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Twelve tips for teaching and supervising post-graduate trainees in clinic

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ABSTRACT

By providing quality teaching and supervision, medical educators can contribute to productive and fulfilling outpatient experiences for postgraduate trainees (sometimes called residents, registrars, or GP trainees). The recent literature addressing practical steps to improve outpatient teaching is limited. Here we present specific trainee-centric behaviors, techniques, and language that educators can employ to enhance their teaching in the outpatient clinic, in the form of twelve tips. The first two tips pertain to navigating the patient-trainee-supervisor dynamic in the exam room, the next four address listening to an oral presentation, and the last six are tips on being an effective teacher and coach.

KEYWORDS

Postgraduate; clinical; feedback; ambulatory medicine; medicine

Introduction

The outpatient general medicine clinic is a rich experiential learning environment for trainees, providing unique opportunities to practice chronic disease management and inter-professional collaboration (Tanaka and Son 2019). The presence of supportive teachers can significantly improve trainees' experiences in the clinic (Bowen and Irby 2002; Cyran et al. 2006; Wearne 2003). However, outpatient clinician-educators face a number of challenges, including time pressure, physical space limitations, documentation requirements, and the need to balance effective teaching with providing adequate supervision and ensuring safe care (McGee and Irby 1997; Thomson et al. 2014; Wearne et al. 2012). 'One-minute preceptor' and 'SNAPPS' are two evidence-based frameworks that can improve outpatient clinical teaching (Neher et al. 1992; Aagaard et al. 2004; Wolpaw et al. 2009). Outside of these two models, the literature on specific techniques for outpatient teaching and supervision of post-graduate trainees is limited.

Trainee-supervisor relationships often evolve over time as trainees assume increasing responsibility, gradually forming their identity as the 'lead clinician' (Sturman et al. 2020; Brown et al. 2020). Qualitative studies of post-graduate trainees and educators have identified supportive relationships, a 'help-seeking culture,' shared expectations, and a collaborative approach to learning as important thematic determinants of success (Kisiel et al. 2010; Jackson et al. 2018; Wearne 2003; Brown et al. 2018; Sturman et al. 2020). We sought to build on this work by identifying specific trainee-centric behaviors, techniques, and language that medical educators can employ to enhance their teaching in the primary care clinic. The following twelve tips are distilled from our experience as outpatient medical educators, conversations with colleagues and trainees at our teaching clinic, and our review of the available literature. The first two tips address the patient-trainee-supervisor dynamic in

the exam room, the next four pertain to listening to an oral presentation, and the last six are tips on being an effective teacher and coach.

Outpatient clinical education occurs in a diverse range of clinical, pedagogical, and cultural contexts. Furthermore, individual trainees can have vastly different needs. In particular, the identification and remediation of persistently struggling learners requires special care and is beyond the scope of these tips (Kalet et al. 2016; Krzyzaniak et al. 2017). The tips presented here will be most relevant to supervision in continuity primary care clinics in which trainees primarily see a panel of patients assigned to them, although we hope that they will be helpful to educators in other outpatient contexts.

Tip 1

Manage psychological size

While joining a trainee in the exam room can be a valuable opportunity for coaching and teaching, there is a risk of undermining the trainee's role as the primary provider (Cohen and Truglio 2017; Brown et al. 2018). Attending to the 'psychological size' (relative perceived status) of yourself and the trainee can help you successfully navigate the patient-trainee-supervisor dynamic (Vaughn and Baker 2004).

When you join a trainee in their exam room, use simple comments to build up their psychological size (e.g. 'You're in really good hands here' or 'I think Dr. R has a great plan and I don't have much to add') (Brown et al. 2018). Use body language to reduce your own psychological size: allow the trainee to enter the room first and try to place yourself out of the patient's line of sight, at the periphery of the clinical encounter (Cohen and Truglio 2017; Laponis and Chou 2016). Explaining your role can help avoid the perception that the trainee is merely a reporter, while you

are the 'real doctor.' You can use language that stresses collaboration ('Dr. R and I work together to provide you the best care'), or discuss supervision in a way that maintains the trainee's primacy ('I'm here as a backup for your doctor').

