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The revised College guidelines on staffing and workload in cellular pathology: first impressions

Text to follow from Bulletin editor

Introduction

Measures of workload are an important aspect of defining appropriate safe working practices by matching workload to staffing, helping to distribute workload appropriately between colleagues, and informing the job planning and review process.

The Royal College of Pathologists (RCPath) first published guidelines on staffing and workload for histopathology and cytopathology departments in 1999,[1] based essentially on numbers of specimen requests. The RCPath then published a substantial revision in 2003,[2] in an attempt to better reflect specimen complexity. The 2003 guidance included, for the first time, a specialty based scoring system. Specimens were scored according to their specific type (e.g. biopsy *versus* resection, etc.) and included scores for macroscopic (macro) and microscopic (micro) elements of the examination presented in tables/matrices for each specialty. Microscopic scores varied depending on individual factors related to the specimen such as numbers of levels, blocks and special stains. The complexity and retrospective nature of the system rendered it problematic in practice, with criticism including inconsistent scoring across disciplines and between colleagues, limiting utility for determining staffing levels and job planning.

Our group, in Warwick, published a system of workload scoring in 2006,[3] which adopted a prospective approach to specimen scoring that addressed many of the deficiencies in the RCPath 2003 system. The 'Warwick' system was developed as a simpler scoring system, allowing biomedical (BMS) and medical laboratory assistant (MLA) staff to score specimens prospectively and facilitated equitable distribution of work between colleagues day by day. In the Warwick system, the cut-up or macro element of the specimen score was included in the overall single workload score allocated. The reporting rate (points reported per hour) between pathologists in different specialties was shown to be more consistent using the 'Warwick' system compared to the RCPath 2003 system.[3]

Two of us (Dr Richard Carr and Dr Scott Sanders) joined the RCPath working group from 2009 that was tasked with updating the workload guidelines. Following an initial questionnaire survey of the RCPath membership, new draft guidelines were circulated in 2011 and, following further subspecialty consultation with the membership, the guidelines were modified and published in March 2012[4] (henceforth referred to as 'RCPath 2012').

RCPath 2012 has adopted a prospective 'averaging' approach to scoring in that additional blocks, levels, special stains and final diagnosis do not impact on the microscopic score (haematopathology being the major exception). Macro and micro scores are presented in simplified site-specific tables, replacing the macro/micro matrices. The retention of macro scores was based on feedback from the questionnaire survey, but does still render the RCPath 2012 considerably more complex than the Warwick system in practice. Here we present a detailed audit of a six-week period in 2011 that compares workload measured using Warwick and RCPath 2012 systems, undertaken to provide evidence to the RCPath working group. We illustrate how the data derived from the audit can be used to assist to provide evidence for job planning.

Methods

Audit study aim: to compare the Warwick and RCPath workload scoring systems in relation to a six-week period of work. Time and motion study of specimen cut-up (macro scores).

Audit study methods: all histopathology request forms were collected for a six-week period prior to implementation of the RCPath 2012 system. The specimen requests had been scored according to the Warwick system, but the micro component was rescored retrospectively by pathologists utilising the RCPath 2012 site specialty tables. RCPath macro scores were also applied retrospectively, but actual time spent at cut up (time and motion) was also recorded for BMS staff and each pathologist for the study period. Comparison between Warwick and RCPath 2012 scores were analysed in Microsoft Excel spreadsheets.

Results

A total of 1788 request forms were received (1586 histology and 202 non-gynae cytology). Average workload points are higher for the majority of each individual requests using the RCPath 2012 system and therefore a higher average value of points per request (Table 1 and 2) was noted,

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compared to the Warwick system. Trained BMS staff and a histopathology trainee carried out the larger proportion of specimen cut up compared to consultant staff over the study period (888 and 346 total macro points respectively).

Applying the RCPath 2012 macro tables, the specimens cut up by consultants accrued a total of 346 macro points, which converts to 38.4 hours of cut up (applying the guidance in RCPath 2012 that recommends a work rate of 36 workload points per PA, i.e. 9 workload points per hour), whereas in the time and motion study, the consultants actually spent 21.9 hours in cut up, which converts to only 197.1 RCPath 2012 macro points, for the same specimens.

We also compared the relative workload score by specialty between the Warwick and RCPath 2012 scoring systems (Figure 1). Applying the 2 systems results in different percentages of total workload for the specialty areas which in turn reflects how generous in time the system is for that specialty. The higher the blue column relative to red (or yellow) the more generous in time the Warwick system is for that specialty relative to RCPath 2012. For example, gastrointestinal pathology is more generously scored using Warwick compared to RCPath 2012. We also subdivided the RCPath scores to include and exclude BMS macro points.

