

Letters to the Editors

Cost-effective analysis of conventional and nurse-led clinics for common otological procedures

J Laryngol Otol 2004;118:189–92

Dear Sirs,

The March 2004 paper by Uppal *et al.*¹ on the cost-effective analysis of conventional and nurse-led clinics shows the following errors:

- (1) Initial and ongoing training costs for the nurse-led clinic are ignored.
- (2) The costs to the patient of more and longer consultations are ignored.
- (3) The hourly cost of employing a nurse is wrongly assumed to be the same as the salary.
- (4) The cost analysis for the doctor-led clinic (DLC) should be identical with the nurse-led clinic (NLC) but is not.

The last point is perhaps the most important. The cost of a DLC appointment is:

‘the cost of a new and a follow-up appointment in the ENT out-patients’ department are £161 and £81 respectively (personal communication Director of Finance, Head and Neck Directorate, York Hospital).’

I suspect this is a charge rather than a cost. The BUPA rate is £150 for a consultation lasting longer than half an hour. The paper assumes that simple complaints take a consultant as much time as more complex ones.

The analysis of the NLC is into indirect and direct costs. The latter are subdivided into salaries for new patients and for review patients, consumables, investigations and DLC follow ups. Excluding investigations, the costs of a DLC follow up were greater than the total of the other three. This implies a surgeon is paid 20 or 30 times as much as a nurse.

About three-quarters of the direct cost of the NLC is due to investigations, mainly routine audiometry and ear swabs, which are not needed as a routine in otitis externa. Four hundred and twenty-six out of 626 patients had investigations: a high percentage as the patients included audiology referrals for waxing, dry mastoid cavity follow ups, grommets and GP referrals, not all with ear infections.

The indirect costs of the nurse-led ear clinic are simply estimated at 50 per cent of the direct costs. Nurses are paid less than doctors. If a NLC and a DLC are identical except for salaries then the indirect costs must be the same. This method automatically makes the indirect costs seem lower for the nurse-led clinic.

Compare a NLC and a DLC paid at £50 per hour (£100 000 divided by 2000 hours p.a.). At 140 hours work the salary costs are £7000 for a DLC and £2000 for a NLC. Ignore consumables, investigations and indirect costs but allow £400 for the patients seen in the nurse-led clinic who required a DLC visit. The difference per patient is c. £7.35. This assumes that:

- (1) it takes a consultant as long to see a patient as a nurse;
- (2) consultant follow-up rates are the same as the NLC’s at 55 per cent ;
- (3) sixty-eight per cent of patients are investigated at a cost of £40 per investigation in both DLC and NLC.

If the DLC rate of investigation was 50 per cent the cost advantage of the NLC would be lost. The follow up and investigation rates of a DLC and a NLC are not known but

it is well documented that more experienced doctors review and investigate less than juniors. The paper itself states that NLC appointments are longer than DLC. In summary, if a DLC and an NLC are identical, but for salary costs, then the cost difference can be no more than £7.35 per patient. As NLC consultations take longer and as it is probable that review and investigation rates are lower in a DLC than a NLC, a DLC may be the more cost-effective approach. Finally, as cost-effective analyses ignore benefit, this paper should have been written as a cost-benefit analysis so that the outcomes were not neglected. A health economist should have been a co-author. The *JLO* would not accept a paper on ENT surgery written by health economists. The opinion of one on this paper would be more valid than mine.

P. H. Jones
Consultant ENT Surgeon

Reference

- 1 Uppal S, Jose J, Banks P, Mackay E, Coatesworth AP. Cost-effective analysis of conventional and nurse-led clinics for common otological procedures. *J Laryngol Otol* 2004; 118:189–92

Authors’ Response

Dear Sirs,

Thank you for giving us the opportunity to respond to the points raised by Mr P.H. Jones in his letter relating to our paper ‘Cost-effective analysis of conventional and nurse-led clinics for common otological procedures’.¹ Mr Jones has mentioned in his letter that health economists should be involved in the writing of papers such as ours. We wish to point out that every effort was made by the authors to involve health economists from the University of York (the largest such department in the UK) in the study. However, a small project like ours, looking at the cost-effectiveness issues at such a small scale did not seem to interest them, as they were occupied with issues on a much grander level. We wish to point out that the Finance and Performance Manager and the Directorate Manager of Head and Neck services at York Hospital were both actively involved in the cost-effectiveness analysis. Both of them are trained in health economics and have contributed to the analysis in our paper.

The second point that has been raised is that the costs of training and ongoing training costs for the nurse-led clinic are ignored. We have made clear in the Patients and Methods section of the paper that consultant otolaryngologists and specialist registrars in otolaryngology trained the nurses involved in running the clinics in-house. The training cost incurred is thus negligible, as the training did not impact on the service commitment of the doctors involved. Moreover the cost incurred, if any, is negligible compared to the cost incurred in training a doctor. In fact, had such a comparison been made, it would have only shown the nurse-led clinic to be more cost effective. It has also been pointed out that the cost of employing a nurse is not the same as the cost to the hospital in employing a nurse. The authors fully agree with this assertion and wish

to point out that although the authors have used the heading 'Nurse salary' in the section 'Direct costs', a careful reading of the subsequent paragraph will reveal that the amounts used for calculations are in fact the cost to the hospital of employing a Grade E and F nurse which is higher than the salary of these nurses. However, Mr Jones has himself used consultant's salary and not the cost to the hospital of employing a consultant of performing the comparison in his letter. This is likely to bias his results making the nurse-led clinic appear less cost-effective, this is misleading.

