

# How to plan, deliver and evaluate a training session



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The long term aim of general practice teaching is to train competent general practitioners to provide high quality care to patients in any setting. The Royal Australian College of General Practitioners' (RACGP) curriculum sets educational outcomes for postgraduate general practice training programs throughout Australia. Registrars have input to this process by reflecting on their learning needs and developing learning plans. This article discusses the teaching of practical procedures in general practice and describes the planning, delivery and evaluation of an educational session about the management of shoulder conditions for general practice registrars.

**M**easuring quality in postgraduate general practice education is complex and has been likened to 'looking inside a black box'.<sup>1</sup> Most models focus on the 'preceptorship' relationship between teacher and learner. In this relationship, a variety of learning opportunities can be offered in a supportive environment to achieve educational outcomes and goals.<sup>2-4</sup>

Translating these curriculum goals and learning plans into educational programs requires the planning, delivery and evaluation of educational sessions by general practitioner supervisors and medical educators. The assessment and documentation of these processes are key aspects of quality assurance within educational programs.<sup>3,5</sup> Despite this, clinicians receive limited instruction in this vital task.<sup>6</sup>

## Planning

The RACGP curriculum identifies five broad domains for competence in general practice to be applied to priority learning areas.<sup>7</sup> The learning objectives of the training session were developed using the curriculum as a guide. These included to:

- demonstrate knowledge and skills required to competently examine a shoulder joint
- understand the place of injection in the management of common acute and

chronic joint problems, and

- perform an injection of the subacromial bursa and supraspinatus tendon on a joint manikin.

Several aspects of the curriculum are relevant to this training session. The educational goals of this lesson can be mapped on a curriculum matrix. A similar matrix is available on the Registrar Information Management System developed by General Practice Education and Training.<sup>8</sup> Mapping all educational sessions offered within a training program identifies any major omissions in domains and priority learning areas that need to be covered by registrars. A lesson plan acts as a useful summary to assist in the planning and preparation of training. It allows prerequisites, safety, resources, venue, content and time necessary to meet the proposed learning outcomes to be documented.<sup>8,9</sup>

## Delivery

Before commencing the lesson, the trainer needs to determine the background, prior knowledge and any special needs of the group. This may be possible at the planning stage or may require the instructor to conduct an icebreaker to get to know the group and their learning goals before proceeding with the formal lesson. Language, religion, disability, and cross cultural issues are important, eg. the use of an animal model for skills training may clash with some partici-

pants' religious beliefs or ethics.

The dynamics of a small group can impact on the success of a session despite thorough planning. Establishing rapport with the group, developing explicit group rules, and adapting teaching methods to the dynamics encountered are useful skills to acquire. This helps to avoid problems with participants who are argumentative, overconfident, or shy.<sup>9</sup>

## Evaluation

Personal observations and reflections by the registrars about the teaching session are important, but can be biased. One way to obtain useful feedback from the group is to analyse the questions asked by registrars, the interactions within the group, and by whether assessment tasks were completed. It is important to assess if the allocated time was realistic to achieve the teaching goals.

During this particular training session, there was good group interaction and plenty of questions generated by the participants. The registrars appeared interested and keen to practise procedural skills. All registrars were able to practise two injections under supervision and receive individual feedback in the allocated time.

An evaluation tool was developed based on the learning objectives. Forty-nine registrars attended the workshop with 28 anonymous evaluation forms being returned

**Table 1. Quantitative evaluation of teaching session (n=28)**

Registrar assessment of session	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
Acquire the knowledge and skills required for a competent examination of the joint	1	0	0	11	16
Understand the place of injection in the management of common acute and chronic joint problems	0	0	2	11	15
Perform a joint injection on a joint mode	0	0	0	10	18
Was the session useful to you?	0	0	1	6	21
Was this session appropriate to your stage of learning?	0	1	7	17	3
Overall quality of the session as a learning experience	0	0	1	11	16

**Table 2. Qualitative evaluation of teaching session**

<b>Outline the key insights that you have gleaned from this session</b>	
<b>Responses</b>	<b>n*</b>
Methods of injection, practical skills	12
Surface anatomy and examination	6
Useful educational session	3
<b>How will this influence your patient care?</b>	
<b>Responses</b>	<b>n*</b>
Increased skills in injecting	12
Increased knowledge	3
Increased skills in examining	3
A lot	1
Not much, not keen to inject, won't be part of my practice	1
<b>What do you still need to know in this topic and how would you access this?</b>	
<b>Responses</b>	<b>n*</b>
More knowledge and reading	10
More practice	6
Ask GP supervisor	2
* n = number of times mentioned	

(55%). Quantitative evaluation results using a 5-point Likert scale are listed in *Table 1*. These results were favourable, with over 90% of registrars who completed the survey agreeing that all learning objectives were met. Most registrars felt the session was useful and of a high quality.

