Going Dutch – again

Jonathan Jenkins-Waud FIBMS concludes his look at pathology services at the Gröningen University Hospital Laboratory Centre in The Netherlands

Last month ('Going Dutch', *Biomedical Scientist* January, page 16) I looked at hospital ergonomics, laboratory organisation, quality systems, education and staffing, and pay and conditions from a Dutch perspective, as part of an exercise to investigate the possibility of introducing clinical support staff exchange between Gröningen University Hospital and hospitals in Cardiff. Here, I conclude the story by looking at work patterns and processes, equipment, and the possibilities for transnational working between The Netherlands and the UK.

Laboratory work patterns and processes

Routine laboratory work in haematology and chemistry is organised on a three-shift basis, with each being eight hours for routine working. Weekends are covered in a similar manner, with appropriate time off in lieu or part-payment given.

Extended-day working is employed, with the laboratory open from 7.00 am to 11.00 pm. The early shift is from 7.30 am to 4.30 pm and the late shift from 2.30 pm to 11.00 pm. Two members of staff work from 11.00 pm to 7.00 am – one each in chemistry and haematology – and four staff work up to 11.00 pm.

In addition, staff are on-call from home during the evenings and at weekends for technical problems within the bloodbank, for transplantation duties, for coagulation and for some complex chemical analyses. Weekend working is achieved by staff working similar flexible shifts.

Salary is paid at x1.42 of the normal rate from 7.00 pm to 11.00 pm and then at x1.72 thereafter. Weekend working is paid at x1.42 of the normal rate on a Saturday and at x1.72 on Sunday. There is some flexibility in the system for time off to be taken instead of pay received, or a mixture of the two; however, it was acknowledged that operation of the system was complicated, particularly at times of staff shortage and sickness. Some senior members of the department work day shifts only, in order to take part in the continuing in-house training of staff.

Specialised areas of the laboratory, such chromatography, operate a flexible pattern of working between 7.00 am and 6.00 pm on weekdays, with no out-of-hours or weekend service provided; however, some automated analysis takes place overnight.

Phlebotomy duties are undertaken by MLAs on the wards between 8.00 am and 10.00 am each day, with additional help from phlebotomists positioned within each out-patient clinic. Samples arrive in the laboratory by vacuum tube, electric cart or with the phlebotomy staff.

Daily workload for both haematology and chemistry amounts to approximately 2000 samples per day, and each section of the laboratory has a sample reception bench; however, there is a view that these should be combined.

Patient demographics and requests are then entered into the laboratory computer system. Test codings are highlighted on the request forms and are part of the name of the request. Worksheets are prepared for urgent and non-urgent workloads and distributed to the appropriate benches. Technical and MLA staff claim not to feel stressed by their work, which may be due to the flexible nature of the working hours, the more even delivery of the work by the vacuum tube system or the routine that appeared to have been developed on the wards for requesting sample testing by a certain time each day. However, it should be remembered that

The main entrance to Gröningen University Hospital

One of the main 'streets' within the hospital. Out-patient departments and wards are accessed from these streets, which were originally real roads on the old hospital site

the Dutch workload is lower than the combined biochemistry and haematology figures for Cardiff, mainly because GP samples are analysed off-site in Gröningen.

Ward-based blood glucose monitoring using the Abbott MediSence system currently is being evaluated, with two machines on a general ward and one in paediatrics (not SCBU). Quality control (QC) information, including barcode data from patients and operators, generated on the ward is transferred via electronic workstations to the laboratory computer system for evaluation, and lockout procedures are triggered for non-compliance with QC standards.

In addition, blood gas analysis equipment has been placed in the operating theatre and at two other sites outside the laboratory. This equipment is monitored via a computer link and various maintenance procedures are undertaken via this link.

All laboratory departments are linked to the Dutch HisCom laboratory computer system, which is interfaced with the hospital-wide system that provides computer access to laboratory reports within each medical department. However, staff at the laboratory centre at Gröningen University Hospital are looking to replace the existing computer system and have shown interest in a French clinical chemistry expert system that provides automatic comments and auto-authorisation of results.

Range of equipment

Combined chemistry and haematology

The laboratories are very well equipped, with many analysers duplicated; however, the 10-year-old Coulter StakS main haematology analysers are due to be upgraded. Coagulation screening forms part of the core facilities available, with two stand-alone coagulometers in operation.

Blood gas analysis is performed by Radiometer 720, with sodium, potassium and calcium electrodes on all machines, but used for ITU patients only on the same gas sample. Blood glucose is measured in fluoride oxalate whole blood samples. Some analysers have been procured in triplicate to allow for maintenance, servicing and breakdowns. The hospital technical and engineering team is responsible for the repair of laboratory equipment.

HbA1c is analysed in the chromatography section, along with endocrinology and trace metals. However, lithium and selenium are analysed in the pharmacy department, together with poisons, therapeutic drug monitoring and overdosage. The philosophy is that hospital laboratories should be involved in human biological disease and diagnosis, while pharmacy should be involved in analysis of materials not normally found in the human body.

Special haematology

Bone marrow morphology, flow cytometry, immunophenotyping and haemoglobinopathy studies are undertaken in a special haematology section of the laboratory. Technical staff rotate through the routine areas of haematology more regularly than occurs in the more specialised areas. Currently, however, there is much discussion about staffing structure and flexible working arrangements, including part-time work, together with levels of automation and the effective use of laboratory assistants within these areas.

Special chemistry and chromatography

In the special chemistry and chromatography section, approximately 15,000 TFTs are processed each year from the hospital population, together with some DNA analysis (eg apolipoprotein E [ApoE] and 5-Lieden genotyping). Approximately 2000 ApoE genotyping analyses per year are requested by the cardiologists interested in lipid metabolism. Equipment includes AutoDelfia, Immunolite2000, Architect, nephelometry, Advantage and HPLC, GC, industrial scale mass spectroscopy and infrared spectroscopy systems.

