GP SUPERVISOR'S GUIDE

'What do I teach and how do I teach it?'

Practice-based teaching

in general practice

GPSA

GENERAL PRACTICE SUPERVISION AUSTRALIA

About this guide

Workplace-based teaching in the clinical environment has been defined as 'teaching and learning focused on, and usually directly involving, patients and their problems'.[1] Teaching in the clinical setting allows direct application of knowledge and skills to patient care, and motivates learners to embrace self-directed learning.

General practice is markedly different to other clinical settings, characterised by comprehensiveness of care, continuity of care, chronic disease management, processes of care e.g. health assessments, and the therapeutic influence of the doctor-patient relationship. As a result, teaching in the general practice setting is unique, with a particular focus on patient-centred care, clinical reasoning, and development of clinical, consultation and communication skills.

Teaching in the general practice setting as part of vocational training comprises two distinct but overlapping approaches - informal and formal teaching. Informal teaching (also known as corridor or ad hoc teaching) is usually brief, unplanned and opportunistic, and occurs in response to the registrar seeking assistance during the patient encounter. Effective informal teaching requires a specific skill set and will be not be further discussed as part of this guide.

The focus of this guide is on formal practice-based teaching, the dedicated, quarantined, structured form of teaching. This guide fills a need for a comprehensive resource for GP supervisors to guide this aspect of their supervision. This guide sets out to answer the following two questions

1. What should supervisors teach?
2. How should supervisors teach?

This guide is not intended to be used as a definitive reference but should be used in conjunction with the policies and guidelines of your own college, medical defence organisations and regulatory authorities.

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GPSA produce a number of relevant guides for GP supervisors and practices, visit www.gpsa.org.au to view additional guides.

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Overview of supervision

Vocational general practice training in Australia is based on the 'apprenticeship model', where registrars (trainees) consult independently with patients, but practice under the supervision of accredited GP supervisors (trainers).[2] The GP supervisor has been defined as 'a general practitioner who establishes and maintains an educational alliance that supports the clinical, educational and personal development of a resident.'[3] The role of the GP supervisor is therefore diverse, and embraces elements of educator, mentor, role model, assessor, coach and pastoral carer.[4]

More specifically, the GP supervisor role includes the following tasks:

- Assisting registrars to identify their learning needs.
- Providing registrars with formal in-practice teaching commensurate with their level of training.
- Providing registrars with assistance with clinical queries and opportunistic informal teaching.
- Assessing registrar competence throughout training, and providing feedback on performance.

Practice-based teaching

The role of teacher is the probably the most apparent of all the GP trainer's roles. Quality of teaching is enhanced by a knowledge of the principles of adult learning, appreciation of different learning styles and teaching methods, a clear understanding of the curriculum and a passion for teaching.[5]

As well, the GP supervisor can support the teaching role by fostering a "culture of learning" in the practice. This includes providing ready access to appropriate resources and reference materials, and active involvement of the whole primary care team in registrar training.

Formal practice-based teaching is dedicated, quarantined, structured teaching that is a requirement of both the Royal Australian College of General Practitioners[6] and Australian College of Rural and Remote Medicine.[7] It complements the external registrar workshop program delivered by the colleges.

Formal teaching time must be quarantined and scheduled to make sure that occurs - unscheduled teaching sessions often become a casualty to clinical demands.

The consultation

At the heart of general practice is the consultation, and it is the doctor-patient encounter that provides the context for the entirety of general practice education. In its simplest form, the consultation can be viewed as the sharing of information between patient and doctor in order to develop both a common understanding and a plan of management.

Over the years, there have been a number of formal models of the consultation described in the international literature. One of the most enduring was published in 1987 by Roger Neighbour in his textbook called 'The Inner Consultation'.[8] Neighbour theorised that the general practice consultation was 'a journey, not a destination', and proposed five 'checkpoints' along the way.

- Connecting – Have we got rapport?
- Summarising – Do I know why the patient that has come today?
- Handing over – Have we agreed on a management plan?
- Safety netting – Have I covered the 'what ifs'?
- Housekeeping – Am I in good shape for the next patient?

More recently, Murtagh stated that the objectives of the general practice consultation are to:

- Determine the exact reason for the presentation.
- Achieve a good therapeutic outcome.
- Develop a strong doctor-patient relationship.[9]

Practice-based teaching related to clinical care in the consultation will be the focus of this guide, and consultation models like Neighbour and Murtagh will be referenced. We believe that understanding the academic basis of the consultation is useful background for GP supervisors when conducting practice-based teaching. Teaching on the broader aspects of practice e.g. practice management, will not be specifically addressed.

What to teach

Introduction

One of the most challenging questions for the GP supervisor, especially those new to the role, is '*What should I teach my registrar?*'. When one considers the breath of general practice content, everything from acanthosis nigricans to z-scores, working out which aspects to focus on can seem like a daunting prospect.

The good news is that ultimately this is not the GP supervisor's responsibility. That is, while the supervisor can clarify, prioritise and help address learning needs, learning is ultimately the responsibility of the registrar.

Learning needs may be derived from:

- What the registrar wants to learn – driven by what they are seeing in practice, identified knowledge and skill gaps, and their interests.
- What the registrar needs to learn – driven by the broader curriculum, the needs of the community, and the exams.

Learning needs identification

Every registrar undertaking GP training comes with a completely different clinical and educational background, and consequently no two registrars have the same learning needs.[10]

One of the important roles of the supervisor is to help the registrar identify and review their learning needs for general practice training, and thus, help them effectively plan learning. The concept of the Johari window can be useful to consider in identifying learning needs.

Johari Window	Known by self	Unknown by self
Known by others	Open area	Blind area
Unknown by others	Hidden area	Unknown

A detailed review of learning needs identification is beyond the scope of this guide. However, we recommend a range of methods and tools, including:

- Exploring previous registrar training and experience.
- Using self-assessment tools e.g. WentWest Confidence Self-Assessment Grid.
- Discussing high risk clinical area lists e.g. RACGP high risk areas.
- Conducting in-practice formative assessment activities, such as direct observation, random case analysis, case discussion.
- Reviewing college curricula.
- Using a learning needs diary, or discomfort log, derived from patient encounters.
- Undertaking multi-source feedback.

