

Assessing Professional Practice: a focus on dietetics

Gail Rees

Formerly Senior Lecturer in Nutrition and Dietetics
London Metropolitan University

Keywords: *feedback, assessment criteria, key skills, grading, competence, work-based learning, reflective practice*

Introduction

Over the last decade, reviews of medical and nursing education have led to the emphasis of attainment of key skills rather than just knowledge (GMC, 1997; Epstein and Hundert, 2002; DH, 1999) Dietetics is a much smaller profession allied to medicine, but some academics and practitioners have recognised the need for the robust assessment of clinical skills. There are “many challenges to those educating pre-registration dietetics students including integration of a system of objective monitoring of skills and the generation of a robust assessment tool” (Pender and de Looy, 2004).

Previously all dietetics students had one six-month period of clinical placement, but recently this has changed to 3 shorter placements. This has highlighted the need to assess skills progression so that the student, academic tutor and next placement provider are all equally aware of the student’s attainments and specific areas that need improvement in the next placement.

Dietetics students are gradually introduced to the professional world by observing a dietitian in practice. They then take over small parts of the interview, obtaining relevant medical and diet history, and finally give dietary advice. This will be observed by the supervising dietitian who will then pass judgement on the student’s progress and give feedback. It is this assessment of observation in clinical practice that requires some standardisation to ensure validity, reliability, objectivity and transparency. It is within this context that the assessment criteria (AC) set out below, previously devised by a multidisciplinary group of LondonMet staff (including M. Betteney, M. Doyle and G. Rees), will be developed specifically for dietetics.

Core Assessment criteria

1. Structure

- a) Is the interview well structured – introduction, middle and end?
- b) Time management – is all the information delivered in the allocated time?

2.Content

- a) Is the content correct, up-to-date and evidenced-based.
- b) Does the student adapt the material to suit the understanding and circumstances of the patient and prioritise important advice.

3.Evidence of transmission

- a) How does the student ask questions during the interview to ensure the patient has understood the advice.
- b) Does the student discuss the dietary goals with the patient to ensure the patient has an input?

4.Communication skills

- a) Is the language appropriate for the situation e.g. for a child, for a colleague or consultant?
- b) Is there good non-verbal communication? (In feedback give examples of good practice and bad practice)

5.Developing the environment

- a) Is the furniture positioned correctly so that the environment encourages participation?
- b) Does the student make full use of the resources – diet sheets / posters/ food models etc?

These are simple core criteria for use when observing a student interviewing a patient. For the whole length of the placement more detailed AC would be needed. Also the level of competency or grading needs to be determined for each criteria.

Pender and de Looy (2004) developed more detailed assessment tools for 4 key skills – written skills, interviewing skills, dietary assessment skills and presentation skills. These key skills are developed over the whole series of placements. In each of these 4 key skills they defined 6 ‘skill performance components’ that would be measured, similar to the core criteria that were developed by our group. Each component was measured using a visual analogue scale (VAS). A definition was provided for the extreme ends of the scale to act as anchor points. For example: for time management they defined poor attainment as “unable to control the interview within time and elicit core of information”. They defined good attainment as “uses time effectively resulting in client satisfaction”. So the assessor would mark on the VAS somewhere on the line between these descriptors that represented the level that the student had demonstrated.

So VAS and defined anchor points are one possible method to help define competency, grade the skill and be used to give specific, objective feedback. Another possibility is to use a matrix and compose a definition of the level of skill that should be attained for different grades A-D.

Performance Evaluation Guides (PEGs) work in this way and were developed for use in the UK to assess practical work in dentistry (Brown and Pendlebury, 1996). A PEG is a set of criteria that has four levels of competence. PEGs can be used to identify strengths and weaknesses of students. (Objective Structured Clinical Examinations can too, but OSCEs are examination stations that are set up artificially– it is not observing students seeing patients in a course of a normal clinic or ward round.) PEGs can be used for summative, formative or diagnostic purposes.

To design a PEG firstly the task must be defined: what needs to be achieved?; How does it relate to the objectives of the placement?; What skills are required? Then the procedures must be analysed. Then 4 levels of competence for each task are defined. So for example: The core criteria for ‘content’ - Does the student adapt the material to suit the understanding and circumstances of the patient and prioritise important advice?

