SHORT REPORT

Subspecialisation in cellular pathology in the DGH setting: the Warwick experience

D S A Sanders, R A Carr, O P Stores, N Chachlani, J Simon

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A successful move towards subspecialised reporting in cellular pathology in the setting of a small to medium-sized district general hospital staffed by five consultant pathologists is described. This move has been facilitated by implementation of a prospective workload allocation system. Perceived benefits in service delivery and career progression are highlighted.

Major changes have taken place in working practice for cellular pathologists through the mid to late nineties and into the millennium. Calman–Hine cancer initiatives, minimum reporting datasets and multidisciplinary meetings have added to the complexity of reporting, which, together with problems in recruitment and retention of pathologists and ever-increasing workloads, have placed a huge burden on the reporting pathologist. Clinical specialties have been quick to respond to the demands of increasing complexity of diagnosis, technological advances and treatment, with moves away from the generalist to the specialist. Following on from this, the cellular pathology report has come under scrutiny, with increased demand for diagnostic accuracy and prognostic information on tumours, including immunohistochemical results and molecular biology. With this has come a trend towards specialisation in cellular pathology with perceived higher standards of diagnosis and reporting; conversely, the case for retaining the generalist has been debated and has its merits.^{1–3}

Specialisation has largely been in the domain of the larger teaching hospitals, where the critical mass of pathologists enables the setting up of reporting teams, forming robust rotas taking account of leave and continuing professional development activity. A selected number of pathologists throughout the country practice “superspecialisation”—that is, they report and work only in one specific site. Subspecialisation for most pathologists in larger centres on the whole, however, implies day-to-day reporting of a limited range of grouped sites in teams—for example, a grouping of breast, gynaecological pathology and cytopathology. One perceived barrier to subspecialisation is the ability to ensure equitable workload distribution between colleagues reporting different specimen types of differing complexity. A system of weighting factors has been published by the Massachusetts General Hospital (Boston, Massachusetts, USA) to tackle this problem⁴ and Ku activity has been suggested as a method of weighting the workload.⁵ A recent publication by the Royal College of Pathologists (RCPath)⁶ was an attempt to identify the workload of individual pathologists, with points weighting for different specimen categories in different specialties to equate points with time. Problems with the first edition of the RCPath publication included an inconsistent application of points weighting across the specialties⁷ and difficulty in equating workload in day-to-day practice.⁸ The system also

works retrospectively and requires medical input for accurate application and audit purposes.

BACKGROUND

Warwick Hospital is a medium-sized district general hospital receiving a broad range of cytology and histopathology specimens (excluding major cardiothoracic surgery, perinatal, paediatric, non-neoplastic kidney and neuropathological specimens). The overall caseload in cellular pathology is approximately as follows: 11 500 histopathology specimens, 1400 non-gynaecological specimens, 22 000 gynaecological cytology specimens and 20 hospital autopsies per annum. The available budget is for 4.6 whole-time equivalent (WTE) cellular pathologists and for 1 advanced practitioner in cytopathology, closely reflecting the recommended staffing levels under the old system of the RCPath.⁹ The department, however, had been working with 3.6 WTE consultants for more than 12 months and failed to appoint a suitable applicant to the vacant post of a general histopathologist. Minor subspecialisation existed in the department, with only two WTE pathologists reporting cytopathology, compensated by a reduced allocation of small histopathology specimens. One pathologist did not report breast specimens. Allocation of small specimens resulted in difficulty equalising work between colleagues, because breast specimens were generally perceived as being more onerous than large specimens from other specialties. Although there was a commitment to the principles of some degree of subspecialisation, it was considered by most pathologists as impracticable, with only four or five pathologists working in a team. The lack of a system of allocation enabling a fair distribution of work for subspecialisation was also a major sticking point.

A pathologist from a larger teaching hospital expressed interest in the vacant post. This pathologist had worked as a generalist for the first 6 years as a consultant, but more recently had been working as a subspecialist largely in the disciplines of gastrointestinal tract and skin pathology. The pathologist had not reported cytology specimens for a few years. A consideration against joining the department would have been the necessity to “re-skill” in all areas of general pathology. The decision to take the department down the route of subspecialisation was taken, beginning with the start date of the teaching hospital consultant. The perceived benefits of specialisation in the department related to speed of cut-up and reporting, familiarity with techniques and minimum datasets relating to specialties, and reduction in time spent reviewing cases for multidisciplinary team meetings.

The need for a workload allocation system initially arose from the requirement to distribute the additional workload resulting from the long-term vacancy equitably between the remaining consultant body. A re-design of the Warwick

Abbreviations: RCPath, Royal College of Pathologists; WTE, whole-time equivalent

Box 1 Questions asked to establish teams

- Specialty you want to lead
- Specialty you want to report
- Specialty you would be prepared to report
- Specialty you would be prepared to drop
- Specialty you want to drop
- How specimens are to be distributed between team members

workload allocation system was undertaken with the start of subspecialisation. It was chosen over the RCPATH system for its simplicity and the advantage that specimens could be allocated to categories by the laboratory staff and run prospectively. A full account of the Warwick workload system is published and is based on equitable daily allocation of points by the Biomedical Scientist (BMS) staff to consultants, comprising a simple five-category scoring system accounting for specimen complexity.¹⁰

SETTING UP OF SUBSPECIALISATION

A consultant meeting was set up to determine the leads for each specialty and the supporting members of the team, with a back-up person as required. Box 1 summarises the key questions asked of each consultant.