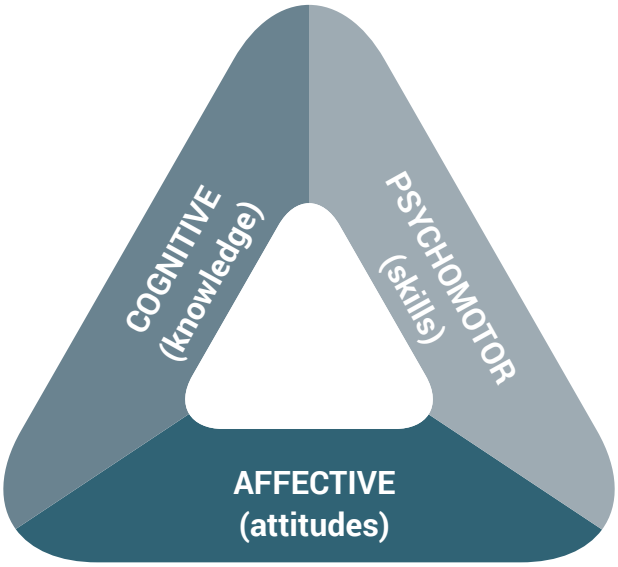
Another aspect of determining *'What should I teach my registrar?'* is for the supervisor to reflect on their own experience, strengths and weaknesses.

Supervisor reflection

- Consider your background and experience over the years, both in and out of general practice.
- What are your strengths as a clinical teacher, both clinical and non-clinical?
- In which areas are you less confident to teach your registrar? How might you address these?

Content

In 1956, Bloom developed his well-known taxonomy of teaching and learning, a framework that continues to underpin medical education today.[11] Blooms taxonomy defined three domains of learning:



When it comes to considering what should be taught as part of practice-based teaching, the three KSA (knowledge, skills and attitudes) domains provide a useful framework in simple terms, this equates to

- *What knowledge do I want the registrar to acquire?*
- *What skills do I want the registrar to have?*
- *What attitudes do I want the registrar to hold?*

These three content areas are discussed in detail below. There are also links to key resources and further readings.

Knowledge

What knowledge do I want the registrar to acquire?

The first domain of Blooms taxonomy is knowledge. And the knowledge that registrars most want to learn, and supervisors are generally most confident to teach, is clinical – diagnosis, management and prevention of illness. This hunger for clinical knowledge reflects the challenges of transition into the primary care setting as registrars encounter multiple new patients and problems, as well as preparing for the content of barrier assessments. Clinical knowledge also includes processes of care e.g. antenatal care, health assessments, and community and patient resources.

The scope of clinical knowledge that is appropriate to be taught is vast. This guide will not elaborate on this further as it is broadly defined by college curricula.

There are multiple resources available to support clinical knowledge teaching, including journal articles, primary and secondary evidence sources, clinical guidelines and texts. These can and should be used as part of practice-based teaching. Of note, GPSA has developed a suite of teaching plans for use by GP supervisors to support clinical teaching in the practice. The majority are based on clinical presentations and problems, but they also cover population groups and processes of care.

There are a number of other important knowledge areas which the supervisor could consider as potential formal teaching topics. These include:

- Australian healthcare system.
- Public health and socioeconomic determinants of health.
- Professional practice and ethical frameworks.
- Legislation relevant to general practice.
- Organisational knowledge, practice systems, recall etc.

Skills

What skills do I want the registrar to have?

While knowledge acquisition is a key element of practice-based teaching, this aspect of Bloom's taxonomy can also occur effectively from independent registrar study exclusive of the GP supervision. Skill development, however, requires deliberate practice and guidance and could rightly be regarded as the primary aim of GP supervisor teaching.

Global skills

Global skills are those broad competencies that are required at all stages of the doctor-patient encounter, and include:

- Clinical skills.
- Consultation skills.
- Communication skills.
- Clinical reasoning skills.
- Cultural competence.
- Skills in managing uncertainty.
- Patient-centred care.
- Counselling skills.
- Reflective practice.
- Professionalism.

This list of global skills has considerable overlap and defies easy classification. For example, consultation skills include the capacity to communicate effectively, and clinical reasoning skills embraces the ability to manage uncertainty. However, as they are frequently used terms in GP training parlance, they are addressed as separate headings below.

Each of these global skills can be broken into a number of more specific skills, which are discussed in the next section. These specific skills are much more discrete and 'teachable' in nature and should be the focus of registrar skill development (see box 1).

Skill development requires deliberate practice and guidance and could rightly be regarded as the primary aim of GP supervisor teaching.

Clinical skills

Clinical skills are defined as 'any discrete and observable act within the overall process of patient care'.[12] They include the diagnostic and management skills of history taking, physical examination, generation and prioritisation of a differential diagnosis, rational use of investigations, rational prescribing, formulating a management plan and emergency skills. The majority of these clinical skills will be discussed in the next section.

Consultation skills

Consultation skills can be considered as the range of skills that underpin the effective consultation. They include core clinical skills, but also a range of skills unique to the general practice encounter like shared decision making and time management. These are also elaborated further in the next section.

For more information

- Read the 2014 AFP article 'Consultation skill tips for new GP registrars'

Communication skills

Effective communication is an essential skill in general practice consultations. There is strong evidence linking good communication with improved outcomes for both patients and doctors. The 'art of communication' has been described as applying the most appropriate skills to suit each unique patient-doctor interaction.[13]

Effective communication embraces a number of specific skills and attitudes, including being respectful, empathic and sensitive; utilising active listening; using silence and open questions; appropriate interaction with the computer; reflecting; 'checking back' with patients; summarising; and using appropriate body language, eye contact and touch. Acknowledgement of the patient's level of health literacy and modification of language to match is also critical to good communication.

As well, there are a number of general practice encounters that require specific communication skills, for example communicating with children, managing the angry patient, breaking bad news, communicating with patients from different cultural backgrounds and grief counselling.

According to one widely adopted model for assessing communication skills, the Kalamazoo consensus statement, seven essential sets of communication tasks can be identified:

- Building the doctor-patient relationship (rapport).
- Opening the discussion (connecting with the patient).
- Gathering information (history, examination, investigations).
- Understanding the patient's perspective (patient agenda).
- Sharing information (explanations).
- Reaching agreement (handing over, shared decision making).
- Providing closure (follow up and safety netting)[14]

Bracketed skills above are discussed in detail in the next section.

For more information:

- Read the 2014 AFP paper 'The art of communication'
- Read the 2011 CFP article 'Teaching communication skills'
- See the GPSA 'Communication Skills Toolbox'

Clinical reasoning skills

Clinical reasoning has been previously been defined as 'the sum of thinking and decision-making processes associated with practice ... it enables practitioners to take ... the best judged action in a specific context.'[15] It is a core element of high-quality general practice.

Clinical reasoning encompasses skills in effective data gathering (history, examination and investigation), data synthesis and interpretation, communication, managing uncertainty, patient-centred care, and evidence-based medicine.

