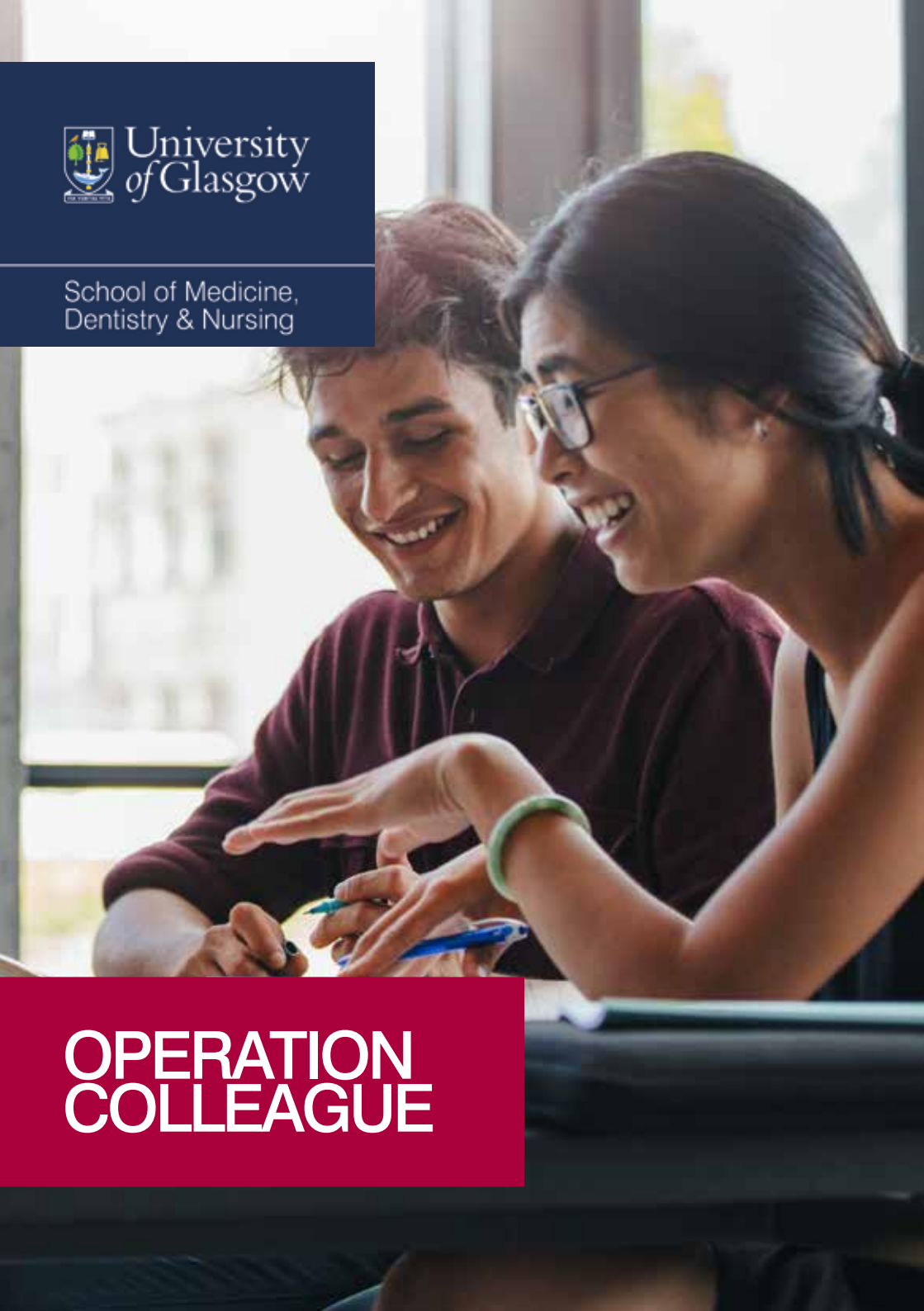
University of Glasgow

School of Medicine, Dentistry & Nursing



OPERATION COLLEAGUE

We are entering a new Academic Year aware of the challenges ahead presented by the COVID pandemic and the associated precautions instituted around all healthcare settings.

We recognise that there will be many competing pressures on your time, whether or not there is a second wave of infections emerging in the coming months, but wanted to stress the importance of continuing the high quality teaching and training, ensuring a constant throughput of motivated medical graduates to keep our NHS running.