Qualitative evaluations were coded for content and common themes (*Table 2*). Most registrars recognised that the learning objectives were relevant to their learning needs. Most appreciated that learning task skills is the first stage of learning a skill and that ongoing practice was needed to develop further competence.<sup>8</sup>

**Discussion**

Based on the results of the evaluation, there are several areas for consideration. The response rate was adequate for interpretation of the session but it could be improved. Participation was voluntary. Offering an incentive for responding – or linking the evaluation form's return to successful completion of the workshop – could be considered.

The workshop was conducted during the introductory basic term for general practice registrars; only 72% found that it was appropriate for their level of training. It may be more effective in the future to offer a proce-

dural training session such as this later in the training program calendar. Another means of increasing the effectiveness of the session is the use of pre-reading distributed before the session to ensure all registrars are at a similar level of assumed knowledge. While most registrars rated the session favourably, one registrar gave neutral responses concerning its use and quality. In addition, a negative comment about this session not having relevance to future practice was received.

Learning will not occur unless the learner sees the relevance of the skills being acquired. Sometimes there can be a mismatch between learning wants and needs. Even if the dissatisfied learner does not want to inject shoulders themselves, they still will need to have some training in this area to be able to diagnose patients and to explain treatment options. This observation shows the need for postgraduate general practice training programs to review learning plans developed by registrars to ensure that their goals are achievable and relevant to their future vocation – while not becoming prematurely narrow.

Consideration of the group members' learning styles is also important. Kolb<sup>10</sup> identifies four learning styles: converger, diverger, assimilator, and accommodator. These styles

are based on whether learning occurs with a combination of abstract conceptualisation, reflective observation, concrete experience or active experimentation. Practical procedures teaching offered by demonstrating task skills on a simulator appeals to the 'accommodator' learner (concrete experience and active experimentation) who learns by 'hands on' experience and simulation. Comments by some registrars that they felt the learning objectives were not realistic for their stage of training may reflect a different learning style. Some 'convergers' (abstract conceptualisation with active experimentation) need to be provided with protocols and information before being convinced of the need to learn a new skill. These learning styles are not fixed and

often registrars will use a combination of styles to learn different skills. Facilitators and teachers need to be aware of this diversity in small group learning.

## Conclusion

The ultimate goal of acquiring new knowledge and skills in clinical medical practice is to improve patient care. Ideally, the aim of evaluation and quality assurance programs is to measure how new knowledge and skills are used at work to influence patient care.

One limit of this evaluation of a training session for shoulder injections is that it was not possible to assess what proportion of registrars returned to their workplace to practise these new skills under the supervision of their GP supervisor. Registrars rated this form of interactive teaching favourably and it is well documented that interactive methods of learning are more likely to have an impact on changing doctors' behaviour.<sup>11</sup> Valid measures of educational outcomes are a research priority for assessing general practice education quality.<sup>12</sup> A prospective study correlating curriculum learning goals, individualised learning plans, and findings during workplace assessment visits is a useful future direction for general practice education quality research.

Conflict of interest: none declared.

## References

1. Shipengrover J, James P. Measuring instructional quality in community orientated medical education: looking into the black box. *Med Educ* 1999;33:846-853.
2. Bowen J, Stearns J, Dohner C, Blackman J, Simpson D. Defining and evaluating quality for ambulatory care educational programs. *Acad Med* 1997;72:506-510.
3. James P, Osbourne J. A measure of medical instructional quality in ambulatory settings: the MedIQ. *Fam Med* 1999;31:263-269.
4. Young B, Graham R, Shipengrover J, James P. Components of learning in ambulatory settings: a qualitative analysis. *Acad Med* 1998;73:60-63.
5. Eriksson H. Quality assessment of medical research and education. *Int J Technol Assess Health Care* 1992;8:479-489.
6. McLeod P, Steinert Y, Meagher T, McLeod A. The ABCs of pedagogy for clinical teachers. *Med Educ* 2003;37:638-644.
7. Royal Australian College of General Practitioners. Training program curriculum. 2nd edn. Melbourne: RACGP, 1999.
8. General Practice Education Training. GPET Update: RIMS and FIMS Training Workshop, January 2002. General Practice Education Training. Available at: <http://www.gpet.com.au/documents/Feb01.pdf>.
9. Australian National Training Authority. BSZ98: Assessment and workplace training package. Australian National Training Authority. Available at: <http://www.anta.gov.au/trainingPackage.asp?qsID=36>.
10. Smith M, David A. Kolb on experiential learn-

ing. The encyclopaedia of informal education. Available at: <http://www.infed.org/b-explrn.htm>.

11. Davis D, O'Brien M, Freemantle N, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing education. *JAMA* 1999;282:867-874.
12. Bordage G, Burack J, Irby D, Stritter F. Education in ambulatory settings: Developing valid measures of educational outcomes, and other research priorities. *Acad Med* 1998;73:743-750.

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