Maintaining an effective medical training portfolio

Postgraduate medical trainees are often required to maintain a training portfolio, but lack formal instruction on how to do this. This article draws upon adult learning theories and the best available evidence from medical education, to give practical tips on maintaining an effective medical training portfolio.

The use of the portfolio is becoming an increasingly important part of both undergraduate and postgraduate training in general (internal) medicine and its associated specialties. The portfolio is also becoming more established in the review of practice following completion of training. However, many trainees have not had any formal instruction in the art of maintaining an effective portfolio, and many find the task onerous. The process can precipitate anxiety and stress in those unfamiliar with, or unprepared for its use. A poorly maintained portfolio can result in ineffectual appraisals and assessments, and the outcome of these processes is more likely to be unsatisfactory.

This article draws upon adult learning theories and the best available evidence from medical education, and describes some tips to introduce and aid the understanding of the process of portfolio-supported learning by trainees (and trainers) who are unfamiliar with its use.

A practical definition of the portfolio

The portfolio is an innovative and reflective way through which a learner, trainee or working professional can purposefully collect samples or items that illustrate and exhibit efforts, and developments made towards achieving or maintaining learning outcomes in one or more defined area.

A portfolio differs from a simple logbook in that it goes beyond mere documentation of lists and events. It allows the owner to demonstrate that active involvement and experiential learning or practice is taking place. Paulson et al (1991) and Webb (2002) highlighted that reflective learning or practice is a central element to the portfolio development process.

Dr Olayinka A Ogundipe *is Consultant Physician in the Department of Medicine of the Elderly, Royal Infirmary of Edinburgh, Edinburgh EH16 4SA*

Portfolio contents: general principles

Structure

Most formal training portfolios come with a predefined structure. Such a framework allows one to monitor the choice of contents and the progression of training. Often the structure is based on identifiable themes that facilitate coverage of a broad range of learning outcomes and competencies. Developing a personalized grid can allow one to ensure that various themes are appropriately represented in terms of the quantity and, more importantly, the quality of the content.

Reviewing the training curriculum requirements can help identify knowledge, skills and attitudinal or behavioural objectives and competencies that one needs to achieve. The process usually incorporates the definition of realistic timescales.

Relevance of content

This should be continuously reviewed so that content does not stray from defined objectives and competencies. Preservation of relevance helps to avoid generating a portfolio that is unwieldy and possibly ineffectual, whether paper based or electronic.

Flexibility of style

Portfolios may allow for development of individual styles (e.g. learning styles, literary styles). However, they should still support the pursuit and demonstration of achievement of identified or stated learning outcomes.

Diversity of content

This is to be encouraged but again should not distract from the need to maintain a focus. Emphasis should be placed on including items that illustrate progress towards, confirm the accomplishment of, or exemplify maintenance of desired outcomes and competencies.

Portfolio contents: examples

The nature of assessments and documentation required could vary depending on the country one is practicing in, as well as the relevant training and/or regulatory bodies. In the UK, for example, an illustrative but non-exhaustive list of contents for a postgraduate trainee could include:

- Results of tests of knowledge, understanding, or of various skills and attitudes, e.g. Membership of the Royal College of Physicians (MRCP) parts 1 and 2 (written) and practical assessment of clinical examination skills – PACES (the MRCP part 2 clinical examination), specialty knowledge-based assessments or Advanced Life Support.
- Indications of attitudes, behaviour and general performance, which may be reflected by summaries of workplace multi-source feedback or patient and service user satisfaction surveys.
- Evidence of attendance at training courses or sessions, with a brief summary of the value derived, either personally or professionally.
- Case studies, case-based discussions or acute care assessment tools which exemplify clinical practice serve as a useful platform to demonstrate how one integrates the relevant knowledge base, psychomotor skills and appropriate attitudes or behaviours.
- Curriculum vitae, individualized short- and long-term career plans or personal development plans.
- Appraisal documentation, as well as more formal assessments like record of in-training assessments or annual review of competence progression forms, along with the accompanying feedback.
- Content derived directly from activities and assessments in the workplace, e.g. mini clinical evaluation exercises (mini-CEX) and directly observed assessment of procedural skills, are appropriate as the portfolio is a supportive element of training and work experiences. Other examples include one's reflections on positive and negative communications or complaints stemming from work (these may need to be anonymized if

personal data are involved), root cause analysis, significant event analysis, teaching evaluation or feedback forms, and summaries of audit, research, health service evaluation or project works.

