware of overnight.

Wards

This is changing every day during COVID-19 so make sure you keep up to date with any changes!

Lower Ground

- **Stroke** - Self-explanatory really, this is a specialist ward for patients recovering post-stroke and most of the consultants are stroke specialists. Generally relaxed ward with a few acute admissions each week but predominantly rehab.

Ground

- **Ward 9** - Gen Med and cardio. Mostly gen med patients, but they also try to keep most of the cardiology patients here, and cardio do regular ward rounds throughout the week.
- **Ward 8** - Rehab. Long-stay ward for patients requiring more rehab input, currently a general medical ward in light of the pandemic.

- **Obs ward** - Observation ward is an extension of A&E. It's generally a mix of A&E patients and Gen Med borders. There's a ward round a 9am with an A&E consultant, and you have responsibility for these patients. The Medical teams will see their patients and may hand you some ward-based jobs. The nurses are normally quite self-sufficient on this ward. Plan is to turn this into a rapid assessment unit for the foreseeable future.
- **DOSA** - Previously the day surgery unit where people would come in for minor/elective Plastic/Urology/MaxFax/ENT procedures. Now houses all emergency surgical patients - currently covered by Plastics SHO.

First Floor

- **Ward 12** - Gynaecology. But also, normally has a solid number of gen med borders which you may be asked to go and see.
- **Ward 14** - Ortho Geris. Another rehab ward, generally for elderly patients who are needing PT/OT post-ortho surgery. Lots of MDT involvement in this ward and the nurses, physio and OTs have the most input into patient care. Also now houses general medical rehab patients.

Second Floor

- **Ward 18** - Gen Med and GI. Previously the Plastics/MaxFax ward but has now been converted to a Covid ward.
- **Ward 19a** - Previously ENT ward. Again, often has a number of gen med borders that you might be involved with. This will be the covid ward for surgical patients.
- **Ward 21** - Gen Med and Resp. Currently a Covid ward.
- **Ward 22** - An extension of MAU, normally used as PAA (Primary Assessment Area)
- **Ward 25** - Covid ward. Confirmed or suspected cases of Covid-19 go to Ward 25.
- **MAU** - Medical Assessment Unit. **Half of this ward is being turned into a Level 1 (HDU) unit and the other half a covid ward.**

Food

Canteen.

- Located on the second floor, the canteen is where most people go for lunch and there's plenty of room for teams to all sit together for a lunch break. The food is pretty decent and reasonably priced. There's also a great sandwich bar where the guy never got the memo r.e. Portion control! Open every day including weekends :)
  - Lunch: 12-2
  - Dinner: 5-7

Coffee shop.

- Downstairs by the main entrance. The coffee shop serves decent coffee and small bites (cakes/sandwiches etc.). Not open on weekends though. **Now Shut**

Hospital shop.

- Also downstairs by the main entrance, opposite the coffee shop. You can pick up most things from here, they sell a wide selection of drinks and snacks. Also not open on weekends.

Over-the-road.

- If you cross over the Howden road at the front of the hospital there's a small Co-op and also a great small coffee shop. (Opening times might be affected by Covid).

Bring your own.

- Most wards have a fridge and a microwave so you can also save the dollar and bring in your own stuff!

Labs

Getting samples to labs

- **Pods**. There is not a comprehensive pod system in SJH - only ED has pods. If you're in Obs ward you can use the ED pods. The instructions are on the wall, but usually there's always someone around who is more than happy to help. Please note you cannot POD COVID swabs or any COVID patient blood samples/swabs, these should be double bagged, labelled and taken by a porter.
- **Porters - set pick up times**. Porters have a couple set pick up times during the day, where they collect samples from a specified point on the ward. When you're starting on a ward it would be a good idea to find this pick-up point for future reference. These times might not get your samples to the lab quick enough though.
- **Porters - call**. Call porters on 52084 or go through switch board and tell them you have samples for the labs from whichever ward you are on. They'll normally get someone round within 15 minutes or so.
- **Walk it yourself**. If you're not busy, sometimes a quick trip to the lab can be a good way to stretch your legs and get off the ward briefly.

