also support patients' councils in psychiatric hospitals and social and recreational activities in day units.¹⁴ In London a consortium of patients, mental health workers, and carers has influenced statutory planning¹⁵ and hospital practice.¹⁶

Health professionals can learn from feedback, but patients' expressed satisfaction with services varies according to who asks the questions. Studies initiated by providers of services yield high ratings for satisfaction. Quantitative assessment of satisfaction with treatment is readily attainable,¹⁷ even from severely disabled patients.¹⁸ In the United States community mental health centres have been required by law since 1975 to evaluate patients' satisfaction.¹⁹ Results, however, may be artificially improved by low response rates and biased assessment techniques.^{20 21} Qualitative surveys conducted by patients' groups are more critical¹⁶ but may also be biased: such groups set out to find and solve problems and they may overgeneralise without being representative of all patients.²² Methodological factors also exaggerate this contrast between quantitative and qualitative research.²³

How can psychiatry respond to the growth in these groups? The second Griffiths report does not mention user participation directly.²⁴ Neither does the Royal College of Psychiatry's paper on community care.²⁵ But the psychiatric profession must learn more about the scope and utility of user participation and encourage it: the persistence of patients' groups seems to underlie many of the most innovative programmes in mental health care. The King's Fund has called for increased collaboration between patients, planners, and managers in mental health care.²⁶ This could improve clinical outcome, encourage agreement about priorities in treatment, and resolve an embarrassing divergence between providers and users of services.

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- 1 Vuorri M. Patient satisfaction: an attribute or an indicator of the quality of care? *Quality Assurance Review Bulletin* 1987 May;106-8.
- 2 McEwen J, Martini CJM, Wilkins N. *Participation in health*. London: Croom Helm, 1983.
- 3 Speedling EJ, Rose DN. Building an effective doctor-patient relationship: from patient satisfaction to patient participation. *Soc Sci Med* 1985;21:115-20.
- 4 Windle C, Cibulka JC. A framework for understanding participation in community mental health services. *Community Ment Health J* 1981;17:4-18.
- 5 Van den Heuvel WJA. The role of the consumer in health policy. *Soc Sci Med* 1980;14A:423-6.
- 6 Nader R, ed. *The consumer and corporate accountability*. New York: Harcourt Brace Jovanovich, 1973.
- 7 Barker I, Peck E. Thinking it through: theoretical perspectives. In: Barker I, Peck E, eds. *Power in strange places: user empowerment in mental health services*. London: Good Practices in Mental Health, 1987:1-4.
- 8 Department of Health and Social Security. *National Health Service management enquiry*. London: DHSS, 1983. (Griffiths report.)
- 9 Secretaries of State for Health, Wales, and Northern Ireland. *Working for patients*. London: HMSO, 1989. (Cmd 555.)
- 10 Hollander R. A new service ideology: the third mental health revolution. *Professional Psychology* 1989;11:561-6.
- 11 Winn D. Human network halts the spiral of despair. *Independent* 1989 Feb 28:13.
- 12 Wallcraft J, ed. *Mindwaves: the newsletter of the MIND consumer network*. London: MIND, 1988.
- 13 Buckland I. Power through partnership: an account of the Contact group in Chesterfield. In: Barker I, Peck E, eds. *Power in strange places*. London: Good Practices in Mental Health, 1987:7-9.
- 14 Nottingham Patients' Councils Support Group. *Information pack*. Nottingham: NPCSC, 1988.
- 15 Camden Mental Health Consortium. *Mental health priorities in Camden as we see them: the consumer viewpoint*. London: CMHC, 1986.
- 16 Good Practices in Mental Health and Camden Consortium. *Treated well? A code of practice for psychiatric hospitals*. London: Good Practices in Mental Health, 1988.
- 17 Shields P. The consumer's view of psychiatry. *Hospital and Health Services Review* 1985 May;117-9.
- 18 Macdonald L, Sibbald B, Hoare C. Measuring patient satisfaction with life in a long-stay psychiatric hospital. *Int J Soc Psychiatry* 1988;34:292-304.
- 19 Windle C, Paschall NC. Client participation in CMHC programme evaluation: increasing incidence, inadequate involvement. *Community Ment Health J* 1981;17:66-75.
- 20 Catek BA. Strategies for studying client satisfaction. *Journal of Social Issues* 1978;34:44-56.
- 21 Lebow J. Consumer satisfaction with mental health treatment. *Psychol Bulletin* 1982;91:244-59.
- 22 Kelman HR. Evaluation of health care quality by consumers. *Int J Health Serv* 1976;6:431-42.
- 23 Weinstein RM. Patient attitudes towards mental hospitalisation: a review of quantitative research. *J Health Soc Behav* 1979;20:237-58.
- 24 Department of Health and Social Services. *Community care, agenda for action: a report to the Secretary of State for Social Services*. London: DHSS, 1988. (Griffiths report.)
- 25 Royal College of Psychiatry. *Caring for a community*. London: Royal College of Psychiatry, 1988.
- 26 Smith H. *Collaboration for change: partnership between service users, planners and managers of mental health services*. London: King's Fund, 1988.

