coordinator should liaise with local coordinators to ensure that the assessment for and prescription of an environmental control system are not undertaken in isolation from the assessment of the broader needs of the disabled person. Medical assessors should be better trained about environmental control systems and have a background in rehabilitation medicine. Local health professionals, including those in social services departments, should be more aware of the scope and availability of environmental controls; and other professionals, including bioengineers, should be encouraged to participate in the assessment process. Involvement of users in the provision of local services should be a priority at all times.

The next few years will probably see major developments in technology that will increasingly allow

people with severe disabilities both to remain at home and to work from home with less dependence on carers. We must make sure that changes in the NHS encourage rather than stifle such innovation.

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How technology can help rehabilitation

Recent advances could transform the lives of severely disabled people

See p 1187

Advances in the management of accidents, anaesthesia, and surgery have led to ever more people surviving major trauma or catastrophic neurological damage. Many are left with active brains locked into a severely physically disabled body. Severely disabled people may live for many decades, so their rehabilitation should focus on improving their quality of life.

Modern technology has the potential to enable even profoundly physically disabled people to take control of their lives. Computer based devices allow some minimal movement of a finger or an eye or the use of a "sip and puff" tube to drive a wheelchair; word processors, multimedia programs, telephones, and automatic feeding devices; turn the pages of a newspaper; open doors and curtains; and, indeed, control anything that can be switched electronically. (See editorial on environmental control systems (p 1181).¹) Voice controlled robotic systems now enable even profoundly disabled people to continue with a vocation.² The ability of technology, either with printout from a computer or with speech synthesis, to make communication possible has been shown to the world by Professor Stephen Hawking, who is able to give lectures on astrophysics by using a speech prosthesis despite profound neurological damage.

Technology that frees a disabled person is important not only to him or her but also to the carer, who can be released from the minute by minute reliance and so will improve the quality of his or her life.³ Care must be taken, however, that the technology is not foisted on people who would prefer to do without it—and that it does not result in a withdrawal of the all important social contact.

Sadly, technological aids may be available but they are not being used by most of the people who would benefit from them. There are three reasons.

Firstly, not enough is known about what is available, and this applies to other countries as well as to Britain.⁴ Little information on recent equipment has yet reached the existing databases, such as those run by the Disabled Living Foundation and the European Union's HANDYNET. Information is especially thin on the technical integration between different devices—for example, wheelchair controllers, environmental controllers, and communication aids—when used for severely disabled people.

Secondly, even when people know what they want they may not be able to get it. Environmental controls are available through regional environment control assessors, but until very recently they have been limited to two systems, which had not changed for several years. The devolution of contracts will provide for a wider variety of systems, many of which are cheaper than the early ones. The separate provision of wheelchairs and special seating, communication aids, and environmental controls further complicates the supply of these devices.

Thirdly, and inevitably, there is the problem of funding. At present this relies heavily on charitable sources, and in each case a willing charity has to be found. The cost of a full set of advanced and integrated devices for a person with high level tetraplegia can be around 50 000. This sum, however, has to be put in the perspective of the costs of care in an institution and the social cost to the disabled person and his or her family.

What is needed—and urgently—is a more effective technology service⁵ to be responsible for selecting and maintaining the most appropriate system, providing environmental modifications, providing a training service for therapists and carers, evaluating the suitability of devices, and coordinating the development of products. If community care is ever to be effective then we need to provide the tools to make it so. Much technology is used to enable and facilitate survival. It is time that the technology that can improve the quality of that survival was made available to all who would benefit from it.

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