Labs Out-Of-Hours

- For samples to be processed urgently (e.g before 9am the following morning), you need to bleep the labs:
  - **Haem** (FBC, Coag, ESR, Haematinics): Bleep **3729**
  - **Biochem** (U&Es, Gluc, Lac, ABGs): Bleep **3728**
  - **Micro:** Leave blood cultures in the incubator located in room opposite microbiology lab (its labelled well, but perhaps get someone to show you during working hours)

Imaging

- Request everything on Trak
- X-rays happen routinely throughout the day including out of hours.
- If you require an USS or CT scan urgently or out of hours (after 5pm), you will need to discuss this with the radiologist on-call (go through switch board).
- If you need portable imaging, you will have to discuss this with the radiographer (Bleep 3645 or go through switch).
- If a CT-scan with contract happens out of hours or at weekends, a doctor (usually FY level) has to accompany the patient in case of an anaphylactic reaction. This is a rare complication and unlikely

to happen, but there is a crash trolley in the CT-scanner room with everything you should need. And just put out a medical emergency (2222) straight away and all the help you need will come ASAP.

Important Bleeps

- Med Reg 3630
- Pharmacy 52050 - phone extension
- HAN/HAW Office - 52210
- Induction app has most things on it
- But if in doubt call switch - Dial 0 from any phone they are amazing

Borders General Hospital

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A reminder:

- These documents were written before the reorganisation of hospitals due to COVID.
- Unfortunately, it is likely some of this has therefore changed but they have been left in as they may still be able to provide some wisdom to orientate yourself around the hospitals.

The BGH is a small district hospital with approx 350 beds based just outside Melrose in the Scottish Borders.

Getting there

Driving from Edinburgh

Follow the A68 to just past Earlston then turn right at the roundabout towards BGH or follow the A7 through Galashiels and on out towards the BGH.

Parking is available on site. The main car park, nearest the hospital, has a time limited stay (approx 4 hours). If you are a commuting staff member you can get special permission from HR to park in this car park for longer than the limit by providing your registration number at indication day. Alternatively, there are a number of long stay car parks dotted around the site, make sure to read the signs at the entrances.

If you are a doctor in training in SE Scotland, you will get your mileage paid, so keep it documented and fill in the forms you can get from the admin team. You also get paid to give other people a lift too. If you are a BGH employee (eg locum) they may agree, on a contract by contract basis, to pay mileage

Train from Edinburgh

The train runs form Edinburgh to Tweedbank station which is about a 15-minute walk from the hospital. Note that the timing of the trains can make it difficult to get in for 9am on a Sunday or back again later that evening.

Train fares as per mileage above. Paid if you are SE trainee. Negotiable if employed by BGH directly.

Usual layout

Note this will be different during the COVID-19 Pandemic

Medical wards – all on first floor

- Ward 4 – General Medicine
- MAU (Ward 6) – Medical Admissions
- AAU – Acute assessment – down the bottom of MAU in the annex
- Ward 5 – Medical "HDU"

Medicine of the Elderly Wards – first floor down past mess

- Ward 12 and Ward 14 (formerly ward 10)
- Stroke unit (BSU) - on the ground floor

Surgical wards – second floor above medical wards

- Ward 7 – General Surgery
- Ward 9 – Orthopaedic surgery (and some gynae)
- GSAU – General Surgical Assessment Unit

Hospice – Ground floor, own entrance

- Margaret Kerr Unit

Paediatrics – Second floor above MKU/MOE

- Ward 15

Ante/post Natal – Second floor above MKU/MOE

- Ward 17

Labour ward – Second floor

Winter pressures ward – Second floor

- Ward 16

ITU – Second floor above canteen

COVID-19 Layout Changes

- MKU (ground floor), BSU (ground floor), Ward 14 (first floor) and Ward 17 (second floor) are all COVID wards – they are all one above the other.
- Other potential overflow wards are Ward 12 and the physio corridor (below ward 12)
- MKU has moved to Cauldshields, an old pshychiatry inpatient area below MAU on the ground floor
- BSU has moved to ward 16
- Ward 14 (MOE) has moved to Ward 7
- Ward 7 (surgery) has moved in with Ward 9 (ortho)
- There are other plans for further change as required

Departments that have FY1s

Medicine

Medicine normally runs from ward 4 and MAU. Medical FY1s usually cover 9-5 shifts on ward 4 and 9-9 shifts on MAU. Sometimes MAU shifts are split shifts with an FY1 from a ward covering the 5-9 portion after their 9-5 ward shift.

In the evening (5-9pm) one FY1 from the wards covers all of the medical wards (except MAU) and holds the FY1 on call bleep (which is held by the MKU FY1 during the day - see day in the life of 6640 below).