Unsatisfactory level (D) Student gives standard advice without adaptation to suit patient’s needs or priorities.

Minimum level of competence (c) Student adapts advice partly to suit lifestyle, culture or diet, but cannot prioritise advice

Good level of competence (B) Student adapts advice partly to suit lifestyle, culture or diet, and prioritises advice.

High level of competence (A) Student’s advice is well suited to individual’s lifestyle, culture and food habits, and prioritises advice. (Full matrix in Appendix).

Whichever way grading is achieved, there is still the question of at which level is the student competent to practice. The PEG method sets out the minimum level of competence and so would overcome this. The Dietitians’ Board of the Health Professions Council sets out ‘key characteristics’ that must be met for eligibility for State Registration. So these would need to be matched to the core assessment criteria and the minimum competency defined.

Whatever method is chosen, there is no doubt that there needs to be some way to define competence. There is no agreed definition of competence. Epstein and Hundert (2002) suggest that competency builds on a foundation of basic skills, scientific knowledge and moral development. They define competence as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and the community being served”.

However professional competence is more than a demonstration of isolated skills competence (Eraut,1994). “When an individual performance is disaggregated into lists of separate actions that are hierarchically arranged, there is an assumption that all competences added together equal overall occupational competence” (The atomistic approach, O’Reilly et al, 1999). This of course is not so.

For a long time professional training within the health service has been based on Nichols binary system model (Nichols, 2001). This is where judgment is based just on whether students are competent or not. Obviously this is not acceptable as there is a large range of competencies within these extremes and students need to have specific information on areas that they need to improve.

In the novice to expert model by Benner (1982), a student passes through five levels of proficiency: novice (stage 1), advanced beginner (stage 2), competent (stage 3), proficient (stage 4) and expert (stage 5). This model is framed around Dreyfus & Dreyfus (1980) model of skill acquisition.

So the characteristics – skills and knowledge - that a dietitian must obtain before s/he can become a registered dietitian are set out by the dietetics board. However the process of getting to this stage - monitoring the development of these skills in clinical practice, grading of skill attainment and feeding back to the student on their progress – can be facilitated by the use of core assessment criteria and grade descriptors such as PEGs.

Other methods of assessing work based learning

Learning in the work place is different to learning in the classroom in the following ways:

- a) Reflection on working practice is central to work based learning (WBL)
- b) WBL arises from actions and problem solving within the work environment.
- c) It is not just acquiring knowledge, but ‘the acquisition of met-competence – learning to learn’. (Gray, 2001)

There are other forms of assessment that are also appropriate to be undertaken in work-based learning. In addition to observation, dietetic students complete a portfolio. Portfolios are used to present evidence of achievement (Gray, 2001). This encourages students to reflect on activities and learning and to document evidence to meet the placement learning outcomes.

The ‘Student Portfolio of Evidence’ has general and specific aims of each placement. Students must file evidence of meeting each aim such as writing about an issue they must understand; explaining why an episode of communication was successful; evidence from patient records photocopied to show appropriate medical history or advice documented. Guidance for the evidence required is given in the portfolio file.

However for learning to take place a reflective account of what has been learnt is required. But what is reflection? Reid (1993) describes reflection as “a process of reviewing an experience of practice in order to describe, analyse, evaluate and so inform learning about practice”. It should also include the idea of moving forward and using the analysis to change. “It is a personal process that usually results in some

change for the individual in their perspective of a situation or creates new learning for the individual” (Johns, 1995).

Reflection is also one of the four key stages in the experiential learning cycle model by Kolb (1984). The reflective observation stage helps transform experience into knowledge. There are several models for reflection which have the following stages in common: Awareness, description, evaluation, new awareness, learning and action – critical reflection (Cooney, 1999)

Bourner (2003) poses the question “Why assess reflective learning?” The most obvious answer is so that students receive feedback and are helped to develop reflective skills that will be required throughout their professional life. If reflective accounts are not assessed then students will naturally spend more time and effort in areas of work that are assessed, neglecting reflection. The difficulty for marking portfolios and reflective diaries is that they contain a huge amount of subjective information that will be different for every student. Only the student can assess whether the learning has been meaningful to them. Also as Bourner discusses in his paper it is difficult to set learning outcomes as learning will differ between students. Therefore there is nothing against which to assess the learning.