It can be challenging to choose how and when to interrupt an encounter. Try to give trainees space to answer patients' questions and explain concepts, even if they stumble. When discussing diagnostic testing or management, try using a 'thinking aloud' approach to avoid undermining the trainee in front of their patient (e.g. 'I wonder if a trial of anti-reflux medication would be worthwhile, what do you think?') (Ingham 2012). Framing your interruption as adding value is another useful strategy, particularly when a trainee is struggling to communicate effectively: use a phrase such as 'May I add something?,' offer a point of clarification, then hand the encounter back to the trainee ('Dr R, perhaps you can talk about the plan moving forward?') (Back et al. 2010).

Correcting a trainee's plan in front of a patient can be particularly challenging, but the same principles apply. In these circumstances, try using language that highlights the help-seeking behavior of your trainee as a benefit in the patient's eyes. (E.g. 'Dr. R, I agree that some features of this skin lesion could be consistent with a benign spot. I also think you were right to get a second set of eyes for this one because it has some worrying features, like its size and how it has been bleeding.') Then, guide the trainee back into the role of lead communicator: 'Dr. R, maybe you can explain the importance of a biopsy in cases like this, where melanoma is a possibility.'

Tip 2

Avoid repeating the clinical encounter

Even when working with experienced trainees, there are times when a supervisor needs to clarify or confirm elements of the patient's history or physical examination, such as when a trainee has not considered a potentially serious diagnosis. However, excessive review of the patient's history in the exam room can cause trainees to feel sidelined or undermined (Kisiel et al. 2010).

If there are elements of the history or exam that you need to clarify, start by discussing with the trainee—it is possible that they already gathered this data but did not initially report it. If additional history must be obtained, it is best to plan for the trainee to ask these questions in the room. If, after taking these steps, it is still necessary for you to ask questions directly of the patient, make it clear that you and the trainee already discussed the patient's case in detail (e.g. 'Dr. R told me your story, I'd just like to confirm a few things ...').

Tip 3

Ration your teaching

Trying to cover too many teaching points can cause trainees to fall behind, which can lead to resentment (Kisiel et al. 2010). In general, limit yourself to one or two in-the-moment teaching points per patient. Try to teach

the 'general rules' that are most relevant and highest-yield for the particular trainee (McGee and Irby 1997).

Follow-up communication can be an effective method to deliver further reflections or teaching points. This can be done in person, via email, or as an addendum in the electronic medical record and is particularly useful when you have investigated a clinical question or want to share relevant evidence or resources. It also applies if you review the patient's medical record after supervising and discover items that require further attention during the patient's next visit with the trainee.

Tailor your teaching to the situation at hand. If a trainee is running behind or if there are multiple trainees who need your assistance, it is best to hold teaching points for a later time (or follow-up communication). Try to be aware if trainees are overbooked, have procedures planned, or anticipate special circumstances (Kisiel et al. 2010). Asking whether trainees expect challenges at the start of a clinic session can be helpful. Depending on the clinical and educational context in which you practice, consider taking an active role in helping your trainees and their clinical team structure their day (Lillich et al. 2005). This can yield extra time for teaching or reflection.

Tip 4

Listen to the trainee as you would a patient

Give trainees your full attention while they are presenting. Avoid distractions such as email, the electronic medical record, or instant messaging. If you need to address something urgently, ask the trainee to pause for a moment until you can devote your full attention to the presentation. Even brief interruptions to a presentation can distract or derail the trainee (Stickrath et al. 2013). Challenge yourself to avoid interrupting the trainee until they have finished presenting. As questions or points of clarification arise, it can be helpful to write these down and address them after the presentation.

Sometimes a trainee will trail off without firmly stating a plan or asking a direct question. This is usually a sign of uncertainty or lack of confidence in their decision-making. Resist the urge to jump in; try using silence deliberately to draw out the trainee's thoughts (Rowland-Morin and Carroll 1990; VandeKieft 2001).

Although it can be tempting to peruse the patient's problem list, medications, and laboratory data during an oral presentation, this is incompatible with giving the trainee your full attention and can introduce unnecessary delays. Trainees often invest time and energy in defining the agenda for the visit; by opening the patient's medical record, you may lead the discussion toward other issues and inadvertently sabotage the trainee's agenda-setting. In some circumstances, such as when working with inexperienced trainees or particularly complex patients, it can be helpful to prepare for the supervising encounter by reviewing the patient's record ahead of time. If you do feel the need to open the medical record while discussing a patient, ask the trainee's permission and explain what you are looking for. If there are important data that the trainee does not have, wait until they have concluded their presentation and examine the medical record together.

