LETTERS

Note to authors of letters: Please note that all letters submitted for publication should be typed with *double spacing*. Failure to comply with this may lead to delay in publication.

Telephone answering times in NHS hospitals

Sir,
'The switchboard is taking ages today' is a well known grumble of both hospital doctors and general practitioners, as well as hospital administrators and secretarial staff. In a recent study, 8% of hospital switchboards took in excess of 90 seconds to respond.[1] There is also a general impression that hospital switchboards are slower to answer calls than companies in the private sector. We carried out a study to determine if this was indeed the case.

The two authors each selected 25 National Health Service hospitals from their own and adjacent regions (excluding their own base hospitals) so that the English health authorities were broadly represented. All hospitals were major teaching hospitals or large district general hospitals and all receive emergency admissions. The 50 hospitals were telephoned during normal working hours. (Monday to Friday, 10.00–12.00 and 14.00–16.00 hours) and the time taken for the main switchboard to answer was accurately timed in seconds from the first ring using a stop watch. An independent witness was present during the timing of all calls.

The top 50 companies were selected from the *Financial Times* top 100 list of companies quoted on the stock market. The telephone number of their head office was obtained and also called during normal working hours and the response time recorded similarly.

The results for each group were tabulated and formed a skewed distribution. The mean waiting time for the hospitals was 30.8 seconds (range 1–104 seconds, interquartile range 6.75–50.50 seconds) while for the companies it was 7.4 seconds (range 1–36 seconds, interquartile range 2–9 seconds).

Figure 1 shows the switchboard response times of hospitals and companies, divided into 16-second bands. At least 90% of the calls to a private sector company were answered within 16 seconds but 16% of hospital responses were between four and seven times longer than this. Statistical analysis of the results using the Mann-Whitney *U* test showed that the difference between the two groups was highly significant ($P<0.001$).

The widely used norm within the communications industry for telephone answering time is six rings, that is approximately 16 seconds (Siemens Communications Systems Ltd, personal communication), and switchboards are designed to achieve this objective. By answering within six rings, calls are unlikely to be lost through 'caller fatigue'. Most major companies examine their own telephone system on a regular basis and if 95% of calls are answered within six rings this is deemed to be satisfactory. Clearly this is essential in a competitive commercial environment where lost callers may mean lost orders.

This study shows that hospital switchboards are significantly slower to respond than those in industry. This is of concern because it results in delays at every level, both within and outside the hospital service. Furthermore, staff who make regular use of the telephone (for example, medical secretaries) waste considerable amounts of time each day, resulting in inefficiency and increased costs. The causes of the observed delay have not been examined, and may lie in staffing levels, the suitability of switchboard hardware for the number of calls received,

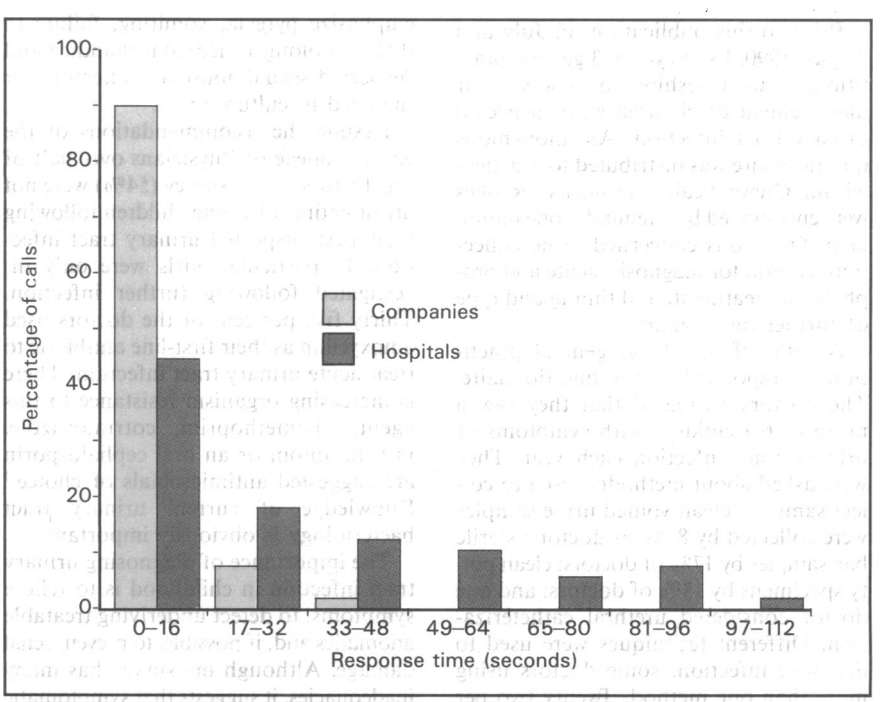

Figure 1. *Switchboard response times of 50 NHS hospitals and 50 private sector companies.*

difficulties in ascertaining which department members of the public should be passed on to, or elsewhere.