In order to address the pressures, we have reinforced the message that our students should be receiving their clinical exposure and training as part of the medical teams. We have outlined the measures that we think will help instil a sense of integration for our undergraduates and NHS clinicians. This also presents opportunities to increase the granularity of the feedback from supervising clinicians of all grades, helping to give our students real-time feedback that they can act on to improve their contribution to the team.

We are acutely aware that the undergraduate experience should not merely consist of timetabled staged tutorials and bedside teaching (important though these are) but should emerge from involvement in all the activities around clinical care in inpatient and outpatient settings. To this end, this booklet contains some teaching tips and hints that should help incorporate experiential teaching into clinical care – we believe this represents the most rewarding way of interacting with students as well as the most formative experience for doctors in training.

One thing we would like to stress is the communication with the medical school if there are any concerns. It becomes clear that a drop in performance or attendance for a medical student (who will have worked at such a high level to get into medical school) is often the first sign of other difficulties. For this reason, we need to hear of any problems to allow us to address reduced performance or engagement – students need to be given the chance to perform at their best, and for this reason we are keen that if there is a drop in engagement or attendance that would worry you in a colleague, it should worry you in a student. If we know about these difficulties, we can nip them in the bud and forestall future problems.

Despite all the challenges, we are confident that we can improve on our already high standards. We can only do this if the lines of communication remain strong between the Medical School and all of our Clinical teachers across the West of Scotland. We look forward to continuing to build on these links, and are happy to be contacted about any matters you would wish to discuss.

Operation Colleague

We are entering a new era in teaching and training. Our aim is to make sure that you align your expectations of students with your expectation of a colleague. In order to make sure that our students can obtain clinical experience on the wards in late 2020 we must ensure that their clinical training and progression can be maintained even if the clinical environment becomes more hectic or hazardous. We need to be able to guarantee to the NHS that students will be able to conform infection control guidance (including appropriate use of PPE), while ensuring that learning and training can be completed. Our aim is that this learning will take place while simultaneously contributing to healthcare and so providing benefit to the clinical teams in attendance. This document is intended to show that in meeting these challenges we can make our teaching better for both clinicians and students.

In summary, if poor time-keeping, incomplete engagement, non-attendance occurred in a colleague, it would be raised as an issue. We want the same standards to apply to our students. If these things happen – let us know. If you wouldn't accept it from a colleague, don't accept it from a student! (See the section on Supporting The Struggling Apprentice below)

If you are uncertain about whether a concern is enough to warrant any intervention, then you might want to contact the Medical School. A call or an email to anyone – the local SubDean, the Year Secretary, Specialty Lead, Head of Year, Head of UG medicine. If we build up a picture of recurrent low-level concerns, we can act on these to improve the student performance at an early stage before things go badly awry.

In this regard, we wanted to launch some new initiatives bundled together as Operation Colleague, outlining our express intention that our senior students are preparing to take their place among the team, optimising their knowledge, skills, behaviours, and attitudes, and ensuring that graduation will mark a seamless transition to the role of trainee doctor, mentor, and educator. Here we set out the measures that will help embed the role of the student on the wards and in clinics.

a) Infection Control and Personal Safety

- Provision of appropriate, easily-recognisable standardised student dress in the form of student scrubs. We propose that the University of Glasgow's School of Medicine colours will source safe, practical, hygienic, and inexpensive clinical workwear – making them instantly identifiable to others in the team and ensuring that they can be given appropriate targeted training and teaching in all relevant settings. This has been organised by the Medical Chirurgical Society. Where necessary the School will attempt to help any students in financial difficulty to meet the cost of these items.
- Appropriate induction (including relevant PPE provision where necessary) for all clinical areas

b) Contribution as part of the team.