The senses of the newborn

Tests for hearing and vision have improved

Shakespeare's description of the infant, "Mewling and puking in the nurse's arms,"¹ was echoed in the attitudes of doctors earlier this century. The newborn baby was thought to be either drowsy, asleep, or crying, and to experience the world as a "great, blooming, buzzing confusion."² But we have learnt over the past 30 years that the healthy newborn baby can discriminate between different sensations from the environment and respond selectively.³ Within hours of birth the baby will look at the mother's face, and given the choice newborn babies prefer to look at a card showing the features of another human being rather than the same features jumbled up or the features condensed into a large black patch.⁴

The newborn baby spends only 11% of the time awake and alert in the first week of life, a proportion that rises to 21% in the fourth week.⁵ This small fraction of wakefulness hindered the early development of methods of testing senses. When eliciting responses it is important to record the baby's state of arousal—between deep sleep at one extreme and crying at the other—and Prechtl's group first described five possible behavioural states.⁶ Brazelton extended this work to include items of higher neurological function, including visual and auditory responses to a ball and rattle, and his neonatal behavioural assessment scale is a means of scoring interactive behaviour.⁷

Why do we need to test the senses of the newborn? We want to ensure that the baby is able to interact with the parents and with the environment and that there is no impairment to social, emotional, cognitive, and linguistic development. It is often difficult to prove that early intervention is effective in minimising handicap, but there is evidence—for instance, that deaf children fitted with hearing aids in the first six months of life have better speech than those fitted later.⁸ And all parents and most therapists agree that they would like to know of any handicap as early as possible.

Finding reliable and practicable methods of testing hearing and vision in newborn babies has proved difficult. They show behavioural responses to sound, blinking and startling to a sudden clap and "stilling" to interesting noises, with alteration in their breathing pattern. Every mother recognises these responses, but they cannot be used to detect deaf babies reliably because of the spontaneous random movements babies make and possible bias on the part of the observers. The use of a simple rattle to produce head and eye turning has been described,⁹ but the method has not found widespread acceptance. Behavioural responses may be recorded by devices incorporating microprocessors such as the auditory response cradle (which should eliminate observer bias). The sensitivity and specificity of this cradle have varied among trials,^{10 11} and the sound stimulus has to be very loud (80-85 dB) to result in a behavioural response by the baby, so that moderate hearing losses are missed.