Clinical reasoning skills develop with experience, reflection and exposure to multiple patient presentations. However, they are skills that can also be taught. GP supervisors can and should play an explicit role in the development of clinical reasoning skills in their registrar, in particular to teach their registrars to 'think like a GP'.

For more information:

- Read the GPSA Guide 'Teaching Clinical Reasoning'

Cultural competence

Cultural competence is defined as 'the development of awareness and respect for differences in social structure and culture, and acknowledgement of the impacts of these on health and wellness beliefs and ability to engage with health services'.[16]

Cultural competency is a key strategy for reducing inequalities in health care access and improving the quality and effectiveness of care for Aboriginal and Torres Strait Islander people, and people from other culturally diverse backgrounds. Cultural competence is more than cultural awareness - it is the set of behaviours, attitudes, and policies that come together to enable a system or professionals to work effectively in cross-cultural situations.[17]

The GP supervisor can play an important role in supporting the development of a registrar's cultural competence, in particular by helping the registrar reflect on their own 'cultural lens' i.e. their own unique personal worldview influenced by the cultures that nurtured them.

For more information:

- Read the 2008 AFP paper 'Patient-centred care - Cultural safety in Indigenous health'
- Read the GPSA Guide 'Teaching Aboriginal and Torres Strait Islander Health'

Managing uncertainty

Establishing the correct diagnosis is fundamental to effective patient care. However, undifferentiated presentations are very common in general practice and frequently establishing a pathological diagnosis is not a realistic goal. As a result, management of uncertainty is an essential skill for general practitioners.

A number of practical strategies have been described to assist the diagnostic process and help manage uncertainty.[18,19] These specific skills can be taught in the practice. They include seeking appropriate evidence; applying Murtagh's process (common and serious causes)[20]; using a 'diagnostic pause' or 'time out'[21]; rational use of investigations; using time for watchful waiting; and responding to gut feelings (a sense of reassurance or a sense of alarm).[22]

For more information:

- Read the GPSA Guide 'Managing Uncertainty'

Patient-centred care

Patient-centred care is a commonly used term but interestingly has no globally accepted definition. However, the common elements have been described as:

- Informing and involving patients.
- Eliciting and respecting patient preferences.
- Engaging patients in the care process.
- Treating patients with dignity.
- Designing care processes to suit patient needs.
- Ensuring ready access to health information.
- Continuity of care.[23]

One definition proposed by McWhinney in 1989, is that patient-centred care is an approach where 'the provider tries to enter the patient's world to see illness through the patient's eyes'.[24]

Patient-centred communication is positively associated with patient satisfaction, adherence to management and better health outcomes.[25] The next section discusses some specific skills related to patient-centred care, including connecting with the patient, identifying the patient agenda and shared decision making.

Another facet of patient-centred care is curiosity. The 'curious' GP explores the illness experience of the patient and enhances holistic practice. Supervisors can support their registrars to have a greater sense of curiosity in their patient encounters.

For more information:

- Read the 2014 MJA article 'Shared decision making: what do clinicians need to know and why should they bother?'

Counselling skills

Murtagh defines counselling as 'the therapeutic process of helping a patient explore the nature of his or her problem in such a way that he or she determine his or her decisions about what to do, without direct advice or reassurance from the counsellor'.[9] General practice counselling has significant differences to counselling in other settings, including the close and long-term relationships GPs have with patients.[26]

There are a number of well-known counselling models, including the PLISSIT model[27] and motivational interviewing.[28] However, the basic approach to all counselling involves a number of common communication skills – listening, empathy, rapport, reflecting, and summarising.

Counselling occurs to some extent in every GP encounter, but a number of presentations benefit from the application of more refined counselling skills, for example encouraging lifestyle change; breaking bad news[29]; discussing end of life care, bereavement, grief, domestic violence and marital problems; managing chronic pain, anxiety and depression; and crisis management. Brief intervention and motivational interviewing are discussed in the next section.

Reflective practice

Reflection in medical education has been defined as 'a metacognitive process that occurs before, during and after situations with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous encounters'.[30] There is an increasing emphasis on reflective practice in medical education. Reflective practice can improve skills in professionalism and clinical reasoning, and lead to better patient management.

Reflective practice is a skill that can be fostered as part of practice-based teaching.

For more information:

- Read the 2005 AFP paper 'Reflection in professional practice and education'

Professionalism

Medical professionalism is regarded as one of the core factors in providing high-quality patient care.[31] Professionalism is closely associated with improvements in doctor-patient relationships, patient satisfaction, and healthcare outcomes.[32]

A good doctor is intrinsically a professional doctor.

The international literature on teaching skills in professionalism describes two complimentary approaches.[33] The first is explicit teaching of the so-called 'cognitive base' of professionalism (mainly knowledge-based), including its characteristics and practical applications. It also includes specific skills in professional practice, for example gaining consent, discussing confidentiality and dealing with error. The second approach is the teaching of professional attributes through role modelling and experiential learning.

For more information:

- Read the 2012 AFP article 'The informal curriculum – general practitioner perceptions of ethics in clinical practice'
- Read the GPSA Guide 'Teaching Professionalism'

Other global skills

There are a range of other global skills that the GP supervisor can assess and teach. These include organisational skills, teamwork, problem solving skills, critical thinking and negotiation. These are not elaborated on further in this guide.

Specific skills

The previous section discussed global skills which are generally comprised of more discrete and 'teachable' specific skills. These specific skills are discussed below and listed in Box 1 (page 17). The list of specific skills is not exhaustive but aims to include the majority of the core skills required of the competent GP.[34]

For further information, and details on how to teach these skills, see the GPSA suite of teaching plans on consultation skills.

Preparing for the consultation

Adequate preparation for the consultation is an important aspect of practice, but commonly overlooked as a discrete and teachable skill. Good preparation includes reviewing the medical record, in particular the last consultation, medication list and recent investigations or correspondence, before calling the patient into the room. Preparing for the consultation embraces Neighbour's 'housekeeping' checkpoint, or 'being in good shape for the next patient', especially not transferring emotions from the past encounter to the current one. This skill is best taught through direct observation.

Connecting with the patient

Neighbour's first consultation checkpoint, 'connecting', is based on establishing and building a relationship with the patient. Connecting with the patient starts with 'opening the consultation' and avoiding interrupting the patient as they tell their story.[35] The computer has been described as 'a third party in the consultation' and previous studies have shown that it can negatively impact on the consultation, including reducing patient-centredness.[36]

Establishing rapport with a patient is the first step of patient-centred care. Rapport is established through a series of verbal and nonverbal means of communication such as smiling, introducing oneself, calling the patient by the preferred name, making eye contact, assuming a welcoming posture, adopting an interested manner and showing empathy. While the registrar's background, past experience, confidence and innate personality will have a bearing on how well they can establish rapport, this skill can also be taught and learnt.