Currently, some 10% of samples are referred from outside the hospital. HbA1c samples are collected by patients at home and sent into the laboratory about a week before out-patient clinic appointment – a system organised by the medical departments in the hospital.

Immunology

Immunology is divided into diagnostics, diagnostics research and developmental research. Areas include transplantation HLA tissue typing, clinical immunology and transplantation research, allergy and lung disease investigation with lung transplantation research, and dermatology. In total, some 100 staff are employed, 60 of whom are financed by the hospital and 40 financed via grants or by the university. Immunologists must have a PhD qualification and some have medical degrees. No clinical chemists are employed in this area.

Transnational working

The visit to Gröningen highlighted much commonality of laboratory processes and patterns between the two countries. The historical consequences of having separate laboratories for each medical facility in Gröningen has left a legacy of over-indulgence in staffing and equipment rarely seen in the UK. In addition, major differences are evident in the educational and training requirements of staff, particularly technical staff, between the UK and The Netherlands.

Transnational working across Europe is one of the goals set by European Community politicians; however, in light of these major differences in educational and training requirements, questions arise about the feasibility of Dutch laboratory scientist meeting HPC state registration and IBMS educational requirements if they wish to work as biomedical scientists in the UK.

A triumvirate of blood gas analysers

Haematology Coulter StakS analysers, due for replacement

Broader horizons?

With clear evidence that the laboratories in Gröningen are well managed and the technical staff knowledgeable of laboratory practice, the visit to The Netherlands has broadened my view.

Clearly, in the UK, highly qualified state registered biomedical scientists are needed. But perhaps it is now time to consider the use of laboratory technician grades (separate from the MLA grade, with either GCSE or 'A' levels, and OND, ONC, HND or HNC qualifications), similar to those employed by our Dutch colleagues, to manage the future predicted staffing shortfalls. Validated IBMS top-up courses for degree equivalence, with state registration if appropriate, then could follow.

Introduction of a technician grade might allow current state registered biomedical scientists the time to supervise staff, manage laboratories or become involved in the scientific endeavours of laboratory practice, such as research and development. Interestingly, the Dutch biomedical scientist equivalent appears to be at biochemist or clinical chemist level, and is dependent on postgraduate qualifications and work related activities.

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Jonathan Jenkins-Waud would be pleased to receive any comments that readers may have at jonathan@waud.freeserve.co.uk

Improving working lives for healthcare scientists

Anthony Walsh, DoH project manager for recruitment and retention of healthcare scientists, reports

The Department of Health published the *Improving Working Lives* (IWL) standard in October 2000. This recognised that modern health services require modern employment practices and that staff work best when they are able to strike a healthy balance between work and other aspects of their lives.

The IWL standard accepted that there was a joint responsibility between employers and employees to develop a range of working arrangements that balance the needs of patients and services. It also stated that staff should be valued and supported, that they should be provided with opportunities for personal and professional development and that they should have access to a range of policies and practices to enable them to achieve a healthy work-life balance.

The IWL standard covers eight key areas:

- Human Resources Strategy and Management
- Equality and Diversity
- Communication and Staff Involvement
- Flexible Working
- Healthy Working
- Training and Development
- Staff Benefits and Childcare
- Staff Attitude Survey.

Implementation of the IWL standard was planned in three stages The first stage – 'Pledge' status – should have been achieved by all NHS organisations (with the exception of a few newly formed Primary Care Trusts) by April 2001. The next stage – 'Practice' status – should be achieved by April 2003 and will mean that the majority of the IWL standard is being applied to the majority of the staff, with an action plan in place for implementation of the remainder of the standard for the remainder of the staff. Trusts are being assessed at the moment to determine whether or not they have achieved 'Practice' status. The final stage is 'Practice Plus' – implementation of the entire standard for all staff – and the DoH currently is considering a target date for full implementation.

However, it has quickly become apparent to the DoH that healthcare scientists often fall in the 'remainder of the staff' category – in other words, their working lives have yet to be improved. The two areas of greatest difficulty appear to be flexible working and career progression. There appear to be a number of reasons for this:

- Low profile – HR professionals in trusts and workforce development confederations may overlook healthcare scientists when drawing up IWL implementation plans
- Small specialised departments – healthcare scientists tend to operate in small specialised teams, with few opportunities for cross-disciplinary working which making flexible working arrangements more difficult to implement
- Size and specialisation create difficulties in career progression, with the higher rungs of career ladders blocked
- Many healthcare science departments open on a Monday-to-Friday, daytime-only basis, limiting opportunities for flexible working
- Culture and 'scientific' management – managers often are less familiar with flexible working arrangements than counterparts in other professions and may be less comfortable in a less structured and controlled environment.

In recognition of these difficulties, the DoH has produced *Improving working lives for the allied health professions and healthcare scientists*, which contains 16 examples of how individual managers are improving the working lives for their healthcare scientist and allied health professional staff. The guidance was launched at the recruitment and retention conference at York Racecourse in October. It includes examples of implementing flexible working arrangements, career progression for support staff and advanced practitioners.

The guidance recognises the difficulties in implementing IWL for healthcare scientists (practical difficulties, problems with resentment and trying to be fair to all staff) but also highlights the benefits (improved morale and recruitment and retention, greater flexibility in service provision, more productive staff).

One thing is certain – the IWL standard will not go away. Every manager must examine how the working lives of their staff (as well as themselves) can be improved

Improving working lives for the allied health professions and healthcare scientists is available on the DoH website (www.doh.gov.uk/iwl) of by post from Department of Health, PO Box 777, London SE1 6XH, tel 08701 555455.