- We have included a section below looking at simple suggestions in which teaching can be enhanced to the benefit of students and clinicians. We see it as crucial that students are signed off only when they have achieved all competencies and not as a default option. The wider medical team will be in a good position to assess progress through the block, and we would be keen to see junior doctors contributing to formal and informal assessment while on placement, with input from senior staff when and where this might become necessary.
- Allocation of Near Peer Coach (NPC) in clinical environments where they are available – (including identification of temporary coach cover to allow for annual or study leave). The NPC will provide daily contact and facilitate integrating into the work of the team (See Operation Colleague Teaching Model below). Utilisation of FY's and other grades to provide teaching, training and mentorship throughout the clinical placement.
- We undertake to monitor and motivate performance in standardised assessment formats on the ward (e.g. Case-based discussions, Mini-CEX, CAPS) which will vary in number depending on clinical specialty. These will be planned by each Specialty Lead. A separate document will outline the requirement in your specialty.
- Using communications such as these we will build on training for our Educational (ES) and Clinical supervisors (CS) to allow widespread implementation of standardised ward, theatre, and clinic teaching methodologies (See Operation Colleague Teaching Model below). Our Clinical Educator Day on August 21st, and the online HPE Bytes teaching resource will form key components of this improvement.
- Encouraging Educational Supervisors, Clinical Supervisors, to fully utilise the End of Block Assessment Forms to feedback any aspects of knowledge, skills, behaviours, attitudes, or engagement that may require extra remediation (See Supporting the Struggling Apprentice). Enhancing this will be key to providing students with recurrent improvement opportunities.
- Pilot of paid roles within the Healthcare team as Medical Student Healthcare Assistant to provide remunerated assistance to the healthcare team out of hours. We are in discussion with the Health Boards to see if this would be feasible and helpful to those students who may find the heavily supervised clinical experience useful. If these are successful in the select pilot areas, there may be an argument for increasing provision across the region in a carefully considered manner.

We hope you find the teaching tips below useful and can begin to help us shape your future colleagues. Engaging with the teaching is one way to keep a strong affiliation with the Medical School, but there are regularly formal roles that help support all aspects of Undergraduate training – please keep an eye out for these as they become vacant.

We see the changes required Post-COVID as opportunities rather than threats. These improvements provide an excellent, safe, and eventually patient-centred way to utilise the skills of our most junior colleagues, while providing assistance to the healthcare team and leaving students ever more ready to take their place in postgraduate life.

The ‘Operation Colleague’ Teaching Model

The Medical School and the Health Boards have the shared goal of tending to patient care while simultaneously fostering an environment that drives learning. While medical students’ primary objective is to the develop their knowledge, skills, and behaviours, we wish to reinforce that they also have a responsibility to self-direct and enhance this process by contributing to the work of our clinical teams. We have identified five steps and ten strategies to enact this as well as guidance on how to support the struggling apprentice.

Five Steps

1. Setting Expectations
To establish a supportive learning environment, we make the student the apprentice - part of the team. We can set clear expectations of your apprentice that they learn from the knowledge, skills, attitudes and behaviour of their new team. Reinforce to them that ILOs serve only as a rudimentary road map and it is only by becoming a member of the team that they will be able to navigate their progress successfully. Apprentices will be able to meet the vast majority of their learning needs (and ILO’s) by tending to daily patient care and asking questions of the patients and the team. The team will sometimes need to find time (See Specific Strategies below) but much of the teaching and training can be embedded in the team’s work.

2. Identifying teachable moments
The busy-ness of clinical work can lead us to forget how much implicit knowledge informs our decisions. Teachable moments are plentiful in all settings but can easily be missed. One way of reducing misses is by ***“Modelling”*** (See Strategies below) - a team member completes part of clinical encounter (eg focused history, hypothesis-driven examination) or Team Professional Activity (See Appendix 1) while thinking out loud. This provides an externalisation of their reasoning by explaining their conceptual understanding, how they knew to do something, how they have weighed up a decision, or what ‘rules of thumb’ they may have used. This is not a trivial activity and it is best in short spells – it is not possible for one team member to think aloud for a long period of time (See Learning Points / Questions below). Similarly, the student should be encouraged to take time away after a few hours – they do not need to see out the entire clinical event to get the benefit – they will get more benefit from 2X2-hour clinics than one 4-hour clinic!

3. Coaching through direct observation
Spontaneous and focused observation of an apprentice is an important way to monitor and provide feedback on their progress over their time with the team. Getting the student to take undertake focussed parts of the history (eg Presenting complaint, Social History, Past Medical History, abdominal or cardiac examination) will allow the team to identify the level of the apprentice and provide directed feedback. It might be helpful to identify previous experience in advance. Sometime selecting certain patients and providing advance guidance is also necessary.

