

persist—until real changes occur.³ At present most young disabled people do not have careers—they have, perhaps, a series of dead end jobs without any structured progress, and they are often directed exclusively to manufacturing or assembly work.

In many ways the problems of these young people are similar to those of their adult counterparts. Extensive medical treatment and much highly competent surgery may influence their subsequent day to day existence little. A series of mishaps, of missed and delayed opportunities, may have tipped the scales against an individual. For example, a patient may remain at home for many weeks, vaguely “convalescent” but with no graded exercise regimen to help him gradually adjust to the level of physical demand his job will make. Frequently, too, the rehabilitation process is lengthy with gaps between medical and employment rehabilitation and later retraining.

Doctors should be alert to these hazards and should try to return a patient to his work rapidly, enlisting whatever help is required sooner rather than later. Some patients equate outpatient visits with “being under the doctor” and hence off work. They should be told explicitly the expected date they may return to work; they should be sent to occupational therapy for job evaluation and tuning up rather than to convalescence, and where necessary they should be directed to the disablement resettlement officer and the employment rehabilitation centre.

But the problem is wider than the individual and has rarely been subjected to the same sort of scrutiny given, for example, to a new disease. Intrinsic factors include the nature of the disability and its prognosis, whether static, fluctuant, or progressive (in either direction), and the functional limitations this diagnosis implies.

This information is rarely passed on appropriately to the other people concerned. For example, many old ideas on the nature of epilepsy are still widespread, with employers and work people often unduly frightened by it. Asthma also frightens; stroke is usually taken to imply gross intellectual deficits that may not be present. Employers expect disabled workers to be poor attenders and poor performers and to contribute to accident statistics. Clearly some severely handicapped individuals cannot perform at the rates normal in open industry. However, Kettle's work suggests that the received wisdom concerning disabled workers is often wrong: disabled workers have been shown to have better than average safety records and attendance.⁴ Doctors could help greatly in ensuring that employers are aware of these up to date findings and by drawing their attention to the excellent book *Employers' Guide to Disabilities*.⁵

Rarely is the work potential of a patient fully analysed—either for his present or for other occupations. Too often doctors themselves give irrelevant, even subjective information. Rarely does the patient have the benefit of systematic work evaluation. More usually assessments end with a suggestion that the patient is suitable, say, for light packing (there may be many hundreds of able bodied people seeking this) or sheltered work (of which little is available). I hope that the work of Bolton,⁶ of Banks and his colleagues⁷ and of others will be extended to the disabled and that experiments now being undertaken in various employment rehabilitation centres will show the merits of approaches that are flexible and may include work sampling.

The Employment Rehabilitation Research Centre's information paper No 10 defines the current problems and necessary changes clearly.⁸ It shows that more use should be made of techniques in other fields so that the assessment of

the needs and potential of a patient seeking work become more precise. Thus structured information on work skills and work adjustment, social skills, physical fitness, functional ability, and disability should be obtained and used to produce vocational objectives agreed with the client. Such an approach gives a profile of the patient (or client) that can be compared with the characteristics of the jobs sought. The various possibilities—training the person efficiently, altering the job, or using aids and adaptations in the working environment (available from Manpower Services Commission)—can then be explored more realistically.⁵

Such developments should be supported by doctors. In a desperate desire to help our patients find some work we may collude in the unrealistic practice of squeezing square pegs into round holes (leading to subsequent disillusionment of all concerned and to unemployment). Instead doctors should press for proper assessment to produce the ability profile of a potential employee. With this information perhaps we may hope for changes in attitude from employment agencies and employers. Possibly health authorities (who fail miserably in employing their quota of disabled people) will lead the field. Our aim must be that “significant living without employment” becomes as much a memory for disabled people as for their able bodied peers.

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² Bookis J. *Beyond the school gate*. London: RADAR, 1983.

³ Walker A. *Unqualified and underemployed: handicapped young people and the labour market. National Children's Bureau series, the Macmillan Press, the Committee for Employment of Disabled People*. London: Macmillan Press, 1982.

⁴ Kettle M. *Disabled people and their employment—a review of research into the performance of disabled people at work*. Banstead, Surrey: Association of Disabled Professionals, 1979.

⁵ Kettle M, Massey B, eds. *Employers' guide to disabilities*. London: RADAR, 1981.

⁶ Bolton B. *Vocational adjustment of disabled persons*. Baltimore: University Park Press, 1982.

⁷ Banks M, Stafford E, Jackson P. *A skills compendium—work skills as identified by the job components inventory*. Sheffield: Manpower Services Commission Training Studies, 1982.

⁸ Horton D. *Assessment and rehabilitation techniques: a brief guide to availability, selection and use*. Sheffield: Employment Rehabilitation Research Centre, 1982. (Information paper No 10.)

