The Association of
Clinical Biochemists

The Royal College of Pathologists

NHS clinical biochemistry
'A profession under siege'

A report on consultant staffing in NHS clinical biochemistry
from the Task Force established by the
Association of Clinical Biochemists (ACB) and
The Royal College of Pathologists (RCPath)

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The full version of this publication can be obtained from www.rcpath.org and www.acb.org

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FOREWORD

Dear Reader,

This report contains the results of a comprehensive study of consultant staffing in NHS clinical biochemistry, which was commissioned jointly by the Association of Clinical Biochemists (ACB) and the Royal College of Pathologists (RCPath). The main findings of the report are of a large increase in both the quantity and complexity of workload over the past five years, with no increase in consultant staffing. NHS clinical biochemistry truly is 'a profession under siege'.

The ACB and RCPath recognise that 2002 is a time of great change in health care, and especially in laboratory medicine. Although evidence of the impact of this change is only now beginning to accumulate, the recommendations in the report have been designed to be capable of implementation in this changed environment, enabling the new NHS to maintain modern, responsive and high-quality clinical biochemistry services which are matched to the needs of the patient.

At national level, the introduction of national service frameworks and managed clinical networks need to be accommodated. *The NHS Plan* challenges us to look closely at the roles of medical practitioners and *Making the Change* offers the prospect of an integrated team of healthcare scientists, many of whom work in clinical biochemistry laboratories.

At NHS Trust level, the introduction of the new strategic health authorities in England calls for flexible but comprehensive service provision and staffing for populations of around 1.5 million. As part of this reconfiguration, there is a substantial programme of pathology modernisation which clinical biochemists are helping to lead. A properly staffed and consultant-led service is essential to deliver the improvements envisaged by the modernisation programme.

Within clinical biochemistry itself, the pattern of requesting is changing and there is greater emphasis on quality standards necessary to ensure proper clinical governance, including interpretation and clinical guidelines. The new sub-specialty of metabolic medicine will also have a major impact on the role of medical consultants in clinical biochemistry.

The ACB and RCPath are keen to work with the four Departments of Health, Strategic Health Authorities and their Workforce Development Confederations, NHS Trusts (including Primary Care Trusts) and other professional bodies to implement the recommendations in the report, in the firm belief that these will deliver the clinical biochemistry services that the NHS and the patient will require in the years ahead. We hope that you find the report informative and useful.

Yours sincerely,

Professor John S Lilleyman
President, RCPath

Professor Alan Shenkin
President, ACB

EXECUTIVE SUMMARY AND RECOMMENDATIONS

1.1 Introduction

This report was prepared by a Task Force established jointly by the Association of Clinical Biochemists (ACB) and the Royal College of Pathologists (RCPath), in response to the concerns of their members about the growing pressures on consultants in clinical biochemistry and their impact on quality, risk management and the ability to meet clinical governance targets for the patient, the service and the profession. The Task Force was established in February 2001 with the following remit: "to produce an evidence based report which recommends the optimal number of consultant level staff currently required for NHS clinical biochemistry departments in the UK, together with a model which may be used to predict future consultant staffing requirements."

The Task Force consulted widely in its work. An essential part of the investigation was the preparation of a detailed questionnaire, which was distributed to every consultant in an NHS clinical biochemistry department.

A second questionnaire was distributed to every NHS Trust Chief Executive, in order to provide initial information and seek the views of senior NHS managers about the current state of clinical biochemistry.

A summary of the main findings of the Task Force is given in Section 1.2. The specific recommendations arising out of the work of the Task Force are given in Section 1.3.

The full report, together with all the evidence to underpin the findings and justify the recommendations, is available from the ACB and RCPath, most conveniently from their websites: www.acb.org.uk and www.rcpath.org.

1.2 Executive summary

1.2.1 The workload of clinical biochemistry departments increased by 56% (requests) and 63% (tests) over the period 1995–2001. On average, clinical biochemistry departments processed 331 000 requests and 1 839 000 tests in the year to 31 March 2001. Not only did the total workload rise, but the percentage of that workload delivered outside normal working hours also rose from 8.7% to 13.4% over the same period. General practitioners now provide the greatest contribution to the workload, with this share rising from 30.9% in 1995 to 36.7% in 2001. The repertoire also increased between 1995 and 2001, with an average of ten additional analytes available within normal working hours and 6.5 analytes out of hours. Although there are important differences between district general hospitals and teaching hospitals, the same major trends are evident.

1.2.2 The number of staff working in clinical biochemistry departments has declined during the period 1995–2001. The number of consultant staff has remained static, whilst the number of grade B clinical scientists and specialist registrars has each fallen by approximately 10%. The number of biomedical scientists in post has also declined, in part due to the difficulties of recruitment and retention.