Coaching through direct observation can be realistically achieved in concert with the teams' clinical activity. Members of the team can perform **1-2 minute daily observations** of the apprentice completing part of a clinical encounter. After the observation is complete a team member can briefly provide hints, reminders and immediate feedback, stating exactly what they observed about the apprentice's performance before highlighting ***one thing they should keep doing and one thing they should start doing/stop doing/ do differently.***

While positive feedback can be delivered immediately, any negative feedback or recommendations for remediation might be best delivered one-to-one. Trainees ***at all levels*** should be able to participate in such observation and feedback and this will help bond the team and reduce the burden on individual clinicians. When time allows coaching can occur over a more prolonged period of observation (eg during a team professional activity) that will facilitate more detailed feedback.

4. Encouraging articulation

Articulation of understanding will form a significant component of the formal assessments that occur across the clinical placements (e.g. CBD, Mini-CEX) but can be brought out during clinical work. While this cannot be done relentlessly during clinical work, shortened sessions can help target this (See Strategies for more detail)

"Finding Time through Learning Points / ***Questions"*** - is a simple but useful way to identify further educational and training needs without intruding too much on the work of the team.

"Self-Explanation"- when the apprentice is reviewing learning material (eg clinical notes, observations, drug kardex or other data that requires interpretation). Here the apprentice will generate self-explanations to oneself with minimal prompting.

"One Minute Mentor" (See Strategies).

"SNAPPS" (see Strategies).

These strategies may benefit from identification of time out with routine clinical work – perhaps over the Ward Round Coffee or lunch.

5. Stimulating self-directed learning

There are number of approaches that can be a catalyst for self-reflection: "***Tell me your story backwards", "Diagnostic Reflection", "Contrastive Examples" & "Diagnostic Timeout/Challenge"*** (See Strategies for more detail). Apprentices can also be encouraged to reflect on learning experiences using a Reflective Cycle (What happened? What were you thinking/feeling? What was good and bad about the experience? What sense can you make of the experience? What else could you have done? If you had the same experience again what would you do?).

More simply we can stimulate self-directed learning by simply asking students what they think they need to learn in the light of their experience. Feedback should be given promptly and in a safe environment (It may have to be delivered privately) and should be improvement-focused and targeted at a concrete behaviour that will promote progression in the apprentice. **"Learning Points / Questions"** and ***"Post It Pearls"*** (see Strategies below) can be used to follow up briefly at the conclusion of the clinical activity. This should be a cyclical process (including feeding back on resultant changes to apprentice behaviours) that should take place at regular intervals over the time the apprentice is with the team.

Ten Strategies

1. Find Time – spreading teaching out
'Half & Half': Apprentice stays for first half of the clinical activity and then leaves to do some self-directed reading/research.
'Scouting': Student moves ahead in the ward round or sees a patient alone in clinic to perform a specific activity on a selected patient (eg section of history or system examination). By the time the ward round comes to that patient the student can present their findings at the relevant part of the ward discussion.
'Learning Points / ***Questions'*** – The student is primed at the start of the clinic or ward round to list questions and Learning Points on a sheet of paper. At discrete intervals (might be every 30-60 minutes or at the end of the session) the student moves through these. This keeps the student attending to the task and avoids persistent interruptions at busy times.
'Boomerang': Apprentice follows the patient to a procedure/investigation/theatre or goes forward/back to review a patient and then returns to the clinical activity.
'Shuttle': Apprentice can shuttle around different members of the team or through different components of a clinical activity: physio, OT, SW, nurse, specialty review, pharmacist, anesthetist.
'Divide & Conquer': Multiple apprentices can be distributed across space & time i.e. across different ward rounds or attend parts of your ward round.
'Near Peer Coaching': junior doctor given coaching role during clinical activity

2. Modelling
This can be done with colleagues in the doctor's room, on the ward round or in clinic
Role-model through demonstration with **think aloud** or **activated observation.** Keep track of time and rotate around the team to prevent overload. Juniors will find great value in contributing to feedback on these range-limited tasks. For example:

≤30 seconds: physical exam feature (e.g. peripheral oedema)
≤2 minutes: conversations (e.g. discuss response to treatment)
≤5 minutes: discussions (explain a procedure)

3. Learning - Not 'Being Taught'
This is done during contributing to clinical work
Students should be given a specific role on the ward round (eg navigating the electronic health record, PACS, reporting on NEWS or Drug Kardex). This keeps the students involved and frees up other staff to contribute to the discussion around patients. It may take time for them to become adept but it will be a positive contribution to the work of the team. In General Medicine the uptake and completion of individual tasks can be documented on the table of Team Professional Activities (see Appendix 1). Different specialties may have amended lists to help direct, inform and motivate contributions to the clinical team.