Expressive touch has been found to improve interactions between GPs and patients.[37] Evidence suggests that touch is generally welcomed by patients and is a useful tool to improve connection and rapport.

Suitable methods to teach the skill of connecting with patients include feedback on direct observation and role play.

History taking

Taking a good history is a core clinical skill. While a good history may not 'lead to the diagnosis 80% of the time', as the old aphorism states, it is the cornerstone of safe and effective clinical practice.[38] However, the unique nature of general practice means that history taking in this setting has some key differences to other clinical settings.

General practice is characterised by the longitudinal nature of care with multiple brief episodic encounters, a close doctor-patient relationship, undifferentiated illness and time pressures. As a result, history taking needs to be:

- Sufficiently comprehensive in order to support formulation of a working diagnosis and/or management plan as well as exclude potentially serious causes.
- 'Focussed' and not overly inclusive, in order to ensure time efficiency.

The context of general practice also requires history taking to be conducted in a biopsychosocial framework to genuinely include the patient's perspective. Balancing all these demands may be difficult for some registrars.

The GP supervisor can therefore play an important role in demonstrating and teaching general practice history taking skills. This includes the use of validated assessment tools commonly used in general practice e.g. IPSS, DAS21. Consultation observation and role play are ideal methods to teach this skill.

Conducting a physical examination

The ability to perform a physical examination appropriate to the patient's presentation, and correctly elicit physical signs, are core skills of the competent GP. This is reflected in college barrier examinations, where physical examination skills are assessed.

However, over recent years a decline in the physical examination skills of doctors has been described.[39] And, anecdotally at least, physical examination skills in GP registrars are often suboptimal. This is especially the case in systems where registrars' recent hospital experience may not provide sufficient exposure for skill development e.g. dermatology, musculoskeletal. Additionally, the general practice setting requires understanding of the physical examination approach for common undifferentiated presentations e.g. dizziness, and specific patient groups e.g. drivers licence medicals.

Like history taking, the general practice setting requires physical examinations to be sufficiently comprehensive to address the problem at hand, but also 'focussed' in scope.

While the colleges may provide practical physical examination skill sessions as part of the external workshop program, the GP supervisor can also play a key role in demonstrating and teaching physical examination skills.

For more information, see the relevant section on physical examination in How to Teach.

Identifying the patient's agenda

As part of the patient-centred clinical method, the doctor's aim is to identify the patient's agenda and to reconcile this with their own.[25] However, the patient agenda is not always easily identifiable. Hidden agendas are common and often emerge late in the consultation, or not at all.[40] Hidden agendas have been described as being particularly common in teenagers, middle-aged men and the elderly.

Pendleton introduced the notion of identifying the ideas, concerns and expectations (ICE) of the patient as a key element of understanding the patient's reasons for presentation.[41] Using the ICE framework, useful questions to help identify the patient's agenda include:

- '*What do you think is going on?*' (ideas).
- *'What are you particularly worried about?'* (concerns).
- *'What were you hoping to get out of the visit today?'* (expectations).

Suitable methods to teach registrars how to identify the patient agenda include problem case discussion, random case analysis and role play.

"identifying the ideas, concerns and expectations (ICE) of the patient as a key element of understanding the patient's reasons for presentation."

Rational test ordering

Pathology, imaging, and other tests are essential elements of quality clinical practice, including for screening, diagnosis, and monitoring of disease. However, non-rational testing, or over-testing, is increasingly recognised as an important issue in health care.[42] This can lead to increased costs, difficulties in interpretation and patient harm.[43] Over-testing is especially problematic in general practice, a clinical setting characterised by a high prevalence of undifferentiated illness and a low pre-test probability of serious disease.

Registrars usually enter general practice after exclusive, hospital-based experience, a setting with a much greater focus on investigation and diagnostic certainty. Supervisors can thus play a key role in developing rational test ordering behaviour in their registrars. For more information, see the relevant section on rational test ordering in How to Teach.

Also read:

- 2013 AFP paper
  We live in testing times: Teaching rational test ordering in general practice

Rational prescribing

Medication, when used correctly, can significantly improve health, and prescribing is a core component of effective clinical practice. However, there are also negative consequences and potential harms related to the use of pharmaceuticals. Inappropriate use of medicines can lead to economic waste, antimicrobial resistance, and most importantly, patient harm.

Vocational training is a critical period in the development of clinical practice patterns, including prescribing behaviour. The supervisor has a key role to play in educating registrars about rational prescribing.[45] Feedback on prescribing can be readily performed using most case discussion methods, topic tutorials, or audit. For more information, see the relevant section on rational prescribing in How to Teach.

Undertaking brief intervention and motivational interviewing

Facilitating behaviour change in patients is an essential counselling skill in general practice. GPs are extremely well placed to offer health promotion messages and brief intervention due to their longitudinal relationships with patients and ability to tailor information to the individual. Brief interventions have been found to be successful in promoting healthy behaviour in relation to a range of lifestyle factors - smoking, alcohol, physical activity and nutrition.[46] Commonly used models include the 5As approach (Ask, Assess, Advise, Assist and Arrange follow up) and 'stages of change' model developed by Prochaska and DiClemente.[47]

Motivational interviewing is defined as a collaborative, person centred way of guiding the patient to elicit and strengthen motivation to change.[28] The goal is to increase intrinsic motivation rather than to impose it externally. Motivational interviewing has been applied to many aspects of behaviour change, ranging from alcohol and drug dependence, smoking cessation, weight loss, physical activity, the treatment of chronic disease.

Brief intervention and motivational interviewing are best taught through role play.

For more information:

- Read the 2013 CFP paper
  'Modified 5 As - Minimal intervention for obesity counseling in primary care'
- Read the 2012 AFP article
  'Motivational interviewing techniques - Facilitating behaviour change in the general practice setting'

Giving explanations

Murtagh lists as the first point in patient management 'Tell the patient the diagnosis'.[9] However, anecdotally at least, this step is frequently overlooked in registrar consultations. It is critical to formulate and deliver a simple and clear explanation, including the provisional and differential diagnosis, likelihoods and the evidence supporting this. This explanation should specifically refer back to the patient's ideas, concerns and expectations, where relevant.

Encouraging learners to 'think out aloud' has been described as key strategy in developing clinical reasoning skills and an important teaching method.[48] Role play is the best method to teach the skill of giving explanations and thinking out aloud.

Practicing evidence based medicine

In 1996, Sackett defined evidence based medicine as 'the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.[49] EBM aims to synthesise best available evidence with clinician experience and judgement and patient views. Supervisors can teach their registrars how to balance these three (sometimes competing) factors when making clinical decisions.