Ownership, value, roles and professional development considerations

Most portfolios remain the property of the trainee, although one may be required to share some of its contents with designated others as part of training, usually on the platforms of mentorship, appraisal and assessments.

Portfolios are also increasingly being used as part of medical trainee interview and selection processes (Hijazi, 2007). One can therefore decide what elements are felt to be confidential and remove these before formal reviews if they are not mandatory elements.

The current trend is clearly moving towards electronic means of maintaining many training records, in the form of the online or e-portfolio (Kjaer et al, 2006). Nevertheless, some paper-based elements of the portfolio are likely to persist indefinitely. The nature and format of documentation is likely to be significantly influenced by the requirements of the professional body that oversees training. A large folder with ring binders and multiple dividers for categorizing contents will prove useful for paper-based portfolios.

A properly maintained portfolio is likely to benefit both trainee and trainer during appraisals and assessments (Challis, 2001; Friedman Ben David et al, 2001). The portfolio supports a professional requirement to commit to lifelong learning, helps demonstrate involvement in continuing medical education and continuing professional development-related activities (Brigley et al, 1997).

Portfolios chart the evolving and dynamic nature of one's training and practice. Active involvement in the reflective process stimulates ownership by identifying and managing individualized learning needs. Portfolios can help identify resources and opportunities needed to achieve desired goals. Thus the portfolio can support an individual in becoming more self directed, and in being empowered to seek out workable solutions to any relevant situations or problems encountered.

As a note of caution, the portfolio is not a panacea, but rather a complement to other assessment methods. The need to recognize the limitations and strengths of various assessment modalities used in postgraduate medical training has been described (Bache et al, 2002; Wragg et al, 2003). This caution is particularly relevant given the broad remit, diversity and complexities of the teaching, training and assessment of both undergraduate (Bartram et al, 2006; Ogundipe, 2007a) and postgraduate (White et al, 1999; Ryland et al, 2006; Booth, 2007; Ogundipe, 2007b) medical trainees.

The portfolio has the advantage of giving a broad overview of the ability of the trainee to integrate different learning outcomes in the knowledge, skills and attitudinal domains rather than merely treating them as distinct entities.

Reviewing one's earlier reflections, considering any evolving changes in perception or behaviour, and monitoring of one's progress assists in the process of self-evaluation. It is worth setting realistic timescales for addressing desired outcomes and deciding what measures one could use to define success or achievement.

Portfolios play a valuable role in both formative and summative assessment. They can serve as a useful platform upon which trainers and assessors can base constructive feedback (Wiles et al, 2007) and can facilitate the more individualized elements of clinical governance (Beavan et al, 2005).

As medical practice in the UK inevitably moves closer to regular revalidation (re-licensure and re-certification) of practitioners, it is likely that early acquisition of the skills required to maintain an effective portfolio will make the transition easier (Shaw and Armitage, 2007).

More practical tips on the reflective learning process

As stated earlier, the reflective process is central to the maintenance of an effective portfolio. An introspective review of one's practice can guide professional development (Mamede and Schmidt, 2002).

For this to work effectively in practice, it is important to regularly review one's practice. This stimulates self-awareness, self-appraisal and self-assessment of one's experiences. The regularity is the key factor to emphasize, but this may be a daily (say 15 minutes) or a weekly (say 1 hour) period set aside for the purpose of self evaluation of the day's or week's training and/or work experiences. It is sensible to discuss this with, and obtain agreement from one's trainer or supervisor so that this reflective period can be recognized as a part of your personal development strategies.