The meeting was also used to discuss specific issues of specimen allocation and distribution. For example, in breast pathology and uropathology, work would be allocated relatively evenly between three team members. In skin pathology and ear, nose and throat, the work was weighted substantially towards the lead pathologist. In gastrointestinal pathology, the lead was to undertake the bulk of the work and also requested to report all cancer resection specimens, which was agreed to by the other members of that team.

By using the outcome of these meetings as a template and on the basis of previous workload estimates using SNOP codes, an "ideal" allocation (distribution of work) for the pathologists was set out as a framework for the laboratory

Table 1 Specialty teams and proposed workload allocation by pathologist

Specialty	Lead pathologist	Support/back-up
General pool	To balance work allocation	
Gynaecological cytology	IV (25%)	II (25%), AP (50%)
Non-gynaecological cytology	IV (50%)	II (50%)
Breast	II (33%)	IV (33%), V (33%)
ENT and oral	I (75%)	II (25%), III (B/U)
GIT	III (70%)	IV (15%), V (15%)
Female genital tract	IV (50%)	II (25%), V (25%)
Hospital skin	I (70%)	III (30%)
Urology	V (35%)	I (35%), II (30%)

The five consultant pathologists are represented by roman numerals I–V. General pool: soft tissue, bone, lung (bronchoscopic/pleural biopsies), appendix, gall bladder, skin from general practice. The percentage in parentheses represents the contribution of each pathologist to the specialty. AP: advanced practitioner; B/U: back-up as a contingency to cover unexpected leave; ENT: ear, nose and throat; female genital tract: includes vulva, products of conception and placenta; GIT: gastrointestinal tract (oesophagus to anus and hepatobiliary, excluding gall bladder and appendix); hospital skin: any skin sent by the hospital dermatologists and surgeons, as opposed to cases received from general practice (general pool).

technical staff to allocate to (table 1). Minor adjustments were made to these allocations during the initial 2-month audit period (not presented here).

The specialist pathologist joined the consultant team on 1 August 2003, and a new system of allocation of specimens by specialty teams in the department was instituted from this date. The system functioned smoothly for 2 months and was adapted after an audit of the results in August and September 2003. The latest version of the system was audited in October 2003 and is published with a comparison of the "Warwick system" with that of the RCPATH system.¹⁰ The system can also accommodate one or more pathologists in the department wishing to retain some more general reporting experience, as small numbers of cases can be allocated to that consultant across the specialties.

Figure 1 shows the distribution of workload according to Warwick points for each of the specialties, with the

Figure 1 Individual consultants are represented by roman numerals, with individual input to a subspecialty identified by the respective shade. ENT, ear nose throat; GIT, gastrointestinal; Gynae, gynaecology; Gynae cytol, gynaecological cytology; NG cytol, non-gynaecological cytology.

Take-home messages

- Tradition dictates that it is difficult to implement subspecialised pathology reporting outside the setting of a large teaching hospital.
- We report successful transition to subspecialisation in the setting of a district general hospital, with a small group of five consultant pathologists.
- Adoption of a prospective workload allocation system has been key to the implementation.
- Perceived benefits include auditable measures of improved pathologist performance and enhanced, more flexible, individual career development.

individual pathologists in different shades, and indicates the extent of subspecialisation. The extent of subspecialisation was close to that proposed in the discussions before implementation of the system and can be guided in future according to the audit results. Three pathologists reported breast, gynaecological and urological histopathology. Work on ENT and skin was undertaken by two pathologists. The lead pathologist reported most of the gastrointestinal tract, with back-up from two others. Some pathologists have retained a broader range of specialties whereas others are more specialised. Excluding cytology, all the pathologists have dropped at least two subspecialties.

Annual leave and study leave need to be arranged in agreement with other specialty team members and dovetailed accordingly. This has not proved to be a major issue so far and robust service cover has largely been achieved.

DISCUSSION

Our experience in Warwick has shown that a degree of subspecialisation is possible in a smaller cellular pathology department with a group of only five consultant cellular pathologists. The key to the success of the transition has been the full co-operation, flexibility and good will of the consultant group and Biomedical Scientist (BMS) staff, and the successful application of a prospective workload distribution system based on specimen complexity to ensure equitable workload distribution.¹⁰ This system allows for minor redistribution of workload up to full specialisation and, within a consultant group, can accommodate a consultant's preference to work specialised or more generalised. Change to subspecialisation has resulted in perceived

improvements in the quality of clinical practice based around auditable measures of pathologist performance in cancer reporting, reduced time to review cases and halving of the number of reports requiring changes after multidisciplinary team meetings,^{11 12} and has helped members of the group continue and further develop specialist reporting and research interests in the district general hospital setting without necessarily having to retain or retrain diagnostic skills across the full clinical spectrum.

Authors' affiliations

D S A Sanders, R A Carr, O P Stores, N Chachlani, J Simon, Department of Cellular Pathology, Warwick Hospital, Warwick, UK

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Correspondence to: D S A Sanders, Department of Cellular Pathology, Warwick Hospital, Lakin Road, Warwick CV34 5BW, UK; Scott.sanders@swh.nhs.uk

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