4. Self-explanation
This can be done with colleagues in the doctors' room on the ward round
Apprentice is prompted to generates self-explanations to oneself when reviewing learning material with minimal instruction. i.e. data interpretation, patient observations, management plan reasoning.

5. One-Minute Mentor
This can be done on a ward round or clinic, or in the doctors' room before / after ward rounds or clinics
Step 1: Get a commitment to a specific activity (pushing the apprentice to get involved in thinking or make a decision e.g. 'what is the differential diagnosis?', 'what investigation?', 'what management?')
Step 2: Probe for supporting evidence (uncovering the clinical reasoning process)
Step 3: Reinforce what was done well
Step 4: Give guidance about errors and omissions
Step 5: Teach one general principle

6. SNAPPS (apprentice led approach that should take 1-2 minutes)
This can be done on a ward round or clinic, or in the doctors' room before / after ward rounds or clinics
S - summarise the history and physical findings
N - narrow the differential to two or three possibilities
A - analyse the differential by comparing and contrasting diagnoses
P - probe the preceptor with questions about areas of uncertainty
P - plan diagnostic or management strategies
S - select an issue related to the case for self-directed learning

7. "Tell me your story backwards"
This can be done as part of the debrief of a case of week/portfolio case/long case
Step 1: Ask the apprentice for his or her diagnosis (may be a provisional or working diagnosis)
Step 2: Ask the apprentice to offer specific history and physical examination information that supports the diagnosis
Step 3: Ask the apprentice to defend why the diagnosis is not one or more other possibilities
Step 4: Ask the apprentice to propose his or her plan of action (Sample questions: "Is additional work-up indicated? If so, what? If not, what plan of action do you recommend?")

8. Contrastive Examples
This can be done on the ward round or in the clinic
Ask the apprentice to give you one alternative diagnosis to a case on the round / clinic.
Ask the apprentice to compare and contrast the illness scripts by answering:

1. Who gets ***this*** illness? (Epidemiology/risk factors)
2. How does it present with respect to time?
3. Clinical manifestations on presentation.

Ask the apprentice to commit to a how likely the alternative diagnosis is?

9. Diagnostic Reflection
This can be done on the ward round or in clinic
Step 1: Narrow your differential Diagnosis including '*must not miss*' Diagnosis.
Step 2: List the findings that support the Diagnosis.
Step 3: List the findings that are against the Diagnosis.
Step 4: List the findings that are absent if this Diagnosis were correct.
Step 5: Rank your Dx in order of likelihood, thereby deciding on the most likely Diagnosis

9. Post It Pearls

This can be done on the ward round or in clinic

Hand a bundle of post-it notes to each student at the beginning of the clinical activity. Ask the apprentice to write down any pearls of wisdom from the ward round or any questions/areas of uncertainty.

Then at the end of the round, put them on the white board and go through them for 5-10 minutes.

10. Diagnostic Challenge (Divide into Red Team and Blue Team)

This may be useful in the doctors' room or during a paper ward round

BLUE TEAM start the challenge with the 'Working Diagnosis' to be challenged. Present the case and give the **RED TEAM** the opportunity to ask questions and challenge the diagnosis. Student(s) can play in either team.

RED TEAM should consider the following:

1. **WCS**: What is the Worst Case Scenario? Have we ruled this out? Anything we need to do urgently?
2. **Alternative Diagnosis**: What else could it be? Is this an atypical presentation of a common problem? Does anything not fit?
3. **Investigations**: Do we have all the Ix? Do we need the proposed Ix? Will it rule in/out the diagnosis? Is there another Ix that will help answer the question?
4. **Ask the Patient**: What do you think it could be? Is there anything you think doesn't fit?

Conclude the challenge with the agreed 'Working Diagnosis' and ongoing plan taking into account planned or additional Ix, changes to the diagnosis, management plan and situational awareness and contingency e.g. timeframe for follow up and review.