Factoring RCPath 2012 into job planning

We have previously published an article on an approach where workload scoring can be used at three levels of complexity to aid job planning and workload distribution.[5] From the results of this audit, we were able to devise a table to approximate the total workload points received by our department in a calendar year and hence put a figure on the total available clinical reporting hours needed to report one year's work.

Table 3 highlights the difference between the hours required per week based on workload with available clinical reporting time in our current departmental job plan. A table such as this illustrates how applying the RCPath 2012 scoring system could help departments to estimate required staffing levels and monitor staffing requirements against increased workload received.

Table 1: Histology request forms scored by Warwick and RCPath 2012

	Points	Points/ request
Total Warwick score	3217	2.03
RCPath 2012 scoring*		
RCPath micro	3644	2.30
RCPath macro (consultant)	346	0.22
RCPath macro (BMS/junior)	888	0.60
RCPath macro total	1234	0.79

Table 2: Cytology request forms scored by Warwick and RCPath 2012

	Points	Points/ request
Total Warwick score	334	1.65
Total RCPath score*	491	2.43

Discussion

The retrospective coding of specimens using the RCPath 2012 specialty tables was relatively straightforward for the pathologists. On 1 January 2012, we adopted RCPath 2012 (prior to the publication of the guidelines). Initial feedback from the BMS and MLA staff now applying the RCPath 2012 system for scoring in day-to-day practice, in place of the Warwick system, is that despite greater complexity, it is relatively straightforward to use for prospective workload allocation.

Our audit findings indicate that, for our workload, the RCPath 2012 system (relative to the Warwick system) is considerably more generous in time for breast pathology reporting, somewhat more generous for cytopathology, but considerably less generous in time for gastrointestinal tract pathology reporting. These changes reflect the fact that the RCPath 2012 scores are weighted more heavily towards complex specimens compared with basic cases. In our subjective view, the weighting of RCPath 2012 towards the more complex specimens is more equitable compared with RCPath 2003, and even the Warwick system.

Using the results of our audit, we were interested to find that the time to report our annual workload, predicted by RCPath 2012, fairly closely approximated to our actual job plans albeit, with an implied 3 hour a week shortfall in our staffing. This finding lends some validity to the 9 RCPath points/hour recommended in the RCPath guidelines, but in our view indicates the system is certainly not generous. Departments with a lesser proportion of BMS or junior cut-up may find the new RCPath system particularly challenging with respect to workload and staffing. Time and motion studies (including work-diary exercises) will be required to validate the RCPath 2012 benchmark of 9 points/hour and guide local job planning negotiations. There has been some suggestion that the RCPath 2003 guidelines underestimated true potential work rate,[6] but work rates depend upon many factors, including the repertoire and complexity of specimens received, and the degree of subspecialisation within the department. Warwick Hospital is a district general hospital (DGH) with a moderate degree of subspecialisation,[7] but further audits with time and motion studies would be of great value to assess the RCPath 2012 system in practice in non-specialised or more highly specialised departments, including teaching centres.

There is considerable discrepancy between cut-up time allocated to specimens applying RCPath

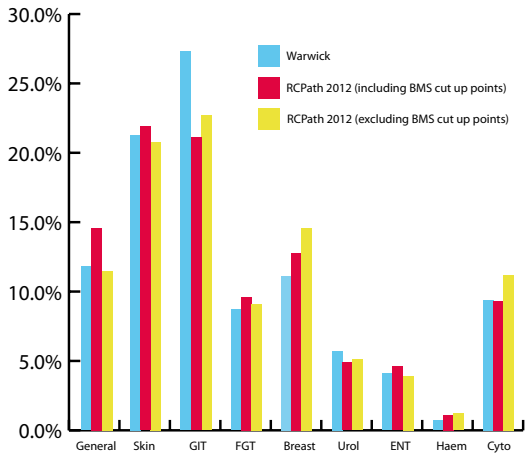

Figure 1: Warwick versus RCPath 2012 workload scoring as a percentage (y-axis) by specialty (x-axis) against total workload

2012 macro points and the actual time spent by our consultants in the cut-up room dealing with those cases. This may reflect consultant experience and faster cut-up speed; alternatively macro scores may be too generous.