We suggest that health authorities should routinely monitor the response times of major hospital switchboards, and that these should be expected to reach similar standards of performance to those in industry and commerce.

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Primary care management of urinary tract infection in children

Sir,
Recently, a research unit from the Royal College of Physicians published guidelines for the management of urinary tract infection in children.[1] The lack of universal policies was recognized and recommendations were made for management, research and audit.

Prior to this publication, in July and August 1990, I surveyed 173 general practitioners in Cheshire to assess their management of children with suspected urinary tract infection. An anonymous questionnaire was distributed to practices within Crewe health authority. Replies were encouraged by a reminder one month later. Questions concerned urine collection, criteria for diagnosis, acute and prophylactic treatment, and timing and type of further investigations.

A total of 82 (47%) general practitioners responded to the questionnaire. The doctors estimated that they saw a mean of 6.3 children with symptoms of urinary tract infection each year. They were asked about method(s) used to collect samples; clean-voided urine samples were collected by 82% of doctors; sterile bag samples by 17% of doctors; clean potty specimens by 13% of doctors; and one doctor considered urethral catheterization. Different techniques were used to diagnose infection, some doctors using more than one method. Twenty two per cent of practitioners made the diagnosis on symptoms alone without culturing a sample; 73% relied on a single positive culture; 35% used microscopic findings of leucocyturia to assist them; and three doctors required two positive urine cultures.

For acute treatment, the most popular antibiotic prescribed by doctors was amoxycillin (35%). Thirty two per cent of doctors chose trimethoprim and 29% chose cotrimoxazole. Trimethoprim and cotrimoxazole were the two antibiotics most likely to be used for prophylaxis (chosen by 46% and 26% of doctors respectively). Thirty nine per cent of general practitioners investigated all children with symptoms of urinary tract infection; 20% of doctors investigated only if there was a recurrence of symptoms; and 34% investigated all boys following their first suspected urinary tract infection, and girls only after further infection.

These results raise a number of important points. A 47% response rate is low: replies thus do not reflect practices of all doctors in the area. However, within the group that did reply there was a wide variety of practices. One suspects an even greater diversity exists within the non-responders. A total of 22% of general practitioners diagnosed urinary tract infection without collecting a urine sample. It may have been that children without infection were being treated with antibiotics and subsequently investigated; while those children with urinary tract infection without symptoms obviously attributable to the urinary tract were being missed. The Royal College of Physicians' guidelines emphasize pyrexia, vomiting, failure to thrive, prolonged neonatal jaundice and suspected sexual abuse as indicators for the need to culture urine.

Despite the recommendations of the Royal College of Physicians over half of the doctors in this survey (54%) were not investigating all young children following their first suspected urinary tract infection. In particular, girls were only investigated following further infection. Thirty five per cent of the doctors used amoxycillin as their first-line antibiotic to treat acute urinary tract infection. There is increasing organism resistance to this agent.[2] Trimethoprim, cotrimoxazole, nitrofurantoin or an oral cephalosporin are suggested antimicrobials of choice.[1] Knowledge of current urinary tract bacteriology is obviously important.

The importance of diagnosing urinary tract infection in childhood is to relieve symptoms, to detect underlying treatable anomalies and, if possible, to prevent renal damage. Although my survey has many inadequacies, it suggests that symptomatic children may not be receiving appropriate investigations. Children with chronic renal parenchymal damage represent a large proportion of those on renal replacement programmes.[3] It is hoped that the new guidelines will clarify a previously confused area, raise the general level of awareness of doctors and provide the impetus for practical resarch.[4] The impact of the guidelines on medical practice needs to be assessed by further studies.

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Computer assisted learning for general practice

Sir,
I was surprised to read in the article by Stanley and Stephens (April *Journal,* p.155) that a literature search had shown very few examples of computer assisted learning from general practice, and in a later part of the paper they comment that at present, computer assisted learning for general practice is in its infancy.

This teaching innovation in general practice was developed at the University of Glasgow in 1975, and the technique was published widely at the time.[1-6] It has been used for both undergraduate and postgraduate teaching in general practice. It is encouraging that after 16 years a similar system is being developed in other medical schools.

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