

speak. Parents who think that deafness is a way of life and not a disability are unlikely to consider implantation. The evaluation process should encompass a child's social, domestic, psychological, and educational needs. No child should be considered too young or too disabled to be evaluated for cochlear implantation. The delivery of a high quality service for children thus requires well founded multidisciplinary teams, capable of making the complex assessments demanded.

At present about 170 children receive cochlear implants in Britain each year, and the cumulative total of child recipients is over 700. The biological safety of cochlear implantation has been confirmed in a range of laboratory and clinical investigations.<sup>4</sup> As elective non-use is an option, a major indicator of perceived benefit is continued use of the system. A systematic study of 85 implanted children confirmed use rates approaching 100% three years after implantation.<sup>5</sup> A longitudinal study comparing speech perception in cochlear implanted children with matched controls who used conventional hearing aids showed significantly better performance in the implanted group.<sup>6</sup> An uncontrolled longitudinal study of 61 implanted children showed that more than two years of implant use was needed before intelligible speech emerged: an average speech intelligibility score of 40% was achieved after 3.5 years of implant use.<sup>7</sup> An educational setting that encourages oral rather than signed communication is probably more conducive to developing spoken language skills, but this remains to be confirmed. Emerging evidence suggests that implantation will result in a shift in educational placement in favour of mainstream schooling.<sup>8</sup> Outcomes from the intervention are variable, but age at implantation seems to be the most important determinant of outcome.<sup>9</sup> Ideally, a decision to implant should be made before the age of 2—but this demands more efficient neonatal hearing screening programmes than are currently the case.

The cost of generating and maintaining a child user over 10 years approaches £50 000, and it would seem sensible to concentrate this service at fewer centres to maintain expertise and generate economies of scale. No randomised controlled trials have been undertaken on paediatric implantation and would now be impossible to perform given the strength of parental preference and the length of time required to run such a study. However, preliminary estimates of cost

effectiveness suggest that the intervention is likely to fall within acceptable limits.<sup>10</sup> Purchasers should recognise that delays in making funding decisions in children can compromise the window of opportunity offered by early implantation. An Audit Commission report was critical of implant providers for giving ambiguous information to purchasers and for variations in price of up to 20% for apparently similar services.<sup>11</sup> The recent NHS white papers advocate the establishment of national service frameworks, which should facilitate commissioning and improve equity of access to implantation services.

Today's children live in a society where prosperity will be determined increasingly by communication skills. Our inability in the past to enable profoundly deaf children the means by which they could communicate competently in the hearing world put these children at an unacceptable disadvantage and incurred an important societal cost. Cochlear implantation has partially broken this barrier and is offering these children unprecedented access to communication skills.

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## Caring for and about acute general medicine

*The service is under stress*

A seismic change has occurred in the delivery of acute general medicine over the past five years, and nowhere has its impact been more dramatic than on the consultant general physician. Concern has recently been expressed about how consultant physicians are coping with the various demands on them,<sup>1</sup> and last year the Royal College of Physicians has commissioned a national survey of all physicians responsible for receiving acute medical emergencies.<sup>2</sup> This survey is timely as it not only provides data on the workload of consultants but also evaluates several

initiatives that have been tried to address the problems of organising the care of emergency patients.

Gone are the days when consultants "on take" might be able to keep a remote hand on the tiller: they are now much more clearly accountable for the emergency service. This has brought with it a range of additional pressures at a time when the expectations of patients are higher, the demands of senior hospital managers greater, and the working patterns of junior doctors radically changed. These additional, external pressures include, in particular, a sustained rise in the

number of acute medical admissions across Britain at a time when the number of hospital beds has continued to fall. The ability to squeeze a quart into a pint pot has been managed only by a concomitant reduction in the length of stay for emergency medical patients. This reduction has been achieved against the backdrop of increasing difficulty in discharging elderly patients into the community.