1.2.3 The net effect of a rising workload and falling staff is increased pressure and stress within clinical biochemistry departments, with consultants having to absorb the management consequences of this additional burden. In 1995, 82% of departments considered their total staffing to be adequate or better, but by 2001, 89% of departments were struggling to cope. Unless a solution is found, 98% of departments will either be struggling or unable to cope by 2005.

1.2.4 Against a general background of improving quality standards, early signs of problems may be detected in areas such as laboratory accreditation, performance in external quality assessment schemes, turnaround time and blunder rates. Consultants have significantly less confidence in meeting clinical governance targets than they did in 1995.

1.2.5 All the evidence indicates that the workload of clinical biochemistry laboratories will continue to rise in line with the growing number of general practitioners and hospital consultants and the extended roles of other healthcare professionals. Moreover, national service frameworks for diabetes mellitus, coronary heart disease and cancer are expected to increase workload by a further 10%.

1.2.6 Many Trusts and departments have introduced a range of measures to try to cope with the rising workload. Automation and information technology have had some impact, especially on the pre-analytical and analytical components of the work but, in general, they have failed to keep pace with the rising workload. In the post-analytical phase of operation, departments have been forced to introduce steps to manage the interpretation and reporting functions, often against their better judgement.

1.2.7 Clinical biochemistry is a consultant-led service. Those consultants work long hours. On average, NHS medical consultants work 47.3 hours each week (excluding on-call cover), with more than 35% of them regularly working in excess of the 48-hour maximum working week as defined by the European Working Time Directive. Consultant clinical scientists and university medical consultants work similar hours. In addition, NHS medical consultants are on-call for an average of 52 hours each week, with the figures for the other consultant grades being only slightly less demanding. In total, more than 115 UK consultants in clinical biochemistry provide a 24-hour, seven-day, single-handed advisory service in addition to their long working week.

1.2.8 On average, a consultant in clinical biochemistry is now responsible for reporting 630 requests and 3500 test results on each normal working day. There are real concerns, supported by the Clinical Benchmarking Company, that this workload is too high to guarantee proper clinical guidance to users of the service – and especially to general practitioners.

1.2.9 The recent accreditation of the sub-specialty of metabolic medicine will improve the quality of clinical care in this developing field of medicine. The development is generally welcome within the profession, but it will generate new work, significantly reduce the amount of time that accredited medical consultants in clinical biochemistry are able to give to laboratory related functions and thereby increase pressure on them and other senior staff.

1.2.10 Whilst the clinical demands of the consultant in clinical biochemistry have increased in line with the workload, there has been an even greater increase in the amount of time spent on quality issues (laboratory accreditation, audit, risk management, clinical governance, etc.) and on management within the department and Trust. Research and development has suffered badly and is now almost non-existent in many NHS non-teaching hospital departments.

1.2.11 Evidence from job plans indicates that the roles of medical consultants and consultant clinical scientists are complementary, with overlapping functions in areas such as reporting, quality matters and management. Medical consultants will normally undertake some aspects of direct clinical care and give advice on patient management; this role is likely to grow as the sub-specialty of metabolic medicine evolves. Consultant clinical scientists generally are involved in more laboratory-based functions, including research and development. The decision on whether to appoint a medical consultant or a consultant clinical scientist should be a local one, based on the detailed duties to be undertaken and the existing staff in post.

1.2.12 Consultants in clinical biochemistry have seen their stress at work increase appreciably during the past six years, with 36% now admitting to severe stress during the normal working day.

1.2.13 An additional 78 medical consultants and 70 consultant clinical scientists are required in clinical biochemistry departments. Whilst these posts are required to meet the deficit identified in 2001, it is recognised that there will have to be a significant lag phase before sufficient staff can be recruited and trained. Workforce planning is required to recruit the necessary additional specialist registrars over a suggested five to six-year period. The problem for clinical scientists is considerably greater because current trainee recruitment is only sufficient to meet 50% of the existing need, and a large increase will be required to meet the additional number of grade B clinical scientists and consultant clinical scientists identified by the Task Force. Therefore an eight-year period seems a more practical target within which to expand the recruitment and training of grade A clinical scientists.

1.2.14 There is also an urgent need to increase other grades of staff in clinical biochemistry departments. In 2001, it has been estimated that 88%, 51% and 49% of departments require additional biomedical scientists, medical laboratory assistants, and administrative and clerical staff respectively. A total of 100 grade B clinical scientists require to be recruited to replace those lost through gradual attrition at NHS Trust level.

1.2.15 A detailed model for assessing the number of consultants in a clinical biochemistry department has been developed and validated. This model acknowledges the impact of workload volume and complexity, the problems of single-handed working and maximum working time and the need for flexibility in the pattern of service delivery, including operation across sites.

