



Scottish Health Facilities Note 14

Disability access

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About this series

Scottish Health Facilities Notes (SHFNs) provide an insight into topics and issues particularly relevant to the provision of healthcare in Scotland. SHFNs are complementary to the Scottish Health Planning Note (SHPN) series presenting the background to the detailed design guidance given in the SHPNs. In some cases SHFNs consider a range of alternative options and the implications of these options in terms of cost and acceptability to the users. However, the opinions expressed in the SHFNs do not include or represent the formal policy of The Scottish Office Department of Health Management Executive.

Acknowledgements

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Executive summary

A significant number of people in the UK are disabled, and this number is projected to rise for at least the next two decades. Disability can be experienced by anyone at any time, on either a temporary or a permanent basis. Any individual can experience a physical, mental, sensory or learning disability, and the risk to each individual increases with age.

The biggest problem experienced by disabled people is not the disability itself, but the environment into which they try to integrate. Equity, value and a good quality of life are fundamental human rights for all. Lack of access is described by disabled people themselves as discrimination, and is the problem that causes the most anger and dissatisfaction. It is also the one in which most significant improvements could be made.

Whilst there have been notable improvements on an international, European and national basis over the past two decades, progress is slow, and attitudes are believed by many people to be negative and discriminatory. Limited finance is seen to be the restraining factor to progress in North America, Europe and the UK.

Many solutions have been identified which would resolve the problems of access, many of which would help the population as a whole. Some of the problems can only be resolved using a macro approach which would be incorporated most easily into the design of new buildings. Most of the solutions, however, involve adopting a micro approach which could be implemented in any healthcare building, in some cases with minimal financial cost.

The implementation of the Disability Discrimination Act (1995) will ensure that the issue of equal rights of access for disabled people receives a still higher profile. This Act, and the removal of Crown immunity from the NHS in 1991, mean that access for the disabled will remain a priority within the NHS.

The trend of improving access will continue, but equal access will not be a reality until society accords everyone the respect of recognising individual abilities and catering for all, not creating exceptions for a group known as "the disabled". People are all "differently abled", and require a range of options to cater for all abilities.

1. Introduction

Scope

This Scottish Health Facilities Note (SHFN) examines the concept of accessibility for all, with particular emphasis on the problems that face people with a disability. Accessibility is inextricably linked with egress, and has been clarified as the opportunity for everyone to get to the entrance of a building, enter and move freely through it, using all the facilities as and when necessary, and to exit a building safely, particularly in an emergency situation.

In this SHFN all reference to “people with a disability” implicitly includes all individuals who have any limitation in their ability to maintain independently the activities of daily living as a result of one or more physical, sensory or mental health disabilities (including substance abusers and those people with HIV-positive status and/or Aids), and people with a learning disability.

The SHFN does not include architectural specifications for buildings and internal fitments, as these are defined more fully by existing statutes, regulations and other documents. Rather, drawing on the literature, it uses a problem-solving approach working from a disabled person’s perspective, makes suggestions for improving the accessibility of existing buildings, and identifies good practice in the design of new buildings.

By definition, the term “access to healthcare buildings” includes any building where employees, patients, clients or visitors require free access. This includes hospitals, nursing homes, health centres, GP surgeries, day hospitals and day centres. It does not include the homes of patients, although it is recognised that an increasing number of clients receive community care and will therefore require help and advice on improving accessibility within their own homes.

It is important to note that some of the facilities described in this SHFN are options for consideration and are not necessarily included in the Departmental Cost Guides published by the NHS in Scotland Estates Environment Forum in Healthcare Construction Project Price Guide.

What is disability?

Disabled people are a heterogeneous group. Disability is evident in people of all ages, regardless of race, class, gender or sexual orientation. The word “disability” encompasses any characteristic of a person which significantly limits his/her ability to complete any activity of daily living independently. Disability therefore may be caused through a limitation of a physical, sensory, or mental health ability, or a learning difficulty. Disability is by nature relative and personal. Some people with a disability are fit, healthy and independent, while others may be ill and dependent on others for all their needs. In some instances, an illness may be dynamic and progressive in nature. An individual may experience long periods of remission where no disability is evident, followed by a relapse when there is a high level of disablement and consequent dependency.

There is ample evidence pointing to an increasing number of disabled persons who will require access to health and/or social services over the next few decades.^(53,68,75,80,94) It is estimated that by the year 2031 there will be at least 8.2 million people with a disability residing in the UK.⁽⁷⁵⁾ The reasons for this increase in demand for facilities include:

- demographic changes. Life expectancy for both men and women has lengthened, and with the increasing number of elderly people, the proportion of disabled persons has increased accordingly;
- an increased awareness of the needs of people with a disability. This is due, in part, to intense political lobbying and activity. There has been a notable increase in the number of legislative, policy and advisory documents published within the last five years;
- disabled people and elderly people demanding recognition of special social and environmental needs, for maximum autonomy, independence and the right to equal access;
- an increased media interest in the inequality and discrimination experienced by disabled people. There has been a sharp increase in the number of newspaper articles, television programmes and magazines concentrating on the needs of disabled people;
- the trend towards increased geographical mobility. This means that people are often unable to care for their elderly relatives, and consequently, there is an increasing number of frail elderly people with one or more disabilities dependent on health or social care;
- improved pre-natal and post-natal care which has decreased peri-natal and infant mortality rates;
- increased knowledge and developments in health technology and care, enabling many individuals with a critical illness or trauma to survive with severe residual disabilities.

It is now generally accepted that disabled people are not handicapped as a result of their disability, but as a result of environmental factors which fail to allow them to achieve maximum mobility and independence.⁽⁷⁵⁾ Each individual has a personal level of competence when dealing with the environment.

Disability has been described as a lower level of competence in coping with environmental demands.⁽¹⁰⁾ This results in a loss of dignity, equity, self-esteem, autonomy, self-determination, personal development and active involvement, all of which are basic human rights.^(1,4,10,13,36,61,68,86) Denying access to disabled people not only discriminates against those individuals, but also against their families, friends and carers. In 1989, it was acknowledged that disabled people of working age had additional problems in obtaining employment and in participating in every aspect of society.⁽⁵⁵⁾ In order to address the problem, one of the priorities was to enable access to all the available facilities.

There are several fundamental principles which must be considered if a good quality of life is to be achieved by everyone, including those people with a disability. These include the need to recognise that:

- the provision of any service is relative to the potential of the individuals who use it;
- the rights of disabled people are equal to the rights of all individuals.

All people should be regarded as of equal value both in society and to society.