A third point raised is that like has not been compared with like and that the analysis of the cost of a doctor-led clinic should be the same as the nurse-led clinic. The authors considered this fact prior to their analysis. However, we were advised by the finance director that such a calculation would be inappropriate as data on the cost of a doctor-led ENT clinic is already available from the National Database of Reference costs for NHS. This data is directly applicable to York Hospital. Had the authors not used the available data they risked being heavily critiqued. Thus the authors were not being cavalier in quoting a personal communication of the Director of Finance. On the other hand the facts quoted were based on National Database of Reference costs for NHS. We also wish to point out that the figure of £181 and £81, respectively, for a new and follow-up appointment with a doctor includes the cost of investigations and the indirect costs incurred during a doctor-led out-patient appointment. Moreover, this figure reflects the support extended by colleagues from audiology, nursing, speech and language therapy and various other departments. These services and support are not available to the same level in the private sector and hence a direct comparison between the two sectors is not appropriate. In fact, most of the consultants in the private sector are not supported by an audiologist. However, should one be very keen to make such a comparison, then the cost of the above-mentioned services along with the cost of performing investigations etc, needs to be taken into account. This will suddenly tilt the balance in favour of the NHS.

Mr Jones has calculated incorrectly that a doctor would be paid up to £250 per hour or more according to our figures. He has obviously not taken into account the fact that the cost of a doctor-led clinic includes the cost of the investigations and also the cost of one or more nurses helping the doctor either directly in the clinic or in providing support services in the treatment room. The nurse-led clinic has the advantage of avoiding these ancillary costs and hence is more cost-effective. Thus his reasoning and logic does not hold true and the calculations proposed are not valid.

The assertion that the indirect costs of a doctor-led clinic and a nurse-led clinic must be the same is not correct for the same reason that the nursing and ancillary medical staff support available at the time of a doctor-led clinic is not available at the time of a nurse-led clinic. Hence, it is clear that these indirect costs are not the same and one cannot simply ignore these differences in the indirect costs between these two groups as proposed in his letter.

Mr Jones has suggested a hypothetical situation that if the rate of investigation of a consultant-led clinic was 50 per cent, and one was to ignore the consumables, investigations and indirect costs then the cost advantage of the nurse-led clinic would be neutralized. We wish to point out that the nurses in our nurse-led clinic follow a strict protocol for arranging audiological assessment following grommet insertion and mastoid surgery. Similarly there are guidelines for arranging pus culture and sensitivity in cases of recurrent otitis externa referred directly to this clinic.

Consultants and other junior medical staff in our department follow the same guidelines. This decreases to a great extent any difference in the investigation rates amongst the two groups studied.

He is right in pointing out that it is well documented that more experienced doctors review fewer patients and perform fewer investigations than less experienced doctors. Since the patients in the doctor-led clinic in our hospital were seen by both a consultant otolaryngologist and other junior members of the medical team, we expect that the difference between a nurse-led clinic and a doctor-led clinic is not likely to be as high as suggested in his letter. In fact, the two nurses have been running this service for 7 years in our hospital, and hence are much more experienced than some of the trainees in the department. They are therefore less likely to bring the patients back unnecessarily as compared to some junior members of the medical team, especially since they are well versed with the departmental protocols that are adhered to strictly. The indirect costs incurred due to investigations in our paper are based on actual figures. Mr Jones is right in pointing out that these costs form a high proportion of cost incurred in running such a service. The fact that these costs account for a high proportion of the cost incurred in running a nurse-led service reflect the fact that there is a potential to reduce the cost of such a service further thus making it more cost effective.

We agree that there may be a variation in the actual costs incurred depending on the method used for economic analysis. However, it is unlikely that the difference will be a great as that has been suggested. Our extensive calculations suggest that the variation is likely to be small and hence the nurse-led clinics are significantly more cost-effective than has been suggested by Mr Jones. This should not distract ones attention from the fact that the message conveyed by the paper is twofold. Firstly, that the nurse-led clinic is more cost-effective and secondly, and more importantly, that this service frees up the otolaryngologist's time to see other patients with more pressing and complex problems. Thus nurse-led clinics for common otological procedures have the potential for reducing outpatient access time in the NHS.

S. Uppal, A.P. Coatesworth,
Department of Otolaryngology, Head and Neck Surgery,
York Hospital,
York, UK.

Reference

- 1 Uppal S, Jose J, Bands P, Mackay E, Coatesworth AP. Cost-effective analysis of conventional and nurse-led clinics for common otological procedures. *J Laryngol Otol* 2004; **118**:189–92

Location, Location, Location

Dear Sirs,

Ear reconstruction in microtia patients is one of the greatest technical challenges facing a reconstructive plastic surgeon. Tanzer¹ introduced the use of autologous costal cartilage and Brent², Firmin and Nagata³ refined the technique to produce consistent and high quality auricles. In microtia, the final result is highly dependent on the baseline condition of the surrounding skin. To produce a quality auricle from a microtic ear, the quality and quantity of the available skin and consequently the pocket into which the carved framework is inserted is highly significant. In the classic form of microtia (Figure 1) with good quality skin and a high hairline an excellent result can be achieved (Figure 2). If, however, the surrounding