The electrophysiological response to sound may be detected by audiometry based on evoked responses in the brain stem, and this is considerably more sensitive. Simpler and more portable brain stem screeners have now been developed.¹² Most recently newborn babies' hearing has been tested by using otoacoustic emissions, a phenomenon first reported by Kemp in 1978.¹³ A click stimulus delivered to a normal ear results in an "echo" sound generated by the cochlea, which can be detected by a miniature microphone. The method is quicker and less invasive than brain stem audiometry and can detect even mild hearing losses. Stevens and his colleagues

tested 346 infants at risk and showed that 20 of the 21 surviving infants who gave negative results to brain stem audiometry also failed on the otoacoustic test.¹⁴ This work also highlighted a major problem—that of validating methods of testing senses in the newborn baby. This has to be by follow up, checking the outcome with the testing methods that become possible in the older infant. Stevens's group found a poor correlation between distraction testing of the babies' hearing at 8 months of age and brain stem audiometry in the newborn, a discrepancy confirmed by others.¹⁵ We must now be more cautious in interpreting the results of electrophysiological tests in the newborn. Babies who give negative results will need retesting several times during the first year. Though the early fitting of hearing aids is desirable, the degree of hearing impairment needs to be clearly established, particularly as maturation of the auditory pathways may be taking place, although delayed.

Similar problems and challenges occur in testing vision in newborn babies.^{16,17} Behavioural responses are familiar to the mother, with the baby blinking to bright light, fixating, and following a red woollen ball or a flashing light. Babies turn their heads to a diffuse light but (like turning to sound) this test may not be reliable, especially in preterm infants. All these responses give a qualitative indication of vision. Optokinetic nystagmus can be shown when a striped tape or drum is moved in a temporal to nasal direction across the newborn baby's field of vision and gives a valuable but crude indication that vision is present. Electrophysiological recording of the visual evoked potential to a flash gives limited useful information because of great individual variations and because it relates as much to general cerebral function as to visual outcome.¹⁸ Visual evoked potentials to patterns may give a measure of visual function but only after the age of 2 months. The best method of measuring visual acuity is to use the preferential looking technique. This is based on the observation of Fantz 30 years ago that patterned objects are visually interesting to infants.¹⁹ The latest version, called the acuity card procedure, uses patterned and plain stimuli mounted in pairs on cards, and these can be used successfully even in the neonatal intensive care unit.¹⁷

Much fascinating and enjoyable research is being done into the ability of babies to discriminate and respond to smell, taste, and touch.³ We should also be glad that at long last there is widespread acceptance of the fact that newborn babies do experience real pain and need postoperative analgesia like the rest of us.²⁰

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- Shakespeare W. *As You Like It*. In: Craig WJ, ed. *The complete works of William Shakespeare*. London: Oxford University Press, 1955:2270. (Act 2, scene 7, lines 143-4.)
- James W. *The principles of psychology*. New York: Holt, 1890.
- MacFarlane A. *The psychology of childbirth*. London: Fontana, 1977.
- Fantz RL. The origins of form perception. *Scientific American* 1961;204(May):66-72.
- Wolff PH. The development of attention in young infants. *Ann NY Acad Sci* 1965;118:815-30.
- Prechtl H, Beintema D. *The neurological examination of the full-term newborn infant*. London: Spastics International Medical Publications, 1964. (No 12.)
- Brazelton TB. *Neonatal behaviour assessment scale*. 2nd ed. London: Spastics International Medical Publications, 1984. (No 88.)
- Markides A. Age of fitting of hearing aids and speech intelligibility. *Br J Audiol* 1986;20:165-8.
- Dubowitz LMS. Clinical assessment of the infant nervous system. In: Levene MI, Bennett MJ, Punt J, eds. *Fetal and neonatal neurology and neurosurgery*. Edinburgh: Churchill Livingstone, 1988:41-58.
- Bhattacharya J, Bennett MU, Tucker SM. Long term follow up of newborns tested with the auditory response cradle. *Arch Dis Child* 1984;59:504-11.
- McCormick B, Curnock DA, Spavins F. Auditory screening of special care neonates using the auditory response cradle. *Arch Dis Child* 1984;59:1168-72.
- Mason SM. Automated system for screening hearing using the auditory brainstem response. *Br J Audiol* 1988;22:211-3.
- Kemp DT. Stimulated acoustic emissions from within the hearing system. *J Acoust Soc Am* 1978;64:1386-91.
- Stevens JC, Webb HD, Hutchinson J, Connell J, Smith MF, Buffin JT. Click evoked otoacoustic emissions compared with brain stem electric response. *Arch Dis Child* 1989;64:1105-11.
- Murray AD, Javel E, Watson CS. Prognostic validity of auditory brainstem evoked response screening in newborn infants. *Am J Otolaryngol* 1985;6:120-31.