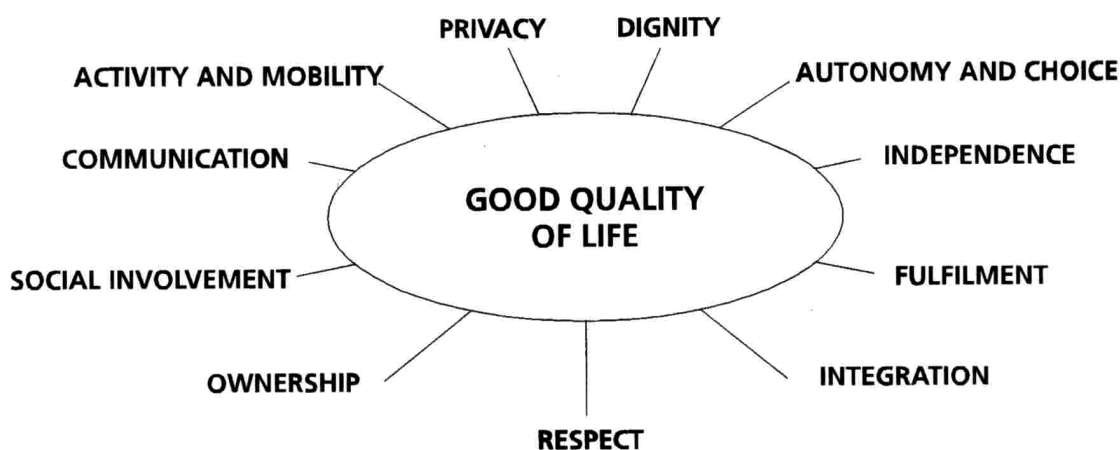


Figure 1

There are many groups of people who can make a positive contribution to helping a person with a disability achieve a good quality of life. These include:

- a disabled person him/herself;
- the family and friends of a disabled person, and carers;
- professional or voluntary organisations which represent disabled people;
- politicians and officials at international, European, national, regional and local levels;
- workers in the health and social services;
- architects, town planners, engineers and interior designers;
- designers and manufacturers of building materials and technological aids.

A collaborative approach which integrates the expertise, knowledge and experience of these groups of people will ensure a pro-active and dynamic agenda for change.

2. The literature

This literature review comprises a brief overview of the progress in addressing the problems of accessibility to public buildings for all individuals, and in particular for the millions of people with a physical, mental health, sensory or learning disability.

The review concentrates on accessibility to healthcare buildings but also examines the significant Acts and policies which have been introduced during the last few decades in the UK and North America, and their implications. The influence of the World Health Organisation, the United Nations and the European Union on the developments within the UK is highlighted.

Introduction

The term “environmental fit” has been adopted by some authors to describe each situation as unique to each individual who attempts to deal with it. In the event of a power failure causing a blackout, a blind person will not be affected; a sighted person, however, will be disabled on a temporary basis. This has been described as maladaptive behaviour in that the environmental pressures are greater than the level of competence which an individual has to deal with the pressure.⁽¹⁰⁾

Many individuals find that their disability becomes more severe as time passes. This means that their problems in gaining equitable access increase. They become limited in their activities, increasingly dependent on others for assistance, and consequently might experience feelings of decreasing self-worth.

Adaptability and flexibility are key issues when planning access services for people with a disability. Buildings should be capable of modification as the need arises. It should be possible, for example, to install grab rails in a corridor or bathroom as an increasing level of disability is encountered.

In order for each individual to achieve maximum performance potential with the maximum ease, the environment must be manipulated to complement individual effort and ability. If this theory is applied to the problem of accessibility, many authors suggest that barrier-free design is the key.^(8,10,36,46,47,54,56,60,76,78,99) Barrier-free designs, however, may mean an increase in problems for some individuals. The replacement of a flight of steps with a ramp, which is beneficial for people who use wheelchairs, may cause increased mobility problems for some semi-ambulant people. Barrier-free design should mean that a choice of options is available for people with

a disability. A flight of steps and a ramp should be available if there is no possibility of gaining access at road level.

Statistics for 1993/1994 reveal that in the UK more people were killed or seriously injured inside buildings (4348 fatalities, 146,000 serious injuries) than in road accidents (3561 fatalities, 46,800 serious injuries).⁽⁸⁸⁾ The majority of accidents occurred within the individual's private residence. The most common incidences described were in bathrooms, WCs, kitchens and in the immediate vicinity of the house. Similar environments are also found in healthcare premises and so the risk of accident must be equally high. Barrier-free design within all public buildings may well reduce the number of accidents.

In healthcare, disabled people frequently require care for problems other than their disability. Individuals who depend upon a wheelchair for mobility may still need surgery for appendicitis. It is essential that all areas used by members of the general public in healthcare buildings are made accessible to all. Barrier-free design addresses the needs not only of disabled staff, patients and visitors but also of pregnant women, children and the population as a whole. For disabled people, it enhances the feelings of independence and equity. It can also help change some of the negative attitudes in the discriminatory general population.⁽¹⁰⁰⁾ Some of the design choices may be in conflict, and there are various interrelated factors which should be considered (see Figure 2).

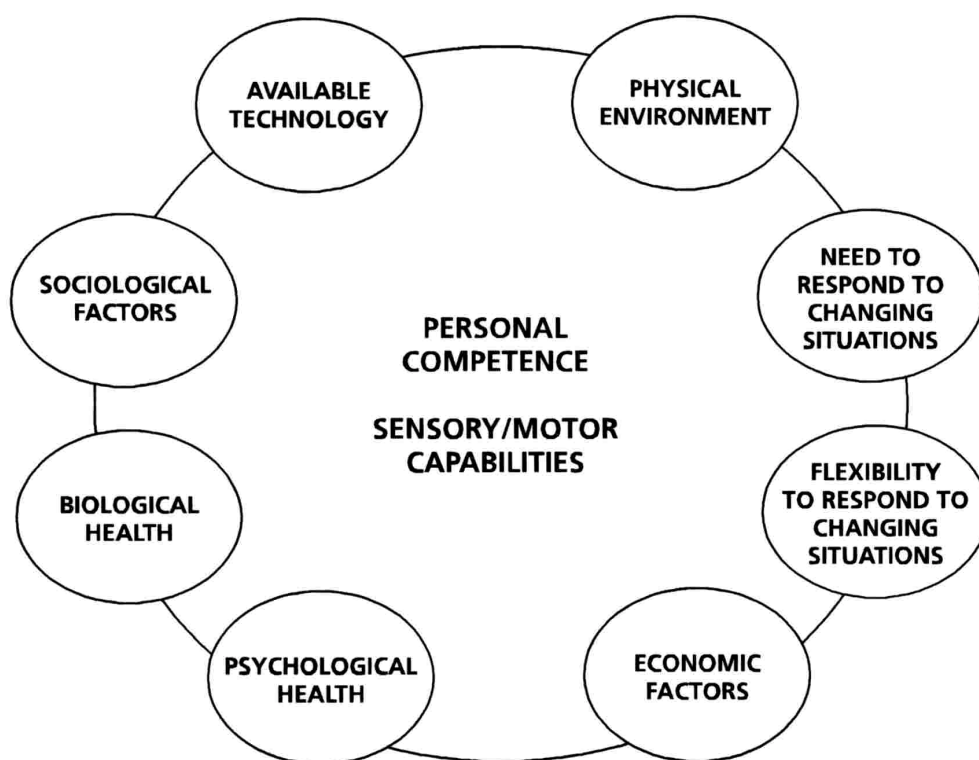


Figure 2

International developments

An International Bill of Rights comprising three documents has been produced by the United Nations over a number of years. The first document, published in 1948 and entitled the 'Universal Declaration of Human Rights', provided a series of principles. The second, produced in 1966 – the 'International Covenant on Civil and Political Rights' (ICCPR) – has an optional protocol and is a legally binding treaty. All signatories (including the UK) are reviewed every five years by the UN Human Rights Committee. The Committee's report identifies issues of any violation of civil and political rights, and the government concerned is supposed to address these. The third and final document is entitled the 'Covenant on Social and Economic Rights'.