Tip 5***Add structure to the presentation when required***

Although in general you should allow the trainee to lay out their own thought process without interruption, there are times when it is necessary to add structure to your interaction. When trainees vacillate, it can be helpful to secure a commitment from them before offering your thoughts (Neher et al. 1992). Try asking 'What would you do if I weren't here?'

Focused reflections can be a helpful way to add structure, particularly when discussing complex patients with many active issues or if a trainee gives a disorganized presentation. These can take the form of 'What I'm hearing ...' reflections, for example, 'What I'm hearing is that the three problems we're addressing today are heart failure, dizziness, and knee pain, is that right?' After clarifying, be sure to hand the discussion back to the trainee with follow-up questions (e.g. 'Of those three, which do you think is most pressing?').

Tip 6***Distinguish between stylistic differences and improper management***

It is common for trainees to suggest management plans that differ from your own. When you encounter discrepancies, it is important to make a clear distinction between stylistic differences and truly incorrect management. When differences of style arise, try to maintain humility; although trainees have less clinical experience, they may know their own patients better than you do. Be sure to call out stylistic differences: 'This is my style, over time you'll develop your own.' Finally, try to explain your rationale for suggesting an alternative management plan, whether it's based in evidence, received wisdom, or personal experience (Schultz et al. 2004). Doing so can help the trainee contextualize any disagreements and decide whether to adopt your approach, while building comfort with complexity and uncertainty (Johnston and Reid 2019).

On the other hand, it is important to unequivocally correct an improper or unsafe management plan (remember the maxim 'Wrong is wrong'). Balancing autonomy and supervision is a perpetual challenge for medical educators, but ensuring patient safety is paramount (Wearne et al. 2012). It can be helpful to reframe such interventions: rather than reprimanding a trainee, you are supporting their development by enabling them to provide safe and high-quality care (Brown and Susan 2020). In practice, we make a correction (citing supporting evidence if possible), allow the encounter to play out, then circle back at the end of the clinic session to ask the trainee to reflect on the encounter (see Tips 8 and 11). This strategy allows time for the trainee to process any emotions they may feel after being corrected (e.g. embarrassment, frustration). Prompting them to reflect on the experience can help restore their sense of self-efficacy by re-framing the correction as a learning opportunity. It can be valuable to normalize uncertainty and humility regarding the limits of one's expertise (Molloy and Bearman 2019; Sturman et al. 2020). (E.g. 'We all miss things. You are here to learn.')

Tip 7***Use hypothetical scenarios to develop clinical reasoning***

If you do not have distinct teaching points to make about a case, try using hypothetical scenarios to reinforce disease-specific knowledge or to challenge your trainee's clinical reasoning. Ask the trainee how their assessment or management would change if an element from the history, exam, or labs were different. A variant of this is to help your trainee think ahead to the next visit. ('What will you do when ...?') This technique can help turn straightforward cases into more productive learning experiences. For early trainees, this strategy can be used to review illness scripts and challenge diagnostic reasoning (Hamel and Gurpreet 2016). For more senior trainees, it can help to build their knowledge of second- or third-line therapies and less common disease presentations.

Tip 8***Foster reflection***

Creating opportunities for trainees to reflect on their experiences can be a powerful way to have a positive impact, without necessarily imparting any new knowledge (McNalley 2016). You can prompt trainees to reflect in the moment (while discussing a case) or in a delayed fashion (e.g. during a 'check in' at the end of the clinic session, as discussed in Tip 11). In-the-moment cognitive reflection is central to the one-minute preceptor model, in which the teacher asks 'What led you to this conclusion?' to uncover the trainee's thought process (Neher et al. 1992). You can also foster cognitive reflection retrospectively by asking questions like 'What did you learn from today?' or 'What knowledge gaps did you identify?' Alternatively, reflection can be affective in nature (McNalley 2016) (e.g. 'What was hard about today?' or 'What inspired you today?'). Given the considerable challenges of outpatient medicine and high rates of burnout, it is important to help trainees reflect on both the positive and negative aspects of their training so that they can integrate these experiences into their developing professional identity (Johnston and Reid 2019). Furthermore, by judiciously offering your own reflections and observations, you can help guide this process. (E.g. 'I hear you saying that your encounter was very difficult ... what I see is that you do the best for your patients even when they don't recognize that. I see that you already possess this feature of a great primary care provider.' Or 'You were very effective at talking your patient through that procedure. Do you see yourself doing a lot of procedures in your practice?')