Clinical information in the form of evidence summaries and guidelines should be sought during the consultation. It has been found that junior doctors overestimate the negative effect on patient confidence of information seeking.[50] Practicing EBM also includes skills in the critical appraisal of such evidence and research.

Sharing decision-making and communicating risk

Shared decision making (SDM) enables doctors and patients to make health decisions in partnership, informed by the best available evidence and the patient or carer's values and preferences. Shared decision-making is an approach where patients are genuinely involved in decisions around their care.[51] It is a core component of the patient-centred clinical method. One practical tip to reinforce the partnership approach in management is to use plural pronouns such as 'we' and 'our'; for example, '*Where do you think we should go from here?*'.

One of the core aspects of SDM is the ability to effectively communicate risk. Risk communication is defined as 'the open, two-way exchange of information and opinion about risk, leading to a better understanding of the risk in question, and promoting better (clinical) decisions about management'. This includes exploration of the level of health literacy, values, preferences and health beliefs of the patient, and tailoring the way information is conveyed to enhance understanding. Decision support tools play an important part in risk communication.

SDM and risk communication are best taught through role play.

For more information:

- Read the 2014 MJA paper 'Shared decision making: what do clinicians need to know and why should they bother?'
- Read the 2012 BJGP paper 'Communicating risk to patients and the public'

Referral writing

Writing referral letters to other health care providers is an essential aspect of safe and effective general practice. Quality referral letters should contain up to date and comprehensive information on the patient, as well as a clear reason why the referral is being made. Writing referral letters is likely to be a new skill for GP registrars. It is best taught through random referral review (RRR), a process equivalent to random case analysis but with a specific focus on referral quality.

For more information:

- Read the RACGP resource 'Referring to other medical specialists: a guide for ensuring good referral outcomes for your patients'

Closing the encounter

It has been stated that perhaps the most important part of the entire consultation is its closure. Ideally the end of the consultation includes:

- A summary of the management plan.
- An opportunity for the patient to ask questions, checking that there are no other issues that the patient wishes to discuss.
- Discuss, and follow-up and safety netting.

Closing the encounter is a skill area that many registrars struggle with. It is best taught through direct observation and role play.

Follow up and safety netting

Arranging appropriate follow-up for patients is an essential element of the safe and effective consultation. The term 'safety netting' was introduced by Neighbour as a key strategy in managing uncertainty.[8]

A recent literature review recommended that safety netting should include discussion with the patient on uncertainty, potential red-flag symptoms, the likely time course, accessing further medical care, follow-up, and the management of investigations.[52] Safety netting may also include other factors such as providing written information and documenting advice in the medical record.

Safety-netting is particularly important in the context of undifferentiated presentations with the potential for serious illness (e.g. febrile child), diagnoses with a known risk of serious complications (e.g. bronchiolitis) and patients with an increased risk of complications (e.g. comorbidities). It is also essential for telehealth consultations.[53]

For more information:

- Read the 2009 BJGP paper 'Diagnostic safety-netting'

Time management

Time management is a core skill of the effective GP. Poor time management is linked to doctor stress and patient dissatisfaction.[54]

While time management is a core consulting skill it is one that can take some time to develop. Supervisors can teach registrars tips to manage time effectively, including prioritising a 'list' of problems early in the consultation.[55] Time management skills are ideally taught through direct and reverse direct observation.

For more information:

- Read the 2018 AJGP paper 'Ten tips for becoming a Time Lord'

Medical record keeping

The Medical Board of Australia states in its document 'Good Medical Practice. A code of conduct for doctors in Australia' that maintaining clear and accurate medical records is essential for the continuing good care of patients.[56] They go on to state that good medical practice involves:

- Keeping accurate, up-to-date and legible records that report relevant details of clinical history, clinical findings, investigations, information given to patients, medication and other management.
- Ensuring that medical records show respect for patients and do not include demeaning or derogatory remarks.
- Ensuring that records are sufficient to facilitate continuity of patient care.
- Making records at the time of the events, or as soon as possible afterwards.

This is an area of critical importance for supervisors to educate their registrars and is ideally taught by either role play or random case analysis.

"Safety netting should include discussion with the patient on uncertainty, potential red-flag symptoms, the likely time course, accessing further medical care, follow-up, and the management of investigations."

Performing procedural skills

Undertaking procedures is a common activity in general practice, and a core skill set of the competent GP. While procedural skills are not a specific consultation skill, they are included here for completeness. Recently, a list of core procedural skills that GP registrars should be taught in training was published.[57] For more information, see the relevant section on procedural skills in How to Teach.

Attitudes

What attitudes do I want the registrar to hold?

The third domain of Blooms taxonomy of teaching and learning is attitudes. Many of the skill areas discussed above include holding attitudes consistent with that skill, including empathy, compassion, curiosity, humility, cultural sensitivity, respect and commitment to learning.

The RACGP and ACRRM curricula lists core attitudes for competent practice. Other attitudes they espouse include access and equity, collegiality, self-awareness and self-care.

Attitudes are ideally taught through role modelling.

BOX 1: TEACHING CONTENT – SKILLS

Global skills

- Consultation skills
- Communication skills
- Clinical reasoning skills
- Cultural competence
- Managing uncertainty
- Patient-centred care
- Professionalism
- Counselling skills
- Reflective practice
- Other skills

Specific skills

- Preparing for the consultation
- Connecting with the patient
- History taking
- Conducting a physical examination
- Identifying the patient's agenda
- Rational test ordering
- Rational prescribing
- Undertaking brief intervention and motivational interviewing
- Giving explanations
- Practicing evidence-based medicine
- Shared decision making and communicating risk
- Referral writing
- Closing the encounter
- Follow up and safety netting
- Time management
- Medical record keeping
- Performing procedural skills

SUPERVISOR REFLECTION

- Consider your practice-based teaching over the past few years
- What are your 'pet' topics?
- What areas of clinical practice, especially knowledge and skills, do you think you should incorporate into your teaching?

How to teach

The previous section of this guide focused on 'what to teach', the knowledge, skills and attitudes that comprise the content of what could be taught as part of practice-based teaching. This section will focus on 'how to teach', the methods that a supervisor can use to deliver this content.

Teaching methods

There are a wide range of possible teaching methods that the GP supervisor can employ as part of practice-based teaching. Ideally, supervisors should use a diversity of methods to make the teaching experience engaging and rewarding for the registrar (and themselves!). Each teaching method has particular strengths and/or shortcomings, and therefore the specific method should be matched to content and registrar
leaning needs (see box 2).