Article 2 of the ICCPR addresses the issue of the equal rights of all individuals "without distinction of any kind" while Article 26 reinforces this declaration by stating that every individual is "entitled without any discrimination to the equal protection of the law".⁽⁹⁷⁾

The United Nations declared 1981 as the 'International Year of the Disabled'. This was a source of inspiration to disabled people themselves and had a positive influence on the World Health Organisation (WHO), the International Labour Organisation (ILO) and the United Nations Educational Scientific and Cultural Organisation (UNESCO). As a direct result of this initiative the United Nations produced an international programme of action in 1983.

The WHO responded in 1985 by identifying one of its targets for health for all as⁽¹⁰²⁾

"By the year 2000, disabled persons should have the physical, social and economic opportunities that allow at least for a socially and economically fulfilling and mentally creative life."

Two of the solutions suggested by the WHO were: engendering a change of attitude by society in general towards people with a disability; and that greater attention should be paid, by governments, local authorities, town planners, architects, employers and public services, to the problems of access.

Europe

More than 34 million European citizens have a serious physical or mental health impairment which results in long-term disability.^(13,20,21) The European Community has developed its own response. In March 1981 the European Parliament adopted a 'Resolution on economic, social and vocational integration of disabled people'.⁽¹⁹⁾ Later the same year the Economic and Social Committee presented its own initiative, 'Opinion on the situation and problems of the handicapped',⁽²⁰⁾ followed by the European Commission report 'The social integration of disabled people – A framework for Community action'.⁽²¹⁾

An EC action programme was formulated in 1982. The remit focused on two main concepts: employment and the environment (including the problems of access). The programme was named HELIOS (Handicapped People in Europe Living in an Open Society) and lasted five years (1988–1992). It primarily developed policy instruments, introduced networks of co-operation and support, and developed a technological database which would enable a central information service and also ensure the most effective distribution of newsletters and documentation. The range of disabilities encompassed in this action programme included physical, sensory, mental illness and learning difficulties.

It was agreed that member states would take collaborative action to promote equal opportunities for disabled people in all aspects of life.⁽¹³⁾ In 1989, a European Social Charter which formalised this commitment was signed by all member states (with the exception of the UK).

In 1993, a Council of Europe publication noted that the "UK legislation does not refer explicitly to a right to employment or to equality of opportunity for people with disabilities". In a subsequent sentence it observed that "no major extensions of the existing legislation are planned".⁽²¹⁾

The success of HELIOS resulted in a further programme being sanctioned (HELIOS II). It was recognised that there was a further need to "eliminate negative discrimination and implement policies of positive action". To achieve this, a formal advisory committee was set up which comprised two representatives from each member state. A liaison group which advises the formal advisory committee was also formed.

The membership of this group includes representatives from the following international organisations:

- World Federation of the Deaf;
- World Blind Union;
- Rehabilitation International;
- Disabled Peoples International;
- International League of Societies for Persons with Mental Handicap;
- World Federation for Mental Health.

The programme commenced in 1993 and was completed in 1996. It focuses on rehabilitation and social, economic, educational and vocational integration. The overall aim is to maximise the opportunities for people with a disability to live independently. A network of rehabilitation centres has been developed, with 50 regional centres throughout Europe. Twenty-two of these are concerned with all disabilities, while six specialise in mental handicap, five in physical and visual disability, four in mental health and two on hearing impairments. The remaining six deal with more than one of the categories but not all.

Within the UK, the Royal Association for Disability and Rehabilitation (RADAR) is the appointed representative. RADAR has the responsibility of co-ordinating Local Model Activities (LMAs), organised under the provisions of HELIOS I. There are three theme-based networks within the 80 LMAs in Europe. One of the themes is described as the “social integration network”.⁽¹³⁾ This network focuses on the promotion of self-advocacy and independent living through the co-ordination of environmental services.

The European Social Fund holds the monies to fund suitable projects which meet the criteria to promote independent living. The social integration network LMAs in the UK are based in Brighton, Llanelli, Banff and Walthamstow. The other two themes focus on education and employment; the only education LMA in the UK is based in Swansea, and the employment LMAs are situated in Newtownabbey (Antrim), Bradford and Balham.

Part of the HELIOS II programme is the HANDYNET database. This system centralises all current research, the latest technological innovations, and advice on adaptation, rehabilitation and accessibility. In the UK the Disabled Living Foundation is the appointed HANDYNET co-ordinator.⁽¹³⁾

The European Disability Forum, founded in 1993, is also part of the HELIOS II initiative. Its remit is to “ensure good lines of communication between Community institutions, national authorities, non-governmental organisations and others”. Government officials, members of different organisations and disabled people from all member states participate, along with representatives from the Commission itself.⁽¹³⁾

A further development has been the introduction of the TIDE programme (Technology Initiative for Disabled and Elderly People). The programme focuses on a problem-solving approach to the technological needs of disabled and elderly people. There are large grants available from the European Union for research and development projects, provided more than one member state is involved in a collaborative project.⁽¹³⁾

A Council of Europe publication in 1993 reviewed the legislation concerning the rehabilitation of disabled people in 16 of its member states.⁽⁶¹⁾ The UK is one of these states, and one of the pertinent points in this document is that the responsible Secretaries of State in England, Scotland, Wales and Northern Ireland must promote the National Health Service which in turn (amongst other responsibilities) must rehabilitate disabled people in “hospital, community based healthcare and after care, home nursing, preventive and health education services and family practitioner services”.

The United Kingdom

The 1988 OPCS Survey⁽⁵³⁾ found that more than six million adults in the UK have some form of chronic physical, sensory or mental disability. In 1991 the Government estimated that there were 360,000 children with a disability.⁽⁷⁵⁾ It is estimated that an additional four million people are temporarily disabled at any one time. Of more than ten million people who are chronically or temporarily disabled, at least four million have mobility problems, with 500,000 people relying on wheelchairs for mobility. More than 60% of those with a chronic disability are elderly people.⁽⁵⁵⁾ The OPCS survey indicated that there were approximately 422,000 people with a disability living in a communal establishment or institution.