Hospital at weekend and hospital at night (H@N) are quite similar. At the weekend for medicine there are two FY1s, some SHOs, a reg, some ANPs and one or two consultants. Some of the team will be on “take” on MAU (one FY1, one SHO, a consultant and the med reg). The rest cover the wards. Wards have to bleep the H@W coordinator with the jobs that need to be done. Otherwise doctors just see the patients that are out for weekend review – each ward provides a handover of which patients need to be seen over the weekend (dividing these up depends on the team, sometimes you take a ward, sometimes the patients are divided by complexity).

The med reg is also available to the ward H@W team for support

At night, there is an FY1, an SHO, a reg and some ANPs. They cover the whole hospital including surgery. All jobs are divided up and managed by the H@N coordinator (an ANP).

Medicine of the Elderly

Known as Department of Medicine of the Elderly (commonly called DME). Note that the Department of Medical Education also sometimes goes by DME (rather confusingly)!

DME is effectively part of medicine. All junior staff are on the one rota with some rostered to the DME wards (12 and 14). There is an MOE reg who does not do very much medicine but instead spends most time in DME. Nights and weekends as above

Surgery

There is a fantastic surgical unit induction handbook prepared by previous surgical FY1s. The current team will be able to give you a copy. In summary, the shift pattern is normally:

- Ward Shift (Handover) - 8:00am to 4:30pm
  - Starts in the handover room at 8am (1st Floor, Blue Corridor, Administration Office - turn left to the end of the short corridor and it's the last door on the right).
  - After receiving handover for both Ward 7 and 9, go to Ward 9 and write any jobs that have been handed over for them to do in their Doctors' Book (a large A4 diary in their doctor's area).
  - Thereafter, make your way to PSAU (Ward 8), and offer your help (e.g. taking blood).
  - Finally, head back to Ward 7 to collect the bleep and prepare for the ward round.
- Ward Shift - 8:30am to 4:30pm
  - You and the handover FY1 will be the 2 morning FY1s.
  - Start your day by printing the ward floor plan and patient list (explained later)
  - Good idea to print off 4 or 5 copies for yourself and the seniors
  - Listen to the morning board round at about 8:30am - the seniors will discuss all the patients in the ward plus the overnight admissions. You may be asked to clarify details or look at blood/radiology results during the round.
  - This is a good opportunity to update the job list and your floor plan!
  - Join the on-call consultant and registrar on the morning ward round. This can be quite fast, and the consultant won't wait for you to finish writing in the notes before moving on.

A good suggestion is to rotate FYs between each patient. That way you can prepare for the upcoming patient as your colleague is finishing with the previous one.

- Late Shift - 12:30pm to 9:30pm
  - Start in the Junior Doctor's Office at 12:30pm.
  - Familiarise yourself with the ward and rotate with your morning colleagues so they can get lunch.
  - Evening ward round – only one FY1 needed (varies between consultants if it actually happens or not).

- Prioritise outstanding jobs towards the end of the shift and decided what needs to be handed over to the H@N team.
- Update the patient list for the following day.
- Head to handover room at 9:00pm for handover.

Pre-assessment Clinic (PAC) - 12:30pm to 9:30pm

- Start in Outpatients Pre-Assessment clinic, 1st Floor, Pink Corridor
- Ask a member of staff where your office is
- Introduce yourself to the anaesthetic consultant leading the clinic that day.
  - Arrive 10-15 minutes before the clinic begins to scan SCI store and get an idea of upcoming patients PMHx – it will save you time later!
- You have 30 minutes to assess each patient and examine them.
  - The focus of the PAC clinic is to stratify anaesthetic risk for upcoming operations. Gather information and document this onto the booklet given to you.
  - You'll also need to write up each patient's regular medication on their Kardex and prescribe prophylactic antibiotics for their procedure. Guidance for antibiotics is available in a black ring binder in your clinic office.
  - Following this you need to hand the patient over to the anaesthetic consultant for them to review.
- There are usually 6 patients in each morning PAC.
- Grab lunch (or attend Grand Rounds if on a Monday) and head up to ward 7.

These clinics are a golden opportunity to complete SLE's and CBD's!

Handover

BGH does a hospital wide handover run using a script with wards handing over in a specific order. Everyone meets at handover time which is currently in the Tryst (due to extra space for covid regulations) Unlike other hospitals the hand over is at a set time and not an 'open hour' so ensure you are there from the start.