Feedback is at the heart of effective teaching and clinical supervision. Good feedback is positively correlated with improved learning and performance. In discussing the teaching methods listed below, there is an assumption that feedback will routinely be given. While feedback is often included as a teaching method in its own right, in many ways it is a broader aspect of supervision and therefore will not be directly discussed here.

For more information on feedback:

- See GPSA Guide 'Giving effective feedback in general practice'

Many of the teaching methods discussed below can be 'reversed', where the supervisor takes on the role of learner. This can be a powerful teaching technique and supports collaborative learning.

Case-based discussion

The most common cluster of teaching methods used in practice-based teaching are variations on case-based discussion. These include direct observation, video consultation analysis, random case analysis, problem case discussion, inbox review and critical incident review. While the 'entry point' to each case differs e.g. random case selection, 'near miss', review of imaging results, they are all forms of clinical case discussion. As such, they are excellent methods to explore clinical knowledge, clinical reasoning skills and managing uncertainty. As above, it is critical to deliver effective feedback after all case-based discussions in order to maximise learning.

Direct observation

'I will be a fly on the wall'

There is no better way for a GP supervisor to assess (and teach) their registrars clinical, consultation and communication skills than by directly observing their interactions with patients. Direct observation (DO), or 'sitting-in', is known to be acceptable to the patient, as well as highly regarded as a learning experience by GP registrars. However, there are well-known barriers to DO occurring in the practice, not least of which being registrar reluctance to be observed. Undertaking DO early and often in the training term is strongly encouraged.

Tips for DO

- Make DO part of the educational culture of the practice.
- Be learner-centred by focussing on particular aspects of the encounter.
- Use a consultation framework to document what was observed.
- Write down what was said as quotes.
- Focus on both process (skills) and content (knowledge).

For more information

- Read 'Taking time to watch – observation and learning in family practice'

Video consultation analysis

'OK, can we pause it there'

Video recording of consultations is a well-established teaching method in the practice. It has all the advantages of direct observation without the potential intrusiveness of the observer being in the room. Its strength lies in the capacity for the registrar to critically watch the encounter as a third person. Analysis of the recording allows stopping and rewinding to assess a range of communication and consultation skills, and scrutiny of registrar and patient behaviours.

Of importance, recent changes to Australian privacy legislation have impacted the use of video recording of consultations. Supervisors need to be familiar with any legal issues before undertaking video recording as a teaching method.

Tips for video consultation review

- Ensure appropriate consent.
- Use a consultation framework to document what was observed.
- Focus on both process (skills) and content (knowledge).
- Understand the legal issues.

Random case analysis

'OK, how about your second patient from yesterday afternoon?'

Random case analysis (RCA) has been described as 'one of the most powerful teaching methods we have at our disposal'. Its strength lies in the random nature of patient selection, unlike problem case discussion where the registrar chooses which patients to discuss. This allows identification and exploration of areas where the registrar either does not recognise a clinical knowledge gap ('unconscious incompetence'), or those they wish to avoid ('conscious incompetence'). As a result, RCA has educational utility for all stages of learner, and across all levels of competence.

RCA is a particularly effective method of exploring a registrar's clinical reasoning, especially when asking hypothetical questions, so-called '*what if's?*'. As a result, RCA has been promoted by the RACGP as one of the best ways that a supervisor can help registrars prepare for their exams.

Tips for Random Case Analysis

- Ensure recent and random case selection.
- Ask to registrar to present the case as a problem representation.
- Consider all domains of practice, not just clinical e.g. professional, ethical, organisational.
- Pose hypothetical scenarios e.g. '*What if the patient was elderly?*'

For more information

- See GPSA Guide 'Random Case Analysis'.
- Read the 2013 AFP article 'A new framework for Australian general practice training'.

Problem case discussion

'Can we discuss a few tricky patients?'

Arguably, the most common practice-based teaching method is problem case discussion (PCD), where the registrar presents their challenging patients to the supervisor and seeks guidance on diagnosis or management. PCD is driven by the nature of the clinical situation, as well as the registrar recognising that they need help. While meeting the registrar's immediate patient care needs, problem case discussion also allows the supervisor to assess and teach on the registrar's clinical knowledge, clinical reasoning skills and tolerance of uncertainty.

Anecdotally, problem case discussion is often done in an unstructured manner. Applying a framework can make PCD a much richer educational experience. At a minimum, the supervisor should probe the registrar's understanding before giving advice. This can be summarised as 'ask before tell'. For example, '*What were you thinking?', or 'What conditions can you not afford to miss?'.*

Tips for problem case discussion

- Ask to registrar to present the case as a problem representation.
- Identify the specific question the registrar is asking in seeking help.
- 'Ask before tell'.

Inbox review

'So, let's have a look at some the tests you ordered yesterday'

As discussed in the section on 'What to teach', over-testing is a significant issue in general practice and has implications for the patient, doctor and health system. Reviewing test results by 'inbox review' is an effective method to address rational test ordering, but also provides an 'entry point' for broader case discussion. A framework for analysis of test ordering practice has been developed, called 'test result audit and feedback', or TRAFk. Like RCA, the framework has a specific focus on exploring clinical reasoning and using hypothetical scenarios to extend registrar skills.

Tips for TRAFk

- Ensure recent and random test result selection.
- Ask to registrar to present the case as a problem representation.
- Pose hypotheticals e.g. '*What if the result was positive?*'
- Discuss evidence and resources.

For more information

- Read the 2016 AFP article 'Test result audit and feedback (TRAFk) as a supervision method for rational test ordering in general practice training'.

Critical incident review

Near misses and critical incidents are unfortunately not uncommon in general practice. While potentially distressing for the GP involved, critical incident review (or significant event analysis) has been strongly promoted as a quality assurance activity. In the context of general practice training, critical incident review can also be a powerful teaching method.[58]

Tips for critical incident review

- Ensure a supportive and blame-free environment.
- Use a specific framework.

For more information

- Read NHS Education for Scotland 'Significant Event Analysis'.

Topic tutorials

'Let's talk about smoking cessation'

Most practice-based teaching is based around assessing and managing a patient presentation like cough or headache, rather than discussion of a clinical topic, like asthma or migraine. However, teaching about specific topics, whether they be diagnoses e.g. lupus, patient populations e.g. adolescent health, or themes e.g. travel medicine, can be a valuable teaching method. Topics can be chosen to address registrar learning needs, supervisor expertise, or to reinforce recent registrar workshop content.

Over the past few years, GPSA has developed a suite of teaching plans for use in practice-based teaching. These plans have been developed as an 'off-the-shelf' resource, covering a breadth of common and serious clinical presentations and problems managed in Australian general practice. They include key references and exam-style questions.