A potential drawback of the RCPath 2012 system is the greater potential complexity in practice and requirement to account for the macroscopic examination separately. Individual departments will have to decide whether to use macroscopic scores or, as we have chosen to do, simple daily records of cut-up times (converted to points) if and when they adopt RCPath 2012 for workload scoring. Having now introduced the RCPath 2012 system, we also plan future audits to look at coding accuracy for BMS and MLA staff.

Conclusions

The new RCPath 2012 workload system represents a considerable step forward in adopting an averaging/prospective approach to workload scoring, whilst still reflecting specimen complexity, and should allow departments to more accurately and reliably score work in practice for benchmarking and job planning. It can be used as a tool to distribute work on a day-to-day basis, assess overall annual workload in comparison to available departmental clinical reporting hours, and can be used to assess the anticipated impact of increased workload resulting from service developments and reconfiguration. The validity of the system depends on whether it truly reflects day-to-day practice and, to that end, audit and evaluation of the key aspects of the system (validity of the micro and macro scores and recommended work rate of 9 points per hour) would be of value from the full range of departments with different workload complexity.

Acknowledgments

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Table 3: Comparison of total workload in RCPath 2012 points against available clinical reporting time in the departmental job plan

	Warwick	
Year	**2011**	
Annual Histology Requests	13279	
Micro Points/Histology Request	2.30	Calculated from Warwick Audit
Weekly Required Histology Micro Hrs	65.2	Calculated based on 9 RCPath pts/hr
Total Macro Points/Histology Request	0.79	Calculated from Warwick Audit
Proportion of Macro by Consultants	0.28	Derived from local estimate or audit
Weekly Macro Hrs (Consultants)	7.90	
Total Cytology Requests	1581	
Points/Cytology Request	2.43	Calculated from Warwick Audit
Weekly Cytology Hrs	8.21	
Weekly MDM Hours	21.25	Derived from Local Audit or Job Plans
Weekly Required Clinical Hrs (Excl. BMS/Junior)	102.6	Calculated from workload above
Total Weekly Clinical Hrs in Job Plans	129.3	Derived from Job Plans
Available clinical PA (corrected for leave–40 weeks)	99.4	40/52ths of the figure above
Difference between available and required hrs/week	-3.1	A negative number indicates a shortfall in staffing

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Working with the enemy: A positive approach to blood transfusion regulation

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It is now seven years since the EU Blood Directive was transcribed into UK law as the Blood Safety and Quality Regulations (BSQRs)[1] and the Medicines and Healthcare Regulatory Agency (MHRA) was established as the regulatory authority for overseeing compliance with this legislation.

The BSQRs set out the standards required to ensure the safety and quality of blood that is provided for transfusion. These standards apply to blood establishments (National Blood Services) where whole blood is collected from voluntary donors and processed, and hospital blood transfusion laboratories (HBTLs, hospital blood banks) where compatible blood is issued for clinical use.

Previously blood establishments had been subject to national regulation under pharmaceutical legislation, but this did not cover HBTLs, leaving a significant phase of the process of blood provision unregulated. The implementation of the BSQRs in 2005 addressed this deficit, but presented a major challenge to HBTLs, which would now be subjected to rigorous external audit at a level previously only experienced by blood establishments.

Anticipation of the EU-driven legislation was less than enthusiastic, with knowledge of the detail and an understanding of how best to implement it proving extremely variable throughout the UK. Many felt that their hospital blood transfusion practice was safe and did not need to change, and that time spent on 'paper chasing' and process would increase, rather than decrease risk, by drawing resources away from service delivery. Such attitudes sometimes still manifest as confrontation and resentment unreasonably directed towards MHRA Inspectors during current site inspections, seven years on.

Appropriate implementation of the BSQRs is a legal requirement. Assessing compliance with this legal requirement is the responsibility of the MHRA.

Much progress has been made by the majority of HBTLs in the areas of quality systems, incident management, cold chain requirements, and traceability based on the principles of good practice (GP).[2] However, the process of compliance assessment through completion of the blood compliance report (BCR),[2] followed by inspection 'for cause' of selected laboratories, relies on the professional integrity of those responsible for providing the transfusion laboratory services, their understanding of the principles of GP, and the role of the Regulator (MHRA) in assessing whether systems are fit for purpose.

Blood establishments are inspected routinely on a two-year cycle. There is no opportunity to evade the watchful eye of the Regulator and the inevitability of an inspection provides focus, demands appropriate resourcing and delivers comprehensive evidence of compliance for this sector. In contrast,