In the next decade nearly 7.5 million (14%) of the total population in England and Wales will be more than 65 years of age, with 6.4% of this group being more than 75 years of age. In Scotland the estimated figures are 15.2% of the total population will be more than 65 years of age and 6.5% will be over 75 years of age. Many of these individuals will remain essentially fit and healthy, although most will experience deteriorating eyesight, hearing and mobility, and will require increasing assistance as they become more frail.⁽⁵³⁾ In July 1995, the Alzheimer’s Disease Society reported that 500 new cases of people with Alzheimer’s disease are confirmed each day in the UK. This figure is predicted to rise until at least 2020.⁽³⁾ In 1991 the Royal National Institute for the Blind (RNIB) found that one in 60 (approximately 1 million) of the UK population are blind or partially sighted.⁽⁸⁶⁾ In 1994 the Royal National

Institute for Deaf People (RNID)⁽⁸⁷⁾ quoted a UK figure of 7.5 million people who are deaf or who have significant hearing loss. There are estimated to be 500,000 people with a significant learning disability.⁽⁵³⁾ Although literature highlighting the problems of accessibility for people with a disability has been available for many years, it is only in the last three decades that more prescriptive documents have appeared.

Since 1966, the UK has been a signatory to the United Nations International Covenant on Civil and Political Rights (ICCPR) but has not adopted the Optional Protocol. This means that British citizens who believe that their civil or political rights have been violated are unable to appeal directly to the UN Human Rights Committee. They must apply instead to the British judicial system and their case may take many years to resolve. If an individual then wishes to appeal against the findings, they may apply to the European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR). The Government's Third Periodic Report to the ICCPR made no reference to disabled people.⁽⁷⁵⁾

In the UK both the Chronically Sick and Disabled Persons Act (1970)⁽⁴²⁾ (extended to Scotland 1972) and the Amendment Act (1976)⁽⁴⁴⁾ refer to the need "to make provision, in so far as it is in the circumstances both practicable and reasonable" for access both to and within buildings to be available to disabled people. The Act was described as an enabling rather than mandatory piece of legislation. Critics of this Act argued that the caveat of "practicable and reasonable" would effectively allow employers to justify their inaction. The 1970 Act was the first legislation which mentioned "access" and required that buildings which were open to the general public must provide for the needs of disabled visitors in both external and internal facilities.⁽¹²⁾

Four years later in 1974, the first government minister with a specific responsibility for disabled people was appointed. Subsequent British governments have continued this brief.⁽⁶¹⁾ The government of the day and, more particularly, the appointed minister, works in partnership with professional and voluntary agencies, with disabled people who represent their own specific groups, and with the principal carers, families and friends of disabled people.

The Disabled Persons Act (1981) was more explicit than the previous Acts.⁽⁴⁵⁾ It referred to the "duty to make provision for the needs of disabled persons using certain buildings and premises". The newly implemented 'Code of Practice for Access for the Disabled to Buildings' (BS 5810) was described as the definitive document which should be adopted by all architects and planning teams.⁽⁵⁾ The Code of Practice should be implemented in new buildings, and its main focus is on the ability of people with disabilities to move into, around and out of a building without obstruction. Interestingly, the Code explicitly excludes exiting a building in an emergency situation. Health and welfare buildings are included in the specifications within the Code. In 1988, a further Code (BS 5588) was

published relating to the design and construction and access regulations of new non-domestic buildings; this sets standards of practice which must be in evidence in the event of fire.⁽⁶⁾

The Technical Standards Part T of the Building Standards (Scotland) Regulations 1990⁽⁵⁷⁾ has been revised and came into operation in June 1994. The Technical Standards Part T deals with access and facilities for disabled people, and has been updated in that the generic term “disabled people” now includes those individuals with sensory impairments. Architects must adhere to the regulations when designing a new public building or when making significant adaptations (such as an extension) to an existing one. There is no requirement, however, for modifications to be made within the existing building itself, although the Regulations warn that “the level of provision after alteration should not be any worse”. The technical specifications required are explicit with regard to the additional space which must be provided in common activity areas, and the facilities which must be made available for disabled people.

One of the stated specific purposes of The Technical Standards Part T is to enhance the health and safety of disabled persons. The importance of such an approach is confirmed by a subsequent reported finding that people who use wheelchairs have an injury rate which is more than 350 times greater than ambulant people.⁽⁸¹⁾

There was widespread support from all parties in the House of Commons for the Civil Rights (Disabled Persons) Bill but it ran out of time in May 1994. This bill would have made it unlawful to discriminate against disabled people in any aspect of daily life. Over a quarter of a million supportive postcards were sent by the general public,⁽³⁹⁾ and more than 330 Members of Parliament either signed an early-day motion or gave their written approval in support of the bill.⁽³⁹⁾

The cost of implementing the Civil Rights (Disabled Persons) Bill was estimated to be £17,000 million, although no detailed cost-benefit analysis had been carried out. A consultation paper examining alternatives to the bill was published by the Government in July 1994.⁽⁴⁰⁾ The proposals in the paper were limited but would cost only about £17 million to implement. The proposals focused on greater accessibility in new buildings, the introduction of a voluntary code of good practice for employers, and the establishment of a National Disability Council. The government proposed that rather than introducing sweeping legislation, education, which changes the attitudes of people on a voluntary basis, was the right way forward.

In the last year, there has been an upsurge of political militancy from disabled people, from organisations which represent the interests of people with disabilities, and from members of the general public who continue to support the concept of the original bill. Attempts were made on 16 previous occasions to introduce legislation on discrimination against disabled people, and it is the 13th time such a bill has failed to become law.⁽⁷⁵⁾

In 1979 the Committee on Restrictions Against Disabled People (CORAD) was established by the Government following intense pressure from various sources. The Committee's report, published in 1982, is the only official report on discrimination and disability. Its findings included a wide range of discriminatory practices including those concerning access to public buildings, and made a number of recommendations to resolve the problems. The findings were not accepted by the Government.^(48,75)

There has been a rapid increase in the number of organisations which are actively campaigning with, and on behalf of, disabled people for equal rights. In 1981 the British Council of Organisations of Disabled People (BCODP) was formed, and by 1991 harnessed 75 registered organisations and approximately 200,000 individual members. In 1994 Rights Now evolved from the Voluntary Organisation for Anti-Discrimination Legislation Committee (VOADL). The remit of VOADL and subsequently Rights Now is to campaign for equal rights on a legally enforceable basis.⁽⁷⁵⁾

The Disability Discrimination Act (1995)⁽⁶⁶⁾ adopts a similar approach to the 1970 Act regarding the need for access on a non-discriminatory basis for disabled people. An employer now has a duty to take steps to ensure that a disabled person is not placed at a substantial disadvantage because of the "physical features of premises". The Act, however, is not clear as to the extent of this duty. The phrases "as it is reasonable, in all the circumstances of the case" and "having regard in particular to the costs involved" are just two examples of how "duty" is open to interpretation. Section 6 (3) of the Act lists a number of incidences which an employer "may have to take" in order to comply with the Act. These include "making adjustments to premises and acquiring or modifying equipment". Disabled people and their representative organisations have been vociferous in their criticism of the limitations of this Act but nonetheless it should make significant improvements in addressing the problems of access, and is designed to eliminate the discrimination that disabled people face when seeking or retaining employment. Section 19 states that it is unlawful if a provider of services refuses to provide, or deliberately does not provide to a disabled person, any service provided to other members of the public. Amongst the examples of services cited are "access to and use of any place which members of the public are permitted to enter; access to and use of means of communication; access to and use of information services". Under this Act, disabled people who believe they have been discriminated against in such a way will have recourse to an industrial tribunal.