Tips for topic tutorials

- Use a structured approach.
- Review evidence and guidelines in real time.
- Ask the registrar to deliver a tutorial.

For more information see

- GPSA teaching plans.

Exam question review

'Let's tackle this exam question separately and then discuss the answers'.

The focus for most registrars as they progress through vocational training is generally twofold – to develop the knowledge and skills to be a competent GP, but also to pass the exams. Happily, these two aims substantially overlap. However, as the exam date nears, specific exam preparation and practice will be the learning priority for registrars.

The colleges provide extensive exam support to their registrars, the supervisor can also play a key role in preparing their registrar for their exams. Supervisors can use practice exam questions as the basis for their teaching e.g. the clinical reasoning challenges attached to the GPSA teaching plans. For some supervisors who are also college examiners, this support might be highly specific to the various exam components, including tips on exam technique. All supervisors can support exam preparation in more general ways, by ensuring a broad clinical exposure, frequent case discussion, assessing and facilitating skills in clinical reasoning and role-playing cases.

Tips for exam question review

- Complete written questions separately and then compare answers.
- Review evidence and guidelines in real time.
- Don't offer specific exam technique advice unless you are very familiar with the exam format.

For more information see

- GPSA teaching plans.

Demonstration

Demonstration is a commonly used teaching process in the practice setting. Three specific methods using demonstration commonly used in practice-based teaching are reverse direct observation, teaching physical examination skills and teaching procedural skills.

Reverse direct observation

'Watch me while I see this patient and then we can discuss the consultation afterwards'

One commonly used teaching method using demonstration is general practice registrar observation of supervisor consultations. This method has particular utility in teaching communication skills, time management and a range of specific consultation skills. It is commonly employed at the start of the training term as part of orientation to the practice.

Despite its utility, an Australian study looking at this teaching method found that a lack of planning and explicit discussion of outcomes, as well as allowing time for follow up and reflection, was likely to compromise learning.[59] The authors encouraged registrars to take on a role of active participants rather than passive observers and be willing to offer basic feedback to their supervisor.

Tips for reverse direct observation

- Ask the registrar to use a consultation framework to document what was observed.
- Registrar to write down what was said as quotes.
- Registrar to focus on both process (skills) and content (knowledge).
- Registrar to give feedback to the supervisor afterwards.

For more information

- Read the 2013 AFP article 'General practice registrar observation of their supervisors in consultation - what is the educational value?'.

Teaching physical examination skills

'I will examine your shoulder'

As discussed in the section on 'What to teach', physical examination skills may be lacking in registrars. Demonstration of physical examination skills, either on real patients, or on the registrar (where appropriate) is a valuable teaching method.

Tips for teaching physical examination skills

- Link to case discussion.
- Consider both a comprehensive (exam-style) and 'focused' clinical examination.
- Talk through the examination as you go.
- Review relevant resources e.g. YouTube videos.
- Critically appraise the value of commonly used physical examination tests.

For more information

- Read the 2017 BJGP article 'Time to revive the GP-focused clinical examination'.

Procedural skills teaching

'This is how I do a rotational flap'

Another teaching method employing demonstration is procedural skills teaching. The concept of 'See one, do one, teach one' has been the historical approach to learning procedural skills in medicine for years. But more recently this model has been criticised, among other reasons, for failing to provide sufficient practice in learning the relevant skills in varying contexts.

An alternative framework based on the psychology of learning motor skills has been proposed. This framework starts with a 'big picture' concept of the skill and its place in clinical care and then the skill becomes fixed through deliberate practice with specific, constructive feedback based on observation. Supervisors can facilitate skill development by using a so-called 'staged learning cycle', building on their learner's prior knowledge and skills.

Tips for procedural skills teaching

- Book procedures at the beginning of sessions so that everyone is on time.
- Use a checklist of equipment needed for each procedure.
- Review relevant resources e.g. YouTube videos.

For more information

- Read the 2011 AFP article 'Teaching procedural skills in general practice'.

Role play

'I will play the role of the patient and you discuss the diagnosis with me'

Role play is an established and highly regarded teaching method in medical education. It has particular strengths in communication skills development but is also well suited to discussion of ethical issues and management of uncertainty. Role plays are typically used in small group learning but are readily adaptable to the one-on-one format. They are highly interactive, and rather than just talking about a topic, focus on the 'doing'. As a result, learners generally find them a deep and memorable learning experience. However, despite its value as a teaching method, there are significant barriers to role play being employed.

An extension of the role play method is to video record the role played interaction between supervisor and registrar and then analyse it together.

Tips for role play

- Make role play part of the educational culture of the practice.
- Role plays should be brief, flexible and opportunistic .
- The role play environment is a 'safe space'.
- Role play is simply 'playing a role' - it is OK to make mistakes or say the wrong thing.
- The registrar can 'come out of role' at any time if they wish.

Audit

Clinical audit and feedback have been found to lead to improvements in clinical practice.[60]

Audit can therefore act as a powerful teaching tool. It allows a critical review of current practice, highlights the need for specific knowledge and skills, and encourages self-reflection. Audit may be informal and small e.g. reviewing the prescribing patterns of the past five patients with UTI, or formal and more comprehensive.

One of the most common examples is a prescribing audit. Formal clinical audits involving data collection and feedback reports have been demonstrated to positively influence prescribing practice.[60] NPS MedicineWise provides freely available clinical e-audits on a number of common general practice topics.[61]

Tips for audit

- Choose an area of clinical interest, as well as practice need.
- Registrar to present the audit results to the practice.

For more information

- GPSA 'Rational Prescribing Guide'.

Teaching

'Are you happy to look after the medical student on Friday?'

Being involved in teaching other learners, so-called 'near peer teaching' is a well-recognised driver of learning.[62] Registrars who teach have been shown to demonstrate enhanced knowledge retention, self-reflection, time management, and leadership skills.[63,64] Teaching is a core competency of the RACGP and ACRRM curricula, and is a core skill in the Medical Board of Australia's 'Good Medical Practice: A code of conduct for doctors in Australia'.[56]

However, there are well described barriers to this occurring, including confidence and a lack of specific training.[65,66]

Tips for teaching

- Ensure the registrar is confident to take on the role.
- Give the registrar some practical teaching tips before starting.

For more information

- Read the AFP article: 'General practice registrar teaching roles – is there a need for shared understanding?'.

Role modelling

Role modelling has a strong influence on GP

registrar behaviour and has been previously credited as 'the primary teaching strategy of clinical education'. While it differs from all other methods as a 'passive' teaching approach, it is a powerful tool for teaching attitudes and a behaviours across a breadth of domains – clinical, professional and organisational. Role modelling has been described as 'arguably the most effective way of instilling professional values in learners'.[68] GP supervisors need to be acutely aware of the influence of their own practice on registrars, and therefore model best practice in all aspects of their work.