However in reflective learning there is less concern about the actual experience or *content* (which is subjective) and more emphasis on whether the student has thought critically about the experience. So the *process* of reflective thinking is not subjective and can be assessed. This then makes it possible to set learning outcomes in advance – evidence of critical thinking or asking searching questions. This fosters a deep approach to learning (Bourner, 2003). Although reflection may dis-empower students if the only focus is on negative situations revealing lack of skills (Burton, 2000). Emphasis must be on *learning* from reflection and highlighting strengths as well as weaknesses.

Students also need instruction on how to complete portfolios and may have queries through out the process. Boud (1995) recommends self-assessment of reflective diaries so that the student can think about whether personal goals are being achieved and help to plan new activities to meet the goals.

According to Brown et al (2003) reflective practice assignments test the ability to analyse and evaluate experience. Self evaluation is also good practice to have for life long learning. According to Schon (1983) developing skills in analysis, evaluation and synthesis, and the ability to be an independent learner are important for the student to become a reflective practitioner and life long learner. Evidence of life long learning to ensure a qualified dietitian is fit to practice is now required to maintain registration.

Student dietitians also must complete a case study of a patient that they have provided care for. According to Brown et al (2003) assessment of case studies can measure application of knowledge, analysis, problem solving abilities and evaluative skills – all skills that are necessary for a dietitian in professional practice. If the case

study is short and guidance is given on the structure it is reasonably easy and fast to mark and grade.

Other tasks that students are asked to do on placement are small projects. Projects provide 'good all round ability testing' – practical, analytical and interpretive skills, wider application of knowledge, wider understanding and time management skills (Brown et al, 2003). Sometimes students can work in small groups if there are other students on the placement. Learning outcomes for projects may relate to: operational context; knowledge and understanding; cognitive and intellectual skills; practical skills and transferable skills (Gray, 2001). Therefore projects create the opportunity for diverse learning outcomes to be achieved depending on the design and have the flexibility for group work which would reduce the assessment burden.

Conclusion

The AC and suggested matrix are tools that could help to make the assessment of observation of student dietitians undertaking patient consultations more valid, reliable, objective and transparent. The next step would be to pilot them in practice. They could then be reviewed to define grades and competencies and could be used to give specific feedback to students.

Other assessments that are carried out on placement include the 'Student Portfolio of Evidence', case studies and small projects. The students already receive some guidance on reflective learning for placement. The next stage would be to look at the assessment of this and the other assignments to see if these too could be made more valid, reliable, objective and transparent.

References

- Benner P, 1982. Issues in competency based testing. *Nursing outlook* 30: (5), 303-309.
- Bourner, T 2003. *Assessing reflective learning*. Education and training, 45; 5; 267-272.
- Brown and Pendlebury, 1996. *Effective Teaching in Dentistry* London: Royal College of Surgeons of England.
- Brown, G, Bull J and Pendlebury M, 2003. *Assessing student learning in higher education*. London: Routledge.
- Boud D, 1995. *Enhancing learning through self-assessment*. London: Kogan Page.
- Burton, S 2000. *A critical essay on professional development in dietetics through a process of reflection and clinical supervision*. J Hum Nutr Dietet, 13: 323-332.
- Cooney A, 1999. *Reflection de-mystified: answering some common questions*. Br J Nursing 8: 1530-1534.
- Department of Health, 1999. *Making a difference. Strengthening the nursing midwifery and health visiting contribution to health and healthcare*. London.
- Dreyfus, S.E. & Dreyfus, H.L, 1980. *A Five-Stage Model of the Mental Activities Involved in Directed Skill Acquisition*. Unpublished report supported by the Air Force Office of Scientific Research (AFSC). University of California, Berkeley.

Epstein RM and Hundert EM, 2002. *Defining and assessing professional competence*. JAMA, 287,2:226-235.

Eraut M,1994. *Learning professional processes: public knowledge and personal experience*. In *developing professional knowledge and competence*. Ed. M Eraut pp100-122. London: Farmer press.

GMC, 1997. *The new doctor – recommendations on general clinical training*. London: General Medical Council.

Gray D,2001. *A briefing on work based learning*. LTSN, York.

John C, 1995. *The value of reflective practice for nursing*. J. Clin. Nurs. 4:23-60.