Part VI of this Act commands the establishment of a National Disability Council. This Council will be a corporate body independent of the Crown, and will have the power to regulate its own procedures. Its main function will be to advise the Secretary of State "on matters relevant to the elimination of discrimination against disabled persons". It will make recommendations as to how this can be achieved and "the likely cost of implementing any such recommendation". It will also be the duty of the Council to devise a code of practice for presentation to the Secretary of State. This code of practice will

not be a statutory document. The Secretary of State will try to ensure that at least 50% of Council members will be disabled people, or the parents of a disabled person, or members of a professional body representing the needs of disabled people. Within the criteria laid down in the Act, all Council members must “have knowledge or experience of the needs of disabled persons or the needs of a particular group . . .”⁽⁶⁶⁾

There will be financial implications for many employers following the enactment of the Disability Discrimination Act (1995). Current estimates vary from £30 to £80 million relating to the right of access alone. The Government’s Compliance Cost Assessment (CCA) estimated that the overall cost of implementing the original Civil Rights (Disabled Persons) Bill could have been as much as £17,000 million, but organisations representing disabled people believe that this figure was inflated by at least £12,000 million.⁽⁸³⁾ Goldsmith (1984) recognised that financial resources were finite and suggested that the most important principle was to use the funds available to the best effect.⁽³⁶⁾

Potentially, the Disability Discrimination Act (1995) will have far-reaching implications for the health and social service sectors, particularly as Crown immunity was removed from the National Health Service in 1991.

The Act has been implemented throughout the UK, although some modifications of the Act have been necessary in respect of Northern Ireland.

The Director of the Office of Telecommunications has been required, since the Telecommunications Act of 1984, to ensure that there are efficient communication systems for people who are deaf or hard of hearing and for those with other disabilities.^(12,87)

Since 1946, in organisations where more than 20 people are employed, there has been a duty on employers to maintain a 3% quota of employees who are registered as disabled. The Disabled Persons (Employment) Acts of 1944 and 1958 established the National Advisory Council on Employment of Disabled People (NACEDP), which advises the Secretary of State for Employment and Training on issues surrounding the employment of disabled people at a national level. To supplement this Council, there are 60 Committees for the Employment of Disabled People (CEDPs) who advise on a local level on employment matters relating to people with a disability. The subsequent Disabled Persons Act of 1981 and the Disabled Persons (Services, Consultation and Representation) Act of 1986 reinforced the position. With the introduction of the Disability Discrimination Act (1995), the quota system has been abolished, although employers of fewer than 20 people will continue to be exempt from the new requirements.

Expert help can be sought by prospective employers, and by job seekers with a disability, from an organisation called PACT (Placing Assessment and Counselling Team). PACT has a major role in working with employers to promote the recruitment, training and retention of people with disabilities.

Members of the PACT team, known as Disability Employment Advisers (DEAs), are linked with job centres. There are nine regional Ability Development Centres (ADCs) which support PACT. The ADCs develop disability awareness packages for agencies and other prospective employers. They also provide specialist assessment, help and advice regarding employment aids and equipment.^(23,24,25,26,27,29,31) Financial assistance in the form of grants is awarded under the “Access to Work” scheme and is funded by the Employment Service. The grant is awarded on an individual needs basis. A person with a disability can be funded to the value of £21,000 over a five-year period.⁽³⁰⁾ For the prospective employers of disabled people, advice can be sought directly from the relevant regional ADC. Any employer can adopt the disability symbol “Positive About Disabled People”, provided they make five commitments⁽³²⁾ (see Appendix A).

Training and Enterprise Councils (TECs) have responsibility for delivering the government-funded training programmes. Within their business plans, TECs must indicate how they intend to meet the training needs of people with a disability. Vocational training is available to all people between the ages of 18 and 59. Within this enterprise and also within NVQ training, additional support is available for disabled persons where necessary. TECs must provide a variety of aids.⁽⁶⁹⁾ These can take the form of:

- a personal readership service for blind trainees;
- a communication service for deaf trainees;
- adaptation of equipment or premises to meet the needs of a disabled trainee;
- individualised training packages if the existing one is not appropriate;
- provision of specialist equipment if appropriate.

The Centre for Accessible Environments⁽⁷⁾ makes a significant contribution to raising the general public’s awareness of the needs of people with a disability, most particularly in matters relating to access. A journal, ‘Access by Design’, is published three times each year and is described as essential reading for all those committed to improving access for disabled people. The Centre produces a number of publications, handbooks, design sheet packs and seminar reports, all of which provide invaluable information and advice on the needs of disabled people. In addition, the Centre undertakes a range of consultancy services including access audits of buildings, appraisals of the access provision in architects’ drawings, and training on access- and egress-related topics.

In 1984 the Access Committee for England ⁽¹⁾ was established. It is funded by the Department of Health and is administered by RADAR. The remit of this Committee is to:

- raise public awareness of the difficulties faced by disabled people in obtaining equal access;
- identify and advise on the potential implications of impending laws;
- collaborate with and influence central and local government departments, voluntary and professional organisations and industry;
- act as a resource to local access groups;
- encourage further employment of designated access officers at a local level;
- advise all individual enquiries on access matters.

In Scotland, Disability Scotland perform a similar function to the Access Committee for England but is only partly funded by grants from The Scottish Office (46%) and relies heavily on fund raising and earned income.

In many local authorities throughout the UK, an access officer is employed.

⁽¹⁾ This individual acts as the central source of information for all departments within the local authority. The most important responsibilities of access officers include:

- advising architects, town planners and councillors on the specific needs of people with a disability with regard to equal access during the initial planning stages of a new building, or when an existing building is being extended or modified;
- acting as an education officer in order to raise the level of knowledge and awareness of other members of local authority staff;
- identifying and liaising with any existing local access group, or if no such group exists, convening one.