Patient controlled analgesia

The only arbiter of pain is—or should be—the patient. In the treatment of prolonged pain drugs are adjusted periodically to match the patient's requirements, but this approach is usually abandoned for those in acute severe pain. The typical prescription is for morphine (or a similar drug) by intramuscular injection, four hourly as required (“prn”)—but this often gives unsatisfactory results. After upper abdominal or thoracic surgery more than half of all patients complain of severe pain,¹ and fewer than half of all mothers in labour report satisfactory pain relief.²

We should not be surprised that a stereotyped prescription cannot cope with individual variations in the response to pain. Nevertheless, the reasons for adopting a cautious approach are understandable: doctors fear mortality from respiratory depression with bolder regimens using larger or regular doses or continuous infusion. Furthermore, clinicians lack confidence in the safety of limited respiratory depression after partial agonist or agonist-antagonist drugs. Most doctors and their patients would agree that a cautious

approach to pain relief is advisable, on the basis that it is better to be in pain than to be killed by the analgesic.

Sixteen years have passed since it was suggested that individual variation in analgesic requirements might be met more adequately by allowing patients to decide when pain relief was required, and then letting them give themselves drugs intravenously.^{3,4} Apparatus was developed with sensitive controls to enable the clinician to prescribe the incremental and the total doses, the minimum interval between each dose, and the speed of injection.⁵ Routes other than intravenous have now been used successfully including the intramuscular,⁶ sublingual,⁷ and epidural.⁸ On demand systems have been used mainly for relief of postoperative and obstetric pain, but they have also been evaluated in the treatment of coronary pain⁹ and that of terminal disease.⁸

The first meeting on self administered pain relief was held in London recently by the European Academy of Anaesthesiology and was preceded by a workshop.⁸ Agreement was reached on terminology: patient controlled analgesia (PCA), alternative terms being self administered analgesia and on demand analgesia; increment (the incremental dose); lockout time (the minimum interval before another increment is allowed). The advantages of giving a dose tailored to the need of each patient are obvious, for biological variation in response is known to occur⁶: in one study in which patients used the apparatus to administer analgesia after cholecystectomy total doses in the first 24 hours varied sixfold to tenfold but the mean dose was reassuringly close to that expected from extensive experience with conventional intramuscular regimens (for example, pethidine 600 mg in 24 hours).⁶ Relief of pain was judged to be good, and most patients liked to be able to regulate their own treatment.⁸ It was agreed, however, that no entirely satisfactory comparison had been made with optimum current practice. That was partly because of the difficulty of defining optimum, and partly because even a randomised study, particularly if double blind, would influence the current practice being examined. A so called optimum conventional prescription might include a dedicated nurse ready to inject an intravenous increment as soon as the patient made a request; if so, then patient controlled analgesia could be no more effective, although it might be less expensive. On the other hand (and more likely), "prn" is usually interpreted as a dose administered when the nurse has time to ask the patient and then decides that another dose is safe and necessary. In these circumstances patient controlled analgesia should result in improved pain relief—and does.¹⁰

The workshop heard that over 3000 patients had been treated by patient controlled analgesia and there have been no deaths.⁸ Theoretically, the technique should be safer than other regimens as pain is barely (or just) suppressed by the patient but can still act as a stimulus to respiration. Indeed, continuous 24 hour postoperative respiratory monitoring in 30 patients did not show apnoeic periods,⁸ unlike recordings following a continuous infusion regimen.¹¹ A good start, therefore, has been made in establishing the effectiveness and safety of patient controlled analgesia, and more clinicians may now be encouraged to try this method of pain relief. Manufacturers have enough confidence in the prospects to have developed five apparatuses with different features. Nevertheless, before patient controlled analgesia is widely adopted for routine use—that is, without additional clinical or nursing supervision—it must be shown to be at least as safe as current practice, and further carefully controlled studies are needed. When the

results of these studies are available "prn" may become widely replaced by patient controlled analgesia—to the advantage of many patients who now suffer avoidable pain.

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Population growth and politics

The integrity of policy makers in a topic as sensitive and central as human reproduction is a virtue, but the fine line that separates conviction from absolutism remains important. In 1949 Chairman Mao said, "The absurd theory that increases in food cannot catch up with increases in population . . . has not only been refuted by Marxists in theory, but has also been overthrown in practice in the postrevolutionary Soviet Union." Eight years later he was saying that "Population [growth] must be controlled." Today, China is in a demographic prison. If 70% of couples have only one child the population will still increase by 200 million—only slightly less than the current United States population—in the next generation. Mao changed course too late. Women who are pressured into aborting a second pregnancy in the 1980s are the daughters of women who did not have access to realistic family planning choices in the 1960s. The lesson of family planning history is not to let grand theories lose touch with family needs.

The United Nation's international conference held in July in Mexico City was the mirror image of a similar meeting which took place in Bucharest a decade earlier. The 1974 conference was characterised by a division between the developed and developing countries. At that time the developed, led by the United States, were seen by India and many Marxist and Latin American countries as pushing too hard for a demographic solution to the world's economic problems. By contrast, the Indian delegation said that development was the best contraceptive—but by 1976 India was dealing with the disaster of forced vasectomies. The Chinese kept a low profile but within a few years had launched their one child policy. Bucharest confused the world; in retrospect, it may even have set back rational development.

The Mexico City conference put family planning back on the world's agenda. The conference's decisions received overwhelming approval from commentators around the