- Van Hof-van Duin J, Mohn G. Vision in the preterm infant. In: Prechtl HFR, ed. *Continuity of neural functions from prenatal to postnatal life*. London: Spastics International Medical Publications, 1984:93-114. (No 94.)
- Fielder AR. Disorders of vision. In: Levene MI, Bennett MJ, Punt J, eds. *Fetal and neonatal neurology and neurosurgery*. Edinburgh: Churchill Livingstone, 1988:517-34.
- Mushin J. Visual evoked potentials. In: Levene MI, Bennett MJ, Punt J, eds. *Fetal and neonatal neurology and neurosurgery*. Edinburgh: Churchill Livingstone, 1988:206-12.
- Fantz RL. Pattern vision in young infants. *Psychological Record* 1958;8:43-7.
- Choonara IA. Pain relief. *Arch Dis Child* 1989;64:1101-2.

Cytotoxic drugs for gastric and colorectal cancer

More effective palliation may now be possible

Cancers of the stomach, colon, and rectum account for 25 000 deaths annually in Britain. Surgery is the mainstay of treatment, but it yields a five year survival of only 5-10% for patients with gastric cancer¹; the results are better in colorectal cancer, but, nevertheless, 55-60% of patients ultimately die of recurrent disease. Local treatment is inadequate for many patients, and systemic drug treatment is the only option.

These tumours are generally regarded as being resistant to cytotoxic drugs. Indeed, in Britain most clinicians would not treat patients outside a clinical trial—an entirely reasonable approach. Yet, while we await the “magic bullet” patients continue to present with symptomatic disease, and for them tomorrow's treatment is too late. In these circumstances the antimetabolite fluorouracil has been the first choice. When given as an intravenous bolus (according to a variety of schedules) regression of the tumour may be seen in 15-20% of patients with gastric cancer and 10-20% of patients with colorectal cancer. Remissions are generally short lived, however, and complete remissions are extremely rare.

So could these results be improved? In gastric cancer combinations of cytotoxic drugs have been investigated for over 20 years. In the late 1970s the FAM regimen (fluorouracil, doxorubicin (Adriamycin), and mitomycin) was reported to produce more frequent (35-50%) and durable partial responses,^{2,3} and in some centres it became regarded as a “standard” treatment. Complete remissions remained unusual, however, and a subsequent randomised trial showed no advantage of FAM over fluorouracil given alone.⁴ More recently cisplatin has emerged as an active agent in gastric cancer. Several studies of cisplatin given as a single agent—which included patients previously treated with chemotherapy—reported regression of the tumour in a quarter of cases.⁵⁻⁷ When cisplatin has been used in combination with fluorouracil, doxorubicin, or etoposide responses have been observed in 45-70% of patients,⁸⁻¹⁰ and—more importantly—histologically validated complete remissions were reported in 18% of a group of patients who had preoperative chemotherapy.¹¹

Chemotherapy should be delivered with the minimum of toxicity. Cisplatin may induce severe vomiting, a symptom which is particularly stressful in patients with upper gastrointestinal cancers. As anti-emetic treatment has become more effective the therapeutic window of palliative treatment has been gradually enlarged.¹² Nevertheless, so far adjuvant chemotherapy has failed to make any real impact on the survival of patients with gastric cancer. A recently completed pilot study of adjuvant intraperitoneal cisplatin has confirmed the feasibility of this approach in gastric cancer, a disease in which up to a third of patients have malignant cells in the peritoneal washings taken at the time of “curative” surgery.¹³