In summary, there have been positive steps forward in the UK which have addressed some of the many problems which people with a disability experience when attempting to lead an independent life on an equitable basis. For many people, however, progress is too slow and discrimination still exists. Two of the key issues appear to be limited financial resources and a lack of public awareness and understanding of how the needs of disabled people can be met.

North America

The incidence of disability in North America is similar to that reported in the UK. In 1990, the Americans with Disabilities Act (ADA) quoted a figure of 43.6 million Americans with a registered disability out of a total population of 261 million. This number is projected to rise as the number of elderly people increases.⁽⁸⁰⁾

Interestingly, the National Center for Health Statistics estimated that more than 160 million Americans had a chronic impairment, but in a 1980 census only 22.5 million Americans identified themselves as chronically impaired.⁽¹¹⁾ There would seem to be a large anomaly between the official records, but this may be explained by individual perceptions of what constitutes a disability.

In Canada, it was calculated that around 14% of the total population had some form of disability.⁽⁹³⁾ If these findings are compared with those produced by the National Center for Health Statistics in the USA, it would seem to indicate that there are fewer disabled people in Canada than in the USA. This may not be the case, however, as the raw data was collected by different methods. There were perceived differences in health status and there was some difficulty in reaching remote populations – all of which contribute to potentially unreliable results.

As early as 1961, standards were being set in the USA which were designed to improve access to buildings and the facilities within them.⁽¹⁰⁰⁾ The University of Illinois appointed a Professor of Rehabilitation Studies who was instrumental in implementing change within the university itself. Purpose-built halls of residence were constructed, and the whole ethos of the university campus was changed towards positive discrimination concerning staff and students who were registered as disabled.

From 1970, as various federal laws were amended, small improvements were introduced which subsequently eased the introduction of the ADA in 1990. Many of these changes, according to one author, unwittingly promoted a greater dependence on others rather than introducing greater freedom and independence for disabled people.⁽¹⁰⁰⁾ West (1991) described the following federal laws as “legislative building blocks” for the ADA, as all make recommendations designed to eradicate discrimination against people with a disability:

- the Architectural Barriers Act (1968);
- the Rehabilitation Act (1973), Sections 501, 503, 504;
- the Education for All Handicapped Children Act (1975);
- the Developmental Disabilities Assistance and Bill of Rights Act (1975);
- Civil Rights of Institutionalized Persons Act (1980);
- Voting Accessibility for the Elderly and Handicapped Act (1984);
- the Air Carriers Access Act (1986);
- the Civil Rights Restoration Act (1987);
- Fair Housing Act Amendments (1988).

In spite of these developments, during the last decade in North America it was recognised that discrimination against disabled people remained a serious problem across the spectrum. In 1990 the US Attorney General's Office estimated that 58% of all men of working age who had a disability were unemployed. For women of working age who were disabled, the unemployment figure was 80%. In an analysis of more than 10,000 employed disabled people completed by the Job Accommodation Network in 1987, it was discovered that 31% had not required additional resources or modifications in order to work. Of the remaining 69%, approximately 50% had cost their employers less than \$50 each and only 1% had cost more than \$5000. Equity of access to health services, education and employment was identified as a fundamental human right. There was a failure to make modifications to existing buildings and a failure to introduce architectural changes which accommodated the needs of everyone in new buildings.

In order to address these problems, the ADA was put on the statute book in 1990.⁽⁸⁰⁾ The purpose of the Act was to “provide a clear and national mandate for the elimination of discrimination against individuals with disabilities” and this would be achieved by enforcing standards set by the Federal Government. It was described by one author as the “most sweeping piece of civil rights legislation since the 1964 Civil Rights Act”,⁽¹¹⁾ and by another as the “rubric of landmark legislation”.⁽¹⁰⁰⁾ The Act guarantees equal opportunities for disabled people in both public and private sectors, in accessing public transport, in obtaining and retaining employment, and in the right to use the telecommunications system.

The ADA (1990) recognises that it is discrimination against disability, rather than the disability itself, that causes the greatest distress for disabled people. It acknowledges that it is very difficult to legislate against attitudes, and that a change in these can only be achieved by raising awareness through education. It was predicted that five million buildings in the USA needed adaptation, although once again there was the opportunity within the Act for justifying non-compliance. This included the imposition of undue financial hardship on the organisation. This primarily protects small organisations, but there is the expectation that large public services should comply with the law.

A year after the Act was enforced, a survey revealed that only 18% of the American population knew that the Act was in existence.⁽¹¹⁾ The number of Americans who participated in the survey was not given, so it is difficult to assess the reliability of this result, but it does reinforce the need for a much greater publicity campaign on behalf of the Government through media involvement. Non-compliance by American citizens may be the direct result of ignorance of the Act itself rather than a deliberate decision to ignore the needs and rights of Americans with a disability.

Economists identified the prohibitive costs involved as one of the main factors for employers’ reluctance in complying with the Act. Although improving access for disabled people would enable many to work and earn a salary, thereby reducing the dependency on benefits, the initial cost estimate for the nation was anticipated to be a net economic drain on society. Healthcare economists calculated that the annual bill for welfare benefits was \$60 billion. They estimated that \$80 billion would be required to comply with the Act.⁽¹¹⁾

Supporters of the Act argued that the \$80 billion would be a ‘one-off’ requirement and that the cost of meeting the standards set within any subsequent new building would increase by a mere 1%. Opponents pointed out that the \$60 billion welfare benefit bill would not be reduced significantly, as there would remain many disabled people who were unable to work and who would continue to need welfare support, and that the hidden cost therefore would be much higher.⁽¹⁰⁰⁾ Subsequent research in the USA has demonstrated that the introduction of anti-discrimination legislation is largely

cost-effective and that although there has been a large cost penalty, this has been nowhere near as great as previously anticipated. ⁽⁸⁹⁾

In conclusion, it is anticipated that the Act will have a profound effect on American life, and it has certainly placed the USA as the pioneer regarding the equal rights of people with a disability.

Disability access to health and social care

The number of people with a long-term or short-term disability who require access to health and social care buildings is likely to be proportionately greater than in other public sectors. Addressing the issues surrounding accessibility to these buildings is therefore essential in order to ensure free access and egress for all, including those individuals with a disability. Goldsmith (1984) believed that everyone would benefit from improved accessibility to public buildings, and suggested that if disabled persons were fully integrated into society they would no longer be a “special needs group”. ⁽³⁶⁾

It has been suggested that self-advocacy by disabled people is the key to improving accessibility and that professionals should examine their own practice, having sought advice from disabled people, who are the most expert in identifying needs. ⁽⁹⁾

Scrutiny of professional practice is partly dependent on implementing quality standards. In order to set explicit and precise standards, the following questions should be asked:

- What are we trying to do?
- Why are we trying to do it?
- How are we doing it?
- Why are we doing it this way?
- Why do we think that this is the best way to do it?
- How could we improve it?

Quality management is a combination of people and systems (see Figure 3).