Kolb DA, 1984. *Experiential Learning: Experience as the source of learning and development*, Englewood Cliffs, NJ, Prentice Hall.

Nichols G, 2001. *Professional Development in Higher Education*. Kogan Page, London.

O'Reilly, Cunningham and Lester,1999. *Developing the capable practitioner*. Kogan Page, London.

Pender FT and de Looy AE, 2004. *Monitoring the development of clinical skills during training in a clinical placement*. J Hum Nutr and Dietet, 17, 25-34.

Reid B, 1993. “*But we’re doing it already*”. *Exploring a response to the concept of reflective practice in order to improve its facilitation*. Nurse Education Today 13: 305-309.

Schon DA, 1983. *The reflective practitioner: How professional think in action*. London: Temple Smith.

Appendix

Core criteria	High level of competence (A) 70%+	Good level of competence (B) 60-69%	Minimum level of competence (c) 50-59%	Unsatisfactory level (D) <50%
1. Structure a) Is the interview well structured?	Clear introduction , middle sections and end	Clear introduction and end. Some middle sections not well ordered	Clear introduction and end, but otherwise not clearly structured	Muddled interview with random order of events.
b) Time management – is all the information delivered in the allocated time?	Interview comfortably finished within the time	Interview finished within the time, slightly rushed	Interview run slightly over (few minutes)	Unable to control the interview with in the time
2. Content a) Is the content correct, up-to-date and evidenced-based.	Uses current up-to-date / evidenced based advice	Uses some evidence-based advice but not all.	Uses safe advice but does not include evidence based advice	Used out of date / wrong / non evidenced based advice
b) Does the student adapt the material to suit the understanding and circumstances of the patient and prioritise important advice.	Student’s advice is well suited to individual’s lifestyle, culture, food habits, and prioritises advice.	Student adapts advice partly to suit lifestyle, culture or diet, and prioritises advice.	Student adapts advice partly to suit lifestyle, culture or diet, but cannot prioritise	Student gives standard advice without adaptation to suit patient’s needs or priorities.

3.Evidence of transmission a)How does the student ask questions during the interview to ensure the patient has understood the advice.	Frequently asks patient questions to check understanding in a natural non-threatening way.	Asks patient questions to check understanding during interview, but infrequently.	Asks patient questions to check understanding but only at end of interview.	Does not ask patient questions to confirm understanding.
b)Does the student discuss the dietary goals with the patient to ensure the patient has an input?	Dietary goals are fully discussed and agreed with the patient	Asks patient's opinion but does not fully discuss goals	Does set dietary goals, but does not include patient in setting them.	Does not give dietary goals or targets
4.Communication skills a)Is the language appropriate for the situation e.g. for a child, for a colleague or consultant?	Adapts language to suit patient understanding and uses scientific / medical language with colleagues	Language is mostly appropriate for patient, may have a little difficult with some medical terms	Only occasionally uses jargon to a patient or lay terms to a colleague	Uses language that is too difficult for the patient to understand. Or too simplistic for a colleague
b) Is there good non-verbal communication? (In feedback give examples of good practice and bad practice)	Student always shows positive body language. Patient is put at ease.	Student mostly shows positive body language and patient generally at ease.	Only occasionally student uses negative body language and patient not always at ease.	Student shows negative body language and does not put patient at ease.
5.Developing the environment a) Is the furniture positioned correctly so that the environment encourages participation?	Furniture is considered and moved to suit situation. Interview is conducted in a suitable environment	Furniture is considered, but not moved to most appropriate situation	Furniture is not considered but general environment is satisfactory.	Furniture is not considered and not moved to suit situation. Interview is conducted with unsuitable environment.
b) Does the student make full use of the resources – diet sheets / posters/ food models etc?	Student shows initiative in selecting suitable teaching material.	Student selects and adapts appropriate advice sheet, but could have used further material	Student selects standard advice sheet without adapting where needed	Student does not select suitable teaching material

Biographical note

Gail Rees was a Senior Lecturer in Nutrition and Dietetics at London Met 2004-2006. She joined the university in 2000 as a Senior Research Fellow studying the effects of maternal diet and birth outcome in Hackney. As a registered dietitian she has also worked and trained dietetic students in the NHS. She has now moved to the South West and is Senior Lecturer in Human Nutrition at the University of Plymouth