1.2.16 NHS Trust Chief Executives were sent an information sheet of the main findings of the Task Force and their reactions were sought through a short survey. The senior managers who replied were split over whether clinical biochemistry is a clinical service or a clinical support service. In general, they are very happy with the overall quality of service but 25% admit that the clinical biochemistry services are deteriorating in their Trust.

1.2.17 A majority of the senior managers recognise all or most of the findings in the information sheet and they acknowledge the pressures that exist in clinical biochemistry. A majority agree that departments are struggling to cope with current staffing levels and shortages are acknowledged to varying extents in all staff grades.

1.2.18 NHS Trusts have clearly invested substantially in automation and information technology during the past five years, in an effort to manage the rapidly rising workload. Some 74% of senior managers agree that laboratories in their Trust have been targeted for savings and virtually all of them have seen an improvement in the cost-effectiveness of their clinical biochemistry services.

1.2.19 Trust managers agree that a wide range of consultant duties in clinical biochemistry will increase in the next four years, with 76% expecting service reconfiguration and 91% expecting extra work related to compliance with clinical governance targets.

1.2.20 Overall, senior managers recognise the range of pressures in clinical biochemistry and see the need for additional staffing, including consultant staffing. Predictably, perhaps, they do not view the problems quite so seriously as the consultants in clinical biochemistry – on average managers see problems to an extent of about two-thirds of that of their consultants.

1.2.21 Senior Trust managers estimate that approximately 100 additional consultants will be required in clinical biochemistry over the next four years.

1.3 Recommendations

1.3.1 It is recommended that the number of medical consultants in clinical biochemistry be increased by 78 whole time equivalents (wte) to meet the current needs of the profession and the introduction of metabolic medicine.

1.3.2 It is recommended that the expansion of 78 specialist registrars in clinical biochemistry (national training numbers) be achieved by a planned increase of 26 per year, for each of the next three years.

1.3.3 An expansion of 70 consultant clinical scientist posts is recommended to meet current needs. In addition, the appointment of 100 principal grade clinical scientists is required to replace lost posts.

1.3.4 It is recommended that the number of grade A clinical scientist posts must be matched to the currently identified workforce planning needs and then further expanded by 22 posts per year for the next eight years.

1.3.5 It is recommended that, as a matter of urgency, the ACB prepare a detailed paper on the workforce requirements for clinical scientists, which it presents to all relevant national and regional workforce confederations.

1.3.6 The following six-step model is recommended as the basis for determining consultant staffing in NHS departments of clinical biochemistry.

(i) Each department should have a minimum of 1.5 wte consultant staff.

(ii) Add 0.1 wte consultant for each increment of 25 000 requests per year above a baseline of 200 000.

(iii) Add 0.5 wte consultant for each department that operates from more than one substantial geographical site.

(iv) Add 0.5 wte consultant for each teaching hospital department, or for each children's hospital department, or for other departments that have a lead role in training medical or clinical scientist staff.

(v) Add 0.15 wte consultant for each 3.5 hour session of direct clinical care above a baseline of 2 sessions per medical consultant.

(vi) Add 1.0 wte consultant to each department that contains a university professor of clinical biochemistry.

1.3.7 It is recommended that the 1996 ACB/RCPath minimum senior staffing model be actively promoted, in conjunction with the new six-step consultant staffing model. For any clinical biochemistry department, the difference in staffing predicted by the two models may be equated with the minimum number of principal clinical scientists required.

1.3.8 It is recommended that the findings of this survey be made known to the Institute of Biomedical Science (IBMS) at an early stage and that the ACB and RCPath offer to work with the Institute to promote the case for additional biomedical scientist staff in clinical biochemistry departments.

1.3.9 It is recommended that the ACB and RCPath work with the IBMS to define the roles of medical laboratory assistants and administrative and clerical staff working in clinical biochemistry; to determine current and future staffing levels; and to suggest a mechanism for ensuring that the contribution of these key members of staff is not overlooked.

1.3.10 It is recommended that the full Task Force report be published in professional format on the websites of the ACB and RCPath.

1.3.11 It is recommended that the ACB and RCPath publish Chapter 1 of the Task Force report jointly in a hard-copy, professional format that will allow for widespread distribution to the profession, health service managers and the four UK Departments of Health.

1.3.12 It is recommended that the ACB and RCPath jointly agree a detailed strategy for the promotion of the main findings of the Task Force report.

1.3.13 It is recommended that heads of departments of clinical biochemistry discuss the findings of the Task Force report with their Chief Executive Officer, Director of Pathology and Medical Director, with a view to preparing a local case for action.

1.3.14 It is recommended that the implementation of the Task Force recommendations is the subject of regular joint review by the RCPath Medical Workforce Department and the ACB Workforce Advisory Committee.