Tip 9***Offer to pre-brief***

In some circumstances, it can be useful to discuss patients with trainees before the visit. This can apply to encounters the trainee expects to be interpersonally challenging or visits with a high degree of medical complexity. In the former case, you can help the trainee experiment with specific language (while encouraging them to keep an open mind).

If discussing medical management, it is important to ensure the trainee has enough space to work through the case on their own. Try to balance effective pre-briefing against the dangers of premature closure and introducing bias about the patient (McGee and Irby 1997).

Tip 10

Find opportunities for observation

Observation and feedback are powerful tools for developing a trainee's clinical skills (Mazor et al. 2011; Rietmeijer et al. 2018). However, finding opportunities to observe trainees during a busy clinic session can be challenging (Graddy et al. 2018). Try priming trainees (and yourself) for observation early in the clinic session by asking them what specific skills they are working on (e.g. the musculoskeletal exam, motivational interviewing, taking a sexual history), and offering to observe those skills should the opportunity arise. Make a habit of observing some element of the first encounter of the clinic session, when competing demands are less likely to interfere.

Any time that you join the trainee in the exam room can present an opportunity to observe clinical skills. This includes 'bedside' presentations and supervised procedures (e.g. pap smears), which will often transition naturally into counseling by the trainee. Trainees generally place the most value on feedback regarding behaviors that were directly observed and are modifiable (Ende 1983; McGee and Irby 1997; Mazor et al. 2011).

Tip 11

Deliver the right feedback at the right time

In most cases, the best feedback is focused, specific, and timely (Moorhead et al. 2004; Klein 2016). As discussed above, asking a trainee to identify areas for improvement at the start of the clinic session can help to focus your feedback and increase its relevance. High-quality feedback often centers on a theme arising over multiple supervising encounters; however prolonged or repeated exposure to a trainee is not necessary. A single presentation or period of observation can certainly yield useful feedback, as long as that feedback is delivered in the context of a supportive relationship (Ramani and Krackov 2012; Moorhead et al. 2004). Consider taking notes throughout a supervising session—this can help you notice patterns and can enhance the specificity of your feedback by grounding it in examples.

In certain situations, such as when trainees are running behind (see Tip 3) or when you need to discuss high-stakes feedback, giving immediate feedback is not appropriate. We often find a moment at the end of the clinic session to huddle briefly with trainees individually. This offers the opportunity to debrief the day's patient encounters, check in with a trainee more generally, or deliver feedback that you did not give in the moment. If delivering timely feedback is infeasible, giving delayed reflections is preferable to not giving feedback at all. You may offer feedback at a later date in person, or utilize a brief follow-up email (this works particularly well for comments on documentation). When giving high-stakes or difficult feedback, consider

both the timing and setting (Klein 2016). Do you need to intervene to correct a behavior right away, or is it better to wait and collect your thoughts? Is your feedback best delivered out of earshot of patients and colleagues? Ground your feedback in specific, nonjudgmental observations, and seek to understand the trainee's perspective (Klein 2016). 'I noticed' statements can be helpful. (E.g. 'I noticed that the patient seemed uncomfortable while you were taking a sexual history, how did you feel about that part of the interview?')

Tip 12

Model uncertainty and curiosity

Trainees consistently value supervisors who are willing to 'figure things out together' (Kisiel et al. 2010; Brown et al. 2018). This attitude applies to any questions that arise during the supervising encounter, whether they pertain to clinical judgment, evidence-based medicine, or logistical matters. When challenging questions arise, be open about your uncertainty, and remember that modeling humility and the use of resources or colleagues is a valuable teaching technique and can contribute to a 'help-seeking culture' (Molloy and Bearman 2019; Sturman et al. 2020; McNalley 2016).

Although it can be tempting to use lulls during a supervising session to complete one's own clinical work, we try to use the time between supervising encounters to enhance teaching. Trainees greatly appreciate supervisors who use this time to pull relevant evidence or guidelines from the literature to deepen teaching points and discussion. Employing this strategy (when it is feasible) can enhance both education and patient care.

Conclusions

Effective supervision can be thought of as a relationship that starts before the visit (pre-briefing), provides guidance and carefully-selected teaching points during the visit, and continues after the visit with feedback, collaborative learning, and follow-up. Providing high quality trainee-centric supervision in the context of a busy clinic day can be daunting, with barriers and opportunities varying by institution, health care system, and country. Not all of the twelve tips detailed above will apply to every trainee-supervisor relationship, but we hope that educators teaching in the outpatient setting will find these techniques to be useful additions to their repertoire.

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