

# Identifying Competency Required for Independent Practice in Histopathology

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**H**istopathological diagnosis of tissue removed at surgical procedures forms the cornerstone of patient management in the appropriate context. As the competence and accountability are of foremost importance in this specialty, it is necessary for histopathologists to be professionally up to date in their profession. Thus, there is a need for the development of a competency based continuous professional development (CPD) program for this specialty.

Several techniques have been described to identify competencies expected of doctors in general.<sup>1</sup> A number of techniques have been described to be most appropriate for identifying competencies in the field of histopathology. These identified competencies are implicitly linked with the concept of CPD and help to determine priorities of a CPD program.

The identified competencies would also be of value when introducing changes to the existing curricula/training programs for histopathology residents, ensuring achievement of these competences at the entry level to the specialty level as independent practitioners.

### *The Subject Centred (or Content Knowledge) Approach*

This approach emphasizes on the factual knowledge a newly qualified histopathologist is expected to encompass, to render accurate diagnosis of disease conditions based on tissue examination (e.g. diagnosing an adenocarcinoma on a gastric biopsy). However, theoretical knowledge alone does not ensure good independent specialty practice. Therefore, the technique is insufficient as the sole means of identifying professional competencies in this discipline.

Delphi technique has been described as a successful technique in identifying professional behaviour or competence, it relies on a panel of experts in the specialty (ideally about 20).<sup>2,3</sup> The experts are identified after inquiring from practicing histopathologist's whom they would refer a difficult case for a second opinion. Each of the identified experts is interviewed independently. Firstly, they would be asked to identify and define general areas of knowledge, skills and attitudes (competencies and capabilities) expected of a practicing histopathologist. Secondly, the experts would be

requested to identify specific important areas in these general competencies.

The responses received confidentially by the researcher would be studied, collated in order and compiled to produce a single document listing principal elements of professional activity in the discipline. The list would then be sent to the experts to go through and to add or to delete items as deemed appropriate. These responses would also be studied and collated, and if necessary, the process would be repeated until a consensus is achieved. The final list would then be sent again to the expert panel for them to prioritize each competency on a five-point scale based on their perception of relative importance. The final list would indicate the competencies required of a histopathologist practicing independently and would form the basis of both a histopathology CPD program and any changes to the curriculum of the resident training program.

### *Critical Incident Survey*

This technique helps to identify behavioural data related to competencies in histopathology. Several histopathologists, histopathology residents and laboratory technical officers as well as clinicians obtaining the services from the histopathologists are interviewed. They would be asked to describe incidents that they experienced or observed in the recent past reflecting either effective or ineffective histopathology practice. It has to be emphasized that the focus is to be on the incident and not on any single individual/s or institution/s. Each incident recorded would include information on the setting, details, outcome of the incident and why it was considered either effective or ineffective practice.

The critical incidents register maintained by most Histopathology laboratories, would also provide information regarding critical incidents (related mainly to undesired histopathology practices) that occurred within the laboratory in the recent past.

An emerging sequence of natural clustering would be observed with the collection of an adequate number of incidents highlighting the educational needs for those in the specialty.<sup>4</sup> However, in order to eliminate subjectivity, the responses obtained

should be submitted to a panel of expert histopathologists for their observations and comments. The collection of incidents would only stop when it fails to add any new categories of behaviour to those already obtained.

The advantage of this technique in identifying competencies in this specialty is high as it takes into consideration the view points of many individuals including specialists in the field, histopathology residents, laboratory technical staff who work closely with the histopathologists within the confines of the laboratory environment, as well as clinicians who obtain histopathology services. The records of critical incidents are an additional boost in this process. The results from all this would help to set up behavioural guidelines for future CPD programs.

### **Behavioural Event Interview**

This technique is closely linked with the critical incident survey.<sup>5</sup> Detailed information of critical incidents encountered in professional practice would be obtained by interviewing a panel of (ideally 15-20) excellently performing histopathologists (star performers) identified by their peers.<sup>6,7</sup> Their perception of particular incidents relating to the practice as well as their view point on the characteristics of a good practicing histopathologist would be given special consideration. The same process would be repeated with a similar number of other histopathologists. The analysis of results with the help of skilled and trained analysts would provide a guide to the behaviours, skills and characteristics that would distinguish between an excellent specialist and an average specialist.

Interviewing recently qualified histopathologists and those about a year into independent practice regarding areas that they are less confident would similarly provide useful information. The CPD program should particularly focus on these areas.

Other sources available to obtain critical information pertaining to competency in this specialty include study of histopathology text books used during the past 15 years. They should be perused for changes in diagnostic criteria and classification systems. Study of errors in practice obtained from other documentary sources (departmental external and internal quality assurance records) and departmental audit results on professional performance indicators are useful in this process.<sup>8</sup> An audit on continuous medical education activities conducted in the

recent past pertaining to the specialty would similarly be useful in setting goals for the CPD program.<sup>9</sup>

A combination of the above techniques and approaches would provide an accurate assessment of the competencies (knowledge, skills and behaviours) expected of a histopathologist practicing independently. It would also help to develop a CPD program for the specialty and to introduce new changes to the curriculum/training program for residents, ensuring achievement of the competences at entry level to the profession.

Additionally, any CPD planning must also take into account the local and national priorities, as well as personal learning needs of the practicing specialists.<sup>10</sup>

Most of the approaches described to identify competencies are not specific to the specialty of histopathology. They could easily be modified appropriately and be used in most other medical specialties to develop individual specialty based CPD programs.

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### **References**

1. Dunn RW, Hamilton DD, Harden MR. Techniques of identifying competencies needed of doctors. *Medical Teacher* 1985; 7:15-25.
2. Helmer O, Rescher N. On the epistemology of the inexact sciences. *Management Sciences* 1959; 6:25-52.
3. Spivey BE. A technique to determine curriculum content. *J Med Educ* 1971 Apr; 46(4):26.
4. Wright PD, Franklin CD. The use of significant event analysis and personal development. Plans in developing CDP: A pilot study. *Br Dent J* 2007 July 14; 203(1):43-47.
5. McClelland DC. *A guide to job competency assessment*. Boston: Mcber & Co, 1976.
6. Lewin AY, Zwany A. *Peer nomination: A model, Literature Critique, and paradigm for research*. Springfield, Va: National technical information service, 1976.
7. Kane J, Lawler E. Methods of peer assessment. *Psychological bulletin* 1979; 85:555-586.
8. Concerns about performance in pathology: Guidance for healthcare organizations and pathologists, The royal College of Pathologists. From [www.rcpath.org/publications](http://www.rcpath.org/publications). Accessed Feb 2010.
9. Bosman FT. Continuous professional development in pathology: a continental review. *J Clin Pathol* 2000 Jan; 53(1):10-12.
10. Fleet LJ, Kirby F, Cutler S, Dunikowski L, Nasmith L, Shaughnessy R. Continuing professional development and social accountability: A review of the literature. *J Interprof Care* 2008; 1(6):15-29.