It has been shown that doctors who provide feedback and consciously articulate what they are modelling, in addition to providing good clinical care, have been recognised as effective role models.[69] Specific areas that can be role modelled include professional behaviour in clinical encounters with patients, billing practice, reflective practice, lifelong learning, and self-care.

Tips for role modelling

- Articulate that you are aware of your influence on the registrar and will attempt to always role model best practice.
- Key clinical areas of role modelling include prescribing and test ordering behaviour.

For more information

- GPSA 'New Supervisor Guide'.

BOX 2. TEACHING METHODS

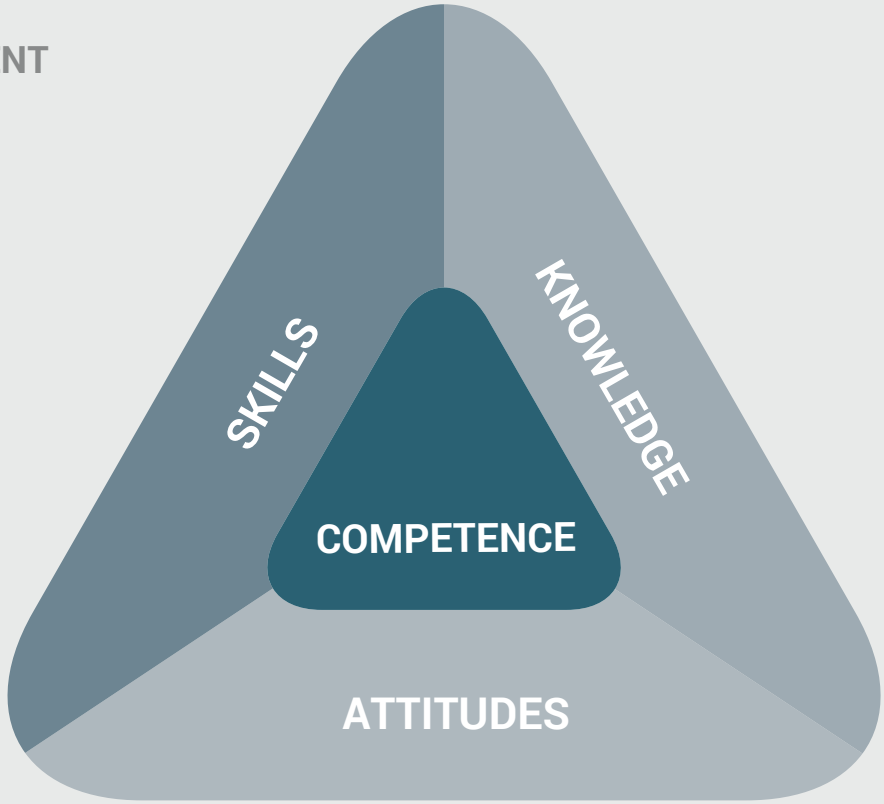
- Direct observation
- Video consultation review
- Random case analysis
- Problem case discussion
- Inbox review
- Critical incident review
- Topic tutorials
- Exam question review
- Reverse direct observation
- Physical examination skills teaching
- Procedural skills teaching
- Role play
- Audit
- Teaching
- Role modelling

SUPERVISOR REFLECTION

- Consider your practice-based teaching over the past few years.
- What are your favourite and most commonly used teaching methods?
- What other teaching methods could you incorporate into your practice-based teaching?

Practice based teaching

CONTENT



METHODS

- Direct observation
- Video review
- Random case analysis
- Problem case discussion
- Inbox review
- Critical incident review
- Topic tutorials
- Exam question review
- Reverse sitting-in
- Physical examination
- Procedural skills
- Role play
- Audit
- Teaching
- Role modelling

Putting it all together

CASE STUDY

Harriet is a GP supervisor in a regional town. Her new GP registrar is Veronica, a second term registrar who spent the first six months of her training in a large urban practice. Harriet is keen to ensure that Veronica has a really good learning experience during the training term, in particular during the formal practice-based teaching sessions. She accesses the new GPSA Practice-based Teaching guide (this resource) for guidance.

At their first formal practice-based teaching session in week one, Harriet and Veronica sit down to plan out the teaching and learning program for the term. They firstly discuss Veronica's known and unknown learning needs using the Johari Window and other tools (see page 6), and document it in a table as below. Harriet ensures that the discussion also covers non-clinical knowledge aspects of general practice, including consultation skills and issues such as professionalism and medicolegal practice.

Veronica's learning needs

Source	Learning need
Previous training and experience	Veronica is a PGY6, and spent the two years prior to entering general practice doing O&G. She has also done a total of 12 months in emergency medicine. She feels confident in these areas as well as paediatrics. She saw lots of patients with mental health issues in her first term.
Recognised learning needs	Veronica feels that her known clinical learning needs are in men's health, dermatology and management of chronic disease. She also identifies that her consultation structure is sometimes a little disorganised, especially when the patient presents with multiple issues. Time management is also an issue at times. Veronica also says that she is 'lost' when it comes to workers compensation.
Self-assessment tools	Harriet suggests Veronica complete the 'WentWest Confidence Self-Assessment Grid' to uncover unknown unknowns.
High risk clinical areas	Harriet discusses a list of high-risk clinical areas and Veronica identifies a number of learning areas, including mental health emergencies

They agree to develop this table into a formal learning plan after the first direct observation session, scheduled for the following week, and a session of random case analysis (RCA).

Harriet and Veronica then map out the first six weeks of practice-based teaching, in addition to the problem case discussion which they recognise is likely to occur every session. They have already done a reverse direct observation session, with Veronica watching three of Harriet's consultations, as part of orientation to the practice. Harriet confesses that her men's health knowledge isn't brilliant, but one of the male GPs in the practice would be very keen to run a session as a topic tutorial on common conditions.

PRACTICE-BASED TEACHING PLAN FOR GPT2

Date	Topic/method	Resources
Week 1	Planning session	High risk clinical topic list Self-assessment checklist
Week 2	Direct observation	College tool for direct observation
Week 3	Random Case Analysis	RCA article
Week 4	Topic tutorial on men's health with other GP	GPSA teaching plan
Week 5	Direct observation with focus on time management and medical records review	GPSA teaching plans
Week 6	Topic tutorial on common skin conditions	DermNet NZ quizzes
Week 7	Topic tutorial on workers compensation	GPSA teaching plan

They also plan for a range of other teaching activities to occur later in the term, including inbox review. Harriet also raises the possibility of Harriet taking a medical student later in the term if she is feeling confident.

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