The approach described above can be thought of as reflection-on-action (i.e. reflecting after experiences). It is important to be aware that we also respond to learning stimuli during the actual encounters, in what has been termed reflection-in-action (i.e. reflecting during experiences). Schon (1983) identifies these components of the reflective process as being complimentary to each another.

These reflective activities can facilitate the systematic identification and documentation of one's strengths, weaknesses and developmental needs.

By identifying the events, experiences and activities that were executed well or 'went well', you are better placed to develop strategies to reinforce and indeed build upon these strengths.

Similarly, identifying and, importantly, also admitting to the events and activities that were not executed well or 'went badly' does not identify one as a failure, but allows the opportunity to improve upon these areas, using these as a platform for identifying one's learning needs (Al-Shehri, 1995; Wesberg, 2001).

The learning needs can then be practically developed using the acronym 'SMART', which summarizes the characteristics of the learning needs being 'specific', 'measurable', 'achievable', 'relevant' and 'time-bound'.

To distinguish it from the processes of self-analysis and self-evaluation, the reflective learning process goes further by requiring (and hopefully stimulating) the design and implementation of specific actions to correct any deficiencies, or to improve upon any weaknesses identified.

It is important to summarize and document these reflections and the related action plans, as these serve as an important reference point during future self-appraisals.

As an example, let us assume that a negative experience stemmed from 'a discussion about the possibility of with-

drawal of artificial nutrition in a terminal patient'. In this example, a trainee may choose to:

1. Discuss the encounter with a senior colleague or supervisor
2. Review up to date guidance relating to this issue from the local hospital, British Medical Association and General Medical Council
3. Attend a training course that gives practical role-play sessions relevant to similar ethical and legal issues
4. Participate in workplace mini-CEX scenarios of similar discussions that allow for formative and constructive feedback, as well as summative assessment of performance.

The preceding example and the action plan involve educational interventions that should assist in achieving, and importantly, also integrating competencies in the cognitive, psychomotor skills, and attitudinal or behavioural domains of practice.

As stated earlier, timescales should be incorporated in the action plan to clarify when one hopes to achieve any specified competencies. Following the various personal developmental activities and interventions, one can arrange a further meeting to review and consolidate the learning outcomes with a supervisor or trainer.

So far, the role of the individual trainee in the maintenance of an effective portfolio has been clearly emphasized. The support of mentors, trainers and training institutions is also crucial. Consequently, consideration should be given to incorporating teaching sessions on the art of maintaining effective training portfolios as part of the regular induction and/or the educational or professional development activities of individual units.

Conclusions

Considerable effort, time and motivation are required to maintain an effective portfolio (Pitts et al, 2001). The process can be facilitated by having an awareness of some of the underlying principles. It is also helpful to develop clearer understanding of some relevant issues that define its value, role, practical considerations and also its limitations, particularly when viewed from the perspective of a professional practitioner.

A useful way to facilitate keeping a portfolio is to identify a professional mentoring relationship (vertical or horizontal), through which both an individual and another colleague could stimulate each other, sharing reflective experiences, learning opportunities, resources and even challenges. **BJHM**

Conflict of interest: Dr Ogundipe has completed a postgraduate diploma in medical education from the Centre for Medical Education, University of Dundee, Scotland.

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KEY POINTS

- Portfolios are becoming an increasingly relevant component of undergraduate and postgraduate education in general (internal) medicine and associated specialties.
- A portfolio differs from a simple logbook, as it requires reflective and experiential learning as a central element to promote self-development.
- The choice of contents for inclusion in portfolios can be guided by categorizing into themes, for example, by tailoring them into demonstrating progression towards, integration of, attainment of, and maintenance of defined training outcomes and competencies.
- Portfolios complement, but cannot replace other methods and strategies that support the teaching, learning, training and assessment of postgraduate medical trainees.
- Greater awareness of the underlying principles, value, role, practical considerations and limitations of portfolio-supported training is advantageous to both trainees and trainers, particularly when used on for mentorship, appraisal, assessment, interview selection processes and, ultimately, in revalidation.
- Reflection is key to success.