- Monday to Friday
  - Morning handover: 8am
  - Evening handover: 9pm
- Saturday and Sunday
  - Morning handover: 9am
  - Evening handover: 9pm

MAU hands over after the hospital handover, so if you are on MAU handover will usually start 15 mins after hospital handover as some team members go to both handovers (eg med reg).

A day in the life of 6640

6640 is the medical FY1 on call bleep. By day, it is also the MKU FY1 bleep. Handing over to the right person at the right time is always a bit confusing for FY1s starting! Hopefully this will help. We will start with 8am on Monday morning.

Monday morning, 8am. The FY1 on for morning handover comes into the handover room, takes handover for all of the wards and picks up 6640 from the desk. This FY1 then does any urgent jobs the night team has handed over between 8 and 9am +/- responds to bleeps from wards. Just before 9, the FY1 hands over anything from the night team to the relevant wards. This can be done in person or by leaving a note on the doctors' desk of each ward. Generally, more complex things are best handed over in person.

At 9am, the FY1 brings the bleep to MKU and gives it to the MKU FY1 who uses it for the day.

At about 430pm, the FY1 on to cover the wards for the evening goes to MKU and collects the bleep from the MKU FY1. He/she then goes around all of the medical wards to receive handover from the day teams. This may include jobs to do between 5pm and 9pm and/or things to handover to the H@N team. From 5-9pm this FY1 does any jobs handed over to them by the day team and responds to bleeps from the wards.

At 9pm, the on call FY1 goes to handover and leaves 6640 on the desk in the handover room, ready to be collected at 8am the next day.

The process repeats for the rest of the week.

On Saturday, the on call FY1 for the wards collects 6640 from the handover room (it will have been left there the night before by the Friday evening FY1 on call). They hold this bleep for the whole day and the H@W coordinator uses it to contact them and pass on jobs.

Note: The 6004 FY1 crash bleep is always held by the MAU FY1 during the day and the H@N FY1 at night. The H@N FY1 does not carry 6640, it is not used overnight at all.

Breaks and Rest

The Doctors Mess

This is situated on the first floor on the corridor on the way to wards 12/14. There is a code on the door, but it is always open. There is a kitchen (keep it tidy- there is a dishwasher!) with bread, a toaster, tea and coffee, milk, cereal and a microwave. There is a TV with full Sky+, daily newspapers and some comfy couches. Great place to go to chill out on a break. On H@N most of the doctors and ANP's will meet here for breaks.

The canteen

The BGH canteen is on the first floor, above A&E. It serves fairly good food at a reasonable price. BGH scones are renowned for being fantastic with a fresh batch cooked every morning. Get in early though, they sell out fast!

There are also two microwaves and some vending machines in the canteen where you can heat up your own food or get snacks when the canteen is closed.

There is a general friendly atmosphere in the hospital. You can usually just sit with anyone and join in the conversation. It is very common for all team members from consultants to FY1s to sit together.

Shop

The WRVS shop/cafe is based beside the main door. Sells the usual sandwiches, chocolate, crisps, fruit etc as well as tea and coffee.

Cricket pitch cafe

Melrose cricket pitch is effectively on the grounds of the hospital. Recently, a little deli opened up in the club house that serves fantastic made-to-order sandwiches and Panini at a great price. There are a couple of seats to sit in or you can take it back to the mess or canteen.

Accommodation

If you are on a long shift or a night shift you can get a room in the accommodation for free. The accommodation block is opposite the ambulance station, on the right as you drive in the main entrance to the hospital. Rooms are fairly basic. You get a bed, bed clothes, and a small towel. Houses have 3 or 4 rooms, 2 bathrooms and a very basic kitchen with quite limited cooking facilities. Most people bring their own pillow as the pillow on the bed is quite small and flat (some people even bring their own duvet if they're down for a week of nights!).

Keys are allocated and given out by the accommodation office on the first floor (in the admin office area where handover takes place). Ideally you should book a room as far in advance as possible, they will put your name in the diary and have a key available for you to collect on the day.

Out of hours, switchboard looks after all the keys. If you have booked a room, you can collect your key from them. If you have forgotten to book one, they will be able to give you a spare key if there are any left.

Remember to give your key back after you have finished using the room to ensure it can be cleaned and then used for someone else.

Switchboard is in one of the offices on the left as you walk from the main entrance towards the main stairs. The door has a big window covered by a curtain.

You can also choose to live in the accommodation all the time instead of commuting. This is arranged with the accommodation office and costs approx £200 per month.