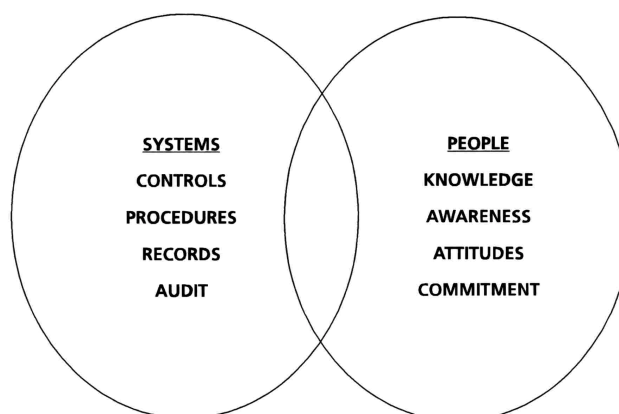


Figure 3 Quality assurance

If these are properly combined, customer satisfaction is achieved. One of the most reliable ways of checking that things are running effectively, according to the planned arrangements, is through the adoption of an audit. An audit checks that procedures are in place, that they are being used and that they are adequate. In essence, auditing verifies that what is **being** done is what is **said** is being done. It is a measure of the standard set against the performance achieved.

The NHS Patient's Charter (1995) makes abundantly clear the standard that the general public can expect from the National Health Service:

"You can expect the NHS to make it easy for everyone to use its services, including children, elderly people or people with physical and mental disabilities."

It is therefore incumbent on all healthcare providers to aim to achieve this standard by examining the ease with which everyone can use its services. The literature review suggests that one of the major limitations for many people is lack of accessibility in getting to the building, entering the building, moving around the building, using all the facilities available and leaving the building (particularly in an emergency situation).^(13,36,91)

The setting of standards in relation to accessibility and the specific needs of people with a disability makes a major contribution to an increased quality of care, and thus an increased quality of life, for disabled people themselves. Management teams in all healthcare buildings should make accessibility a priority area for development. Improving accessibility within and around each building will improve the perceptions of all patients, visitors and employees.

The healthcare sector has a responsibility for promoting the rehabilitation of people with a disability.⁽²¹⁾ One of the strategies which would signify a real commitment to this task, and should be adopted as standard practice, would be a recruitment drive to employ a greater number of people with a disability. Being employed and earning a salary is deemed by most disabled people to be one of the most important criteria for equal opportunity, although in some cases this is not a realistic option.⁽¹³⁾

One of the biggest barriers to employment for a disabled person is inaccessibility. There may be major difficulties in getting to work and, even if these are overcome, it may be impossible to access the building itself and the facilities within that building. The attitudes of potential and actual employers are crucial, but in many instances the negative discrimination expressed by some members of the general public towards people with a disability continues to influence potential employers. There is ample evidence that, given the opportunity to work, people with a disability offer outstanding motivation, loyalty and reliability.^(13,25,80,100)

In partnership with disabled people, healthcare providers should identify areas of good practice and extend them, and also identify problems of access and take measures to eliminate or minimise them. There should be a collaborative effort to stress the positive capabilities of people with a disability. Employers should ensure that the working environment is suited to meet the needs of disabled people. This may mean modification of existing job specifications to ensure a more flexible approach.

Several publications identify the invaluable contribution that representatives of the different disabled groups make to planning services.^(4,36,74,85) Suggested representatives include wheelchair users, the semi-ambulant, the blind, the deaf, those with speaking difficulties, frail elderly people, individuals of short stature, people with learning difficulties and those with a mental health problem. The organisations who have an international/national/local profile representing the differing needs of disabled people willingly participate in any planning process and share the benefits of their knowledge and experiences. Some authors, however, refer to such a development as “tokenism”, but the majority believe that joint collaboration between the providers of services and the consumer is of immense mutual benefit.

Over the past ten years a collaborative venture has evolved between the Prince of Wales’s Advisory Group on Disability and the King’s Fund Centre, the result being the ‘Living Options Partnership’. The venture receives additional funding from the Department of Health. This organisation has published several invaluable papers which focus on the relationship between health and social services and disabled people.^(4,74)

In 1992, the Prince of Wales Advisory Group on Disability collaborated with the Royal College of Physicians (RCP) to produce 'A Charter for Disabled People Using Hospitals'.⁽⁸⁵⁾ The President of the RCP remarked in her preface:

“Understanding the needs of the individual patient is crucial to management of any illness in hospital; working with a disabled person requires a special partnership.”

The Charter identified good communication, positive attitudes, multidisciplinary teamwork, and partnership with disabled people as the fundamental criteria for ensuring equity in care. A useful appendix to the document is a suggested 'audit of provision for disabled people using hospitals'. The working group recommended that a named person should be identified within each health authority, who was given specific responsibility for services for disabled people in hospitals. The role of the access officer in local authorities has been discussed previously. It would seem that the remit of the named person suggested in this Charter could be modelled, in part, on the role of an access officer.

It has been suggested that when considering the question of indiscriminatory accessibility for all, a suitable perspective would be the adoption of a macro/micro model.⁽³⁶⁾ The macro model is frequently described as a universal design.

“Macroism” can be described as the expectation, for example, that the main entrance to a building will be suitable for all people, while “microism” merely ensures that at least one entrance is suitable for a disabled person to use. A further example of macroism would be that all toilets are designed to accommodate people with a disability, while microism would encompass the design or adaptation of one cubicle.

Macroism is an approach which encompasses the needs of disabled people and ensures accessibility, effectiveness, equity, acceptability and appropriateness for all. Using a macro approach in the design of a new building is a much easier proposition than in the adaptation of an existing building, where adopting a micro approach may be the only practical solution.

Many buildings in the health sector were designed and built in an era before the accessibility needs of disabled persons became a consideration. Many have some form of heritage preservation order on them and, in the light of this and the penchant of architects in the last century to design hospitals with many steps leading to the main entrance and narrow winding corridors leading to the wards, it would be physically impossible to adopt a macro approach, regardless of the cost implications.

This does not absolve the managers of existing buildings from working in partnership with disabled people to identify problems of access. Suitable adaptations and modifications of the existing facilities which meet the needs of disabled people should be planned. This entails the adoption of a problem-solving approach.

One of the most frightening and disorientating experiences that could confront any individual at any time, is leaving a building in an emergency situation. By its very nature, an emergency situation gives no prior warning and it is therefore crucial that emergency evacuation procedures are planned in detail and rehearsed regularly. It is equally important that such rehearsals are evaluated and, if necessary, revised. The stress experienced in a fire situation makes people's behaviour unpredictable.