There are papers published on each of these teaching methods – if you have an interest in this then we can direct you to these resources. Additionally there is material available on HPE Bytes

Supporting the Struggling Apprentice – "Call It Out"

Undergraduate medical training is challenging, and all apprentices will face difficulties along their journey. It is important that we identify early those apprentices that are experiencing undue difficulties in progressing along the expected trajectory. It is important to note that by not putting in place the necessary support at the right time, we are setting the apprentice up to fail their successful transition to becoming a colleague. Clues can be identified from data collected during educational/clinical supervision meetings, via the apprentice's contributions to the team (see Steps and Strategies above) and from coursework and standardised assessments (e.g. Mini-CEX, CBD). Below, we briefly provide some **clues** and a **potential approach** to supporting the struggling apprentice:

Clues

- Apprentice appears to be struggling with behaviour (e.g. appears disorganised -has difficulty with time management such as attendance or deadlines for assessments, integrating into the team or self-directing their learning).
- Apprentice appears to be struggling with knowledge and skills (e.g. you or the team identify deficits in history taking, clinical examination, components of clinical reasoning, communication skills, CAPs, TPAs)

Potential Approach

Your approach (Medical School and Local) may be determined by the timing of the concern (late in the block or after the block), the seriousness of the concern, or your availability for local intervention. When student performance falls, this is often the first sign of an underlying issue so before any action is taken, it is helpful to ascertain whether or not there is an underlying personal or health issue that may need involvement from their GP or our Support/Year Teams.

1. **Medical School**
   Inform the Medical School (Via the Local SubDean, Specialty Lead, Year Director, or Head of UG Medicine). They can then arrange for a meeting to discuss the specific issues. It is helpful for them to have sight of the nature of the concern to allow a full discussion to take place.

2. **Local Intervention**

- Ask the apprentice to reflect (using a reflective cycle) and self-assess.
- Provide your own view of what is working well and what is not working well (the apprentice may have no idea).
- Ask the apprentice to make connections between specific knowledge, skills and behaviours and negative outcomes.
- Point out these connections if required (the apprentice may have no idea).
- Elicit a self-directed plan from the apprentice of how they may change the specific knowledge, skills and behaviours that is leading to a negative outcome.
- Contribute to the plan to ensure it is realistic providing specific guidance (stabilisers) on strategies/resources (e.g. task chunking and scheduling, using 10 strategies) the apprentice could use if required.
- Follow up or 'check in' at a specific time/s to facilitate apprentice accountability/self-assessment of progress and your updated perspective.

Appendix 1

TEAM PROFESSIONAL ACTIVITIES (TPA) LEVEL LOG

Team professional activities (tasks or responsibilities) are units of professional practice with a clinical team. During your Senior Medicine block you should complete the log below to ensure you have reached the necessary level of supervision required by the end of your attachment. The level required by the end of Senior Medicine is pre-populated in the log below. The supervision scale overleaf provides a descriptor to each level. Each of the 12 Medicine team professional activities must be dated and signed by the person that you observed or were supervised by. This log will form part of your end of attachment assessment with your Educational Supervisor. Please refer to full descriptors of each team professional activities (separate excel document).

Team Professional ACTIVITY	Level Required	Supervisor Name/Designation	Date
1. Write a ward round 'jobs list' and then prioritise tasks	Close supervision		
2. Carry out a review of a drug Kardex during rounds	Close supervision		
3. Carry out a review of an observation chart during rounds	Close supervision		
4. Carry out a review of a fluid prescription chart during rounds	Close supervision		
5. Handover a patient to a colleague	Close supervision		
6. Refer a patient to a colleague	Close supervision		
7. Consent a patient for an investigation	OBSERVE		
8. Present a patient review during rounds	Close supervision		
9. Write a structured entry in the case notes	Close supervision		
10. Review a patient for a nursing colleague	Close supervision		
11. Prescribe in parallel with a colleague on your 'student' kardex'	Unsupervised		
12. Write a structured immediate discharge letter	Close supervision		

TEAM PROFESSIONAL ACTIVITY (TPA) SUPERVISION SCALE

Task initiated by vision	**Supervisor proximity**	**Supervisor check**	**Level of Supervision**	**Explanatory notes**
Supervisor	N/A	N/A	OBSERVE	Student just watching
Supervisor	In immediate clinical area Co-activity - early Hands off - late	Full	Close supervision - trusted to act while observed by experienced supervisor	Co-activity: supervisor shows student how to do TPA Hands off: supervisor watches student do TPA whilst in clinical area
Supervisor	In nearby clinical area	Full	Unsupervised – trusted to act unsupervised (under clinical oversight)	Supervisor advises what to do and returns to check everything