Several common themes emerge from the royal college's survey, yet there is obviously a substantial variation in the demands that medical on take presents. The median frequency for consultants to be on take is one day in five, with only 10% of consultants on take less than one in eight. The median daily number of emergency admissions is 20-24 patients, but a quarter of consultants admitted at least 30 patients, and in some large city hospitals physicians admitted 70 patients each day on take. Such figures say nothing, however, about the variability in numbers of medical admissions, which, apart from seasonality, seems to be unpredictable. Surges in emergency admissions in the face of reduced bed numbers have exposed the difficulties associated with high bed occupancy. Although the college's survey does not dwell on these difficulties, it does reveal an image of the "safari ward round" as the admitting team visits far flung non-medical wards where nursing staff may be unused to coping with medical patients.

Though the number of medical patients presenting to emergency departments cannot be controlled, the survey did identify local initiatives to avoid the need for admission. These include designated emergency outpatient clinics, a rapid endoscopy service for stable and relatively minor upper gastrointestinal bleeding, and an outpatient service for deep venous thrombosis.

The pressure of a busy day on take inevitably impacts directly on junior staff. The reduction in their working hours together with greater structure in their training has resulted in changes in emergency rotas so that 42% of consultants now work with junior staff who operate a partial shift pattern. Senior and junior doctors probably have different views about shift systems, but the survey makes it clear that most consultants think little of an arrangement which they perceive as failing to allow junior staff to provide real continuity of care. Admissions wards, to which nearly three quarters of consultants had access, at least allow most emergency patients to be placed in a dedicated area. Apart from the great benefit of concentrating skilled nursing, this also encourages more efficient handover between junior doctors.

A quarter of consultant physicians had no specialist registrar and managed their on take work with a total of between two and five senior house officers and house physicians. Nearly one in ten resident medical teams comprise just one senior house officer and one house physician. Continuity of care must then become well nigh impossible. Partial shifts have succeeded in some specialties, such as anaesthetics and accident and emergency services, but in acute medicine continuity of care is clearly desirable, yet it seems to have been compromised by the drive to reduce junior doctors' hours. There is a real need to evaluate whether partial shifts in acute medicine deliver an acceptable standard of care.

Nearly all consultants provide a specialist service as well as their general medical commitment, but they are

necessarily becoming more directly involved in general medicine when on take. "Post take" consultant rounds are now, belatedly but appropriately, the norm, but increasing numbers of consultants are now leading a second (and occasionally third) ward round during their periods of duty. The opportunity cost to their other commitments—particularly their main specialty—is obvious.

The mental health of British consultants has been giving concern for a while.<sup>3-5</sup> A survey of 1133 consultants in various disciplines revealed psychiatric morbidity in 27%.<sup>3</sup> There was a consistent relation between burnout (emotional exhaustion, depersonalisation, and feeling of low personal accomplishment) and job stress, irrespective of specialty. Importantly, however, job satisfaction protected consultants' mental health. Although the royal college's survey did not attempt to assess stress, some physicians are clearly finding their emergency workload such that they would like to withdraw from on take work but don't because it would only increase the burden on their colleagues. Yet the survey commends general physicians for their capacity to adapt to change and their ingenuity in devising ways of coping with admissions and facilitating discharges.

The college now clearly recognises that there are problems and has drawn up a "blueprint for effective medical practice."<sup>6</sup> Its 14 "strong recommendations" are all highly desirable and unlikely to find opposition from within the medical profession—although on reading that "acute medical teams should not handle more than 20 patients in a 24 hour period," I wondered about the writers' experience of the rising tide of medical emergencies. The college report coherently argues for an extra 2000 consultant physicians, yet neither this nor its other recommendations are costed. Nor, indeed, are they based on much more solid data than that collected by questionnaires. The government is unlikely to respond to recommendations that are not strongly evidence based. There is thus a pressing need for a national audit to evaluate the quality of emergency medical care and the demands it makes on those who deliver it.

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**Correction**

*Subdural haemorrhages in infants*

In his editorial (5 December, p 1538) Dr Ben Lloyd, referring to the paper by Jayawant et al (5 December, p 1558), mentioned that seven of the infants had previously been abused. The paper itself states that four had previously been abused. We apologise for this error, which resulted from a late change to the proofs by the authors of the paper.