

Experiments with computers— —and our money

Now that the dust has settled, and we have all had time to pause and reflect, we should perhaps try to learn some lessons from the disturbing events which have surrounded the NHS experimental computer programme. The facts are well documented. In 1967 the (then) Ministry of Health approved an experimental programme to explore the use of computers in hospitals. Nine years later the Committee of Public Accounts was asked to investigate the programme, and its report was disquieting.¹ The plan had been that eight main NHS computing projects would have finished their research and experimental phases by 1972 at a cost of £6.8m; but in fact none could reach that stage until 1978 and the total cost would have been nearer £20m. Moreover, the committee had some harsh things to say about some of the projects, in particular those at King's College Hospital, the North Staffordshire Hospital, and the London Hospital.

At King's College Hospital an attempt was made to establish whether patients' clinical notes could be held on a computer, with access by doctors and nurses. The project started in 1970 and ran into difficulties a year later. In September 1972 the scheme was suspended by the hospital; by August of 1973 news of this suspension had reached the DHSS (four miles away in Central London); and in 1974 "acting rapidly"—to quote the Committee of Public Accounts report—the Department closed down the project after expenditure of £1.4m. The DHSS concluded that the system was clinically unacceptable—a conclusion similar to the initial evaluation in 1971. Nor was this experience at King's College more than a bad example of a general trend. At North Staffordshire Hospital at first all stages of the project were expected to be operational by March 1973 at a cost of £750 000: in fact by March 1975 some £1.7m had been spent; by 1976 it was hoped to have stage one operational within 18 months or so; and the current evaluation puts the date at some time in 1979. At the London Hospital two stages of another major project on hospital bed states have been dropped.

All of this makes sorry reading—though it will be familiar to those who followed the sagas of Concorde and TSR2. What is much more depressing is the difficulty of identifying any general, concrete benefit from the schemes in question. The poverty of achievement may, perhaps, best be measured by the DHSS claim that at Stoke on Trent (at a cost of £1.7m) "they have got an efficient system operating that saves five minutes per patient." It is difficult to disagree with the committee's tart comment that "we cannot be impressed with the results to date." The report will make particularly galling reading to other computer scientists whose systems (such as those we have discussed only recently²) are either not funded by the Department of Health or are due to close because of the present economic climate.

In the initial furor which greeted the publication of these results, many snap judgments and solutions were put forward; but, while "Do away with the computer" is a useful rallying cry, it ignores the facts. Both at King's College Hospital and at Stoke the computer did what was expected of it, though we may now realise that what was expected was not very sensible. "Clinical acceptability" is yet another phrase which rolls easily off the tongue: but clinicians too may be wrong; and, though in the end the medical profession accepts change and new-fangled gadgetry, there have been instances of worthwhile

developments delayed by the dead hand of inertia by clinicians.

Nothing much will help until we get some common sense into medical computing. The "all-singing, all-dancing" computer must go. The only systems likely to pay off in the near future are very simple ones doing jobs of work which clinicians specifically want them to do. It is a sobering thought that, had the DHSS decided to purchase a mini-computer (and hire a programmer) for every clinical team in the United Kingdom which has published anything on computing in the last five years, it would still have spent substantially less than the £3m expended at King's and Stoke alone.

What do clinicians want? Or more properly what should clinicians be encouraged to evaluate? These are the key questions, and perhaps the only encouraging news to emerge is that a task-force under the Chief Scientist, Sir Douglas Black, is looking at the problem. For until we can evaluate the benefits (if any) of computers the only thing we will be able to measure (with depressing clarity) is their cost. Till then, the DHSS should concentrate on simple systems, improve its communications with those projects which it does support, and try to devise some sensible means of co-ordinating those developments which seem to have something to offer. Any other course is likely to lead to a repeat of the grandiose shambles of the past few years.

¹ Committee of Public Accounts, *Sixth Report (1975-6 Session)*, p 483. London, HMSO, 1976.

² *British Medical Journal*, 1976, **2**, 716.

Prostheses for impotence

The success of silicone materials¹ in the treatment of urinary incontinence has stimulated interest in their use in the management of impotence due to organic causes. Indeed this use of inflatable penile prostheses has offered fresh hope to men who have lost their potency as a result of diabetes or pelvic trauma. Furlow² described 36 patients (one-third were diabetic and another third with post-traumatic impotence) of whom 34 achieved a "nearly physiologic erection." One prosthesis had to be removed on account of infection. Control was similar to the inflatable cuff for urinary incontinence.³ A silicone tube designed to fill each corpus from the crus to the end beneath the glans was implanted into each corpus cavernosum. Both tubes were connected to an inflation bulb, located in the upper part of the scrotum.

This was not the first implant for impotence by any means: in 1964 the use of a silastic penile prosthesis was suggested by Lash *et al*⁴ on the principle of an acrylic os penis.⁵ In 1972 Pearman⁶ implanted a silicone covered Teflon rod or coiled spring between Buck's fascia and the tunica albuginea of the corpora cavernosa, and in 1975 Small, Carrion, and Gordon⁷ described tubes of silicone implanted inside the corpora. None of these implants could be inflated or deflated, but they gave a moderate but persistent erection, adequate for penetration. The penis could be folded downwards without fracturing the prosthesis and could be retained in a downward position by well-fitting underpants. Small⁸ described 75 patients given these prostheses: 15 had spinal cord injuries, 13 had diabetes, 6 had previous fractured pelvises, and 13 had impotence after pelvic operations. Only two serious complications were reported, both infections which resulted in the extrusion of the prosthesis.