In an emergency situation, every individual relies heavily on their senses. Sight, smell, hearing and speech are crucial factors for escape. It has been suggested in the USA that an important addition to the fire protection equipment in public buildings would be the installation of directional lines on the floor. These would be modelled on the directional lights found on the floor of aircraft and are described as a "safe path concept".⁽¹⁰⁾ A further suggestion in the same publication incorporates the use of an "acoustic path concept". These would comprise sequenced sound waves, which should be complemented by a directional voice beacon. An explanation of the sequenced sound waves was not given, but it is presumed that the principle would be the same as the Doppler effect emitted from an emergency vehicle or a train which projects a different sound depending on whether it is coming towards, or going away from, a focal point. In the case of a fire in a public building, the focal point would be the nearest exit.

For disabled people who are dependent on others for assistance, the level of stress is likely to be even greater. For this reason, information regarding the means of escape in an emergency situation should be given routinely to all individuals wherever possible. Proulx and Sime (1991) found that audible and visual alarm bells were the most effective way to alert people initially, but that during egress itself, the most effective way of keeping the majority of people informed was through a public address system or voice beacon.⁽⁹¹⁾

The optimum use of such a pre-recorded centralised public address system involves the integration of timing, the frequent repetition of the appropriate directions for evacuation, a high quality of volume and a tone of voice that people will respond to in a positive manner in an emergency situation.

The voice beacon system was originally developed for blind and visually impaired people, but a US study which measured the flow of people in a simulated fire condition disclosed that because of intense smoke, the majority of people cannot see. The report concludes that a voice beacon system is therefore a suitable system to adopt in every public building.⁽¹⁰⁾

There are several other prototypes which aid egress currently being developed and tested in the USA. One of these is described as an electronic guidance device. It is inexpensive to install and easy to use. The principle is based on the establishment of electromagnetic pathways, and the antennae are installed beneath the floor material. It is designed to aid blind and visually impaired people. The initial tests indicated that the exit times of blind and visually impaired people decreased when guided by this system.⁽¹⁰⁾ The weakness would appear to be that the system only operates if the individual is carrying a stick with a receptor in it. This system would not benefit the rest of the population, who are also visually impaired in a smoke-filled area.⁽⁹¹⁾

A further prototype is described as a tactile building directory. The principle of this equipment is based on a circuit diagram identifying key features and routes. It has a topological directory map. Words are printed in large letters and are overlaid in Braille. The tactile directory is placed in a standard location on each floor and next to each entrance of a building.⁽¹⁰⁾ Although designed for visually impaired and blind people, it could also be of use to those people with limited mobility. Signs and symbols have not been incorporated, so the effective use of this system would depend on an individual's ability to read English.

Shields (1993) recommended that in an emergency situation, the general rule should be to anticipate that a disabled person needs at least twice as long as the rest of the population to evacuate a building. He suggests that people with a disability would benefit from being allocated into three classifications for the purpose of emergency egress:⁽⁹¹⁾

- people with communication difficulties;
- people who are semi-ambulant;
- people who are non-ambulant.

Semi-ambulant people who use walking frames or walking sticks may well be able to move more quickly unaided, but people with a hemiplegia may move more confidently with assistance. Non-ambulant people will be totally dependent on others for help.

Pearson and Joust (1983) compared young, fit and healthy individuals' exit times with those for disabled people who were visually impaired, semi-ambulant or depended on a wheelchair for mobility in a simulated fire situation.⁽⁹¹⁾ The disabled people took at least four times as long to move to a place of safety. Sime and Gartshore (1987) proved, however, that a person in a wheelchair can be evacuated down six flights of stairs in four minutes. The exit times of visually impaired or blind people, however, were much closer to those of the young, fit and healthy individuals in reaching a place of safety provided they were in a familiar environment.⁽⁹¹⁾

The vulnerability of disabled and elderly people in a fire condition can be demonstrated by examining records of fire fatalities. Shields quotes a figure of 799 fatalities in England, Scotland and Wales in 1987. Of these, 23 were described as bedridden. Most of these bedridden fatalities were more than 60 years old (83%), with 11 people being more than 75 years old. A similar picture emerges in the percentage of non-fatal casualties. The total number in the UK (excluding Northern Ireland) was 10,256. Of these, 17.20% were immobile. Most of these casualties were rescued from private dwellings, indicating that elderly/disabled people isolated at home are more vulnerable than hospital populations. Elderly people were most vulnerable, with 64% of the total being more than 60 years of age.⁽⁹¹⁾

The Merseyside Fire Brigade figures show that between 1987 and 1990, 99 people died in fires. Of these, 33% could be classified as disabled. A significant majority were more than 60 years old.⁽⁹¹⁾

In 1992, the North American Fire Protection Unit reviewed 17 major fires in public buildings. These were described as “compartmented fire resistive building deaths”. There were 161 fatalities overall. The majority of people died during the process of evacuation. The figures were given as “126 died whilst in the process of escape” whilst only 32 people died who were classified as “non-evacuees”. The conclusion drawn was that unless individuals are situated at the origin of the fire, it is safer to remain behind a fire door and await further information and instructions.⁽¹⁰⁾

The conclusion drawn by the North American Fire Protection Unit reflects the Firecode policy adopted within the UK National Health Service. In all large institutional buildings such as a large acute general hospital, the policy states that in all ward and unit areas, patients and staff should remain in-situ unless the origin of the fire is in the immediate vicinity. If necessary, all staff should assist patients to evacuate to the nearest approved refuge in a fire-resistant compartmented area. NHS in Scotland Firecode states that in most instances this will be on a progressive horizontal evacuation basis. This is considered the essential approach in hospitals, but occasionally a vertical evacuation may be the only option.^(47,51,54) The open air is the ultimate place of safety.

The growth of the nursing home sector has meant that there are many smaller buildings which, although monitored by the NHS, are the responsibility of the private operators. Only in those buildings where it is not possible to achieve evacuation to the nearest safe fire compartment should the building be completely evacuated.⁽⁹¹⁾ In buildings such as health centres and day hospitals (on an independent site), where there are no bedridden patients, it may be appropriate that everybody should leave the building, assisted where necessary by members of staff. (Refer also to Chapter 5.)

A Health Technical Memorandum (HTM 84) relating to fire safety in residential care premises has been published as part of NHS in Scotland Firecode by the Property and Environment Forum and is available from the Property and Environment Forum Executive.

3. Getting to the entrance

There are many hazards which people with a disability may encounter when trying to gain access to a healthcare building. Some of these can be identified as follows.

A. Problem

Lack of knowledge of the facilities available for people with disabilities due to inadequate advance written communication offering advice.

Solutions

- a. All new employees and all patients and visitors, wherever possible, should receive written information prior to their first visit to the building. Information should be available in various languages as well as in accessible formats, for example large print, Braille and audiotape. The written information should include advice on parking, access to the building, emergency evacuation procedures and the facilities available within the building for disabled people. A similar strategy could be adopted in health centres and GP surgeries.
- b. An invitation for individuals to contact a named person if they require additional help would minimise the problems that may otherwise occur.
- c. Information leaflets should be readily available at each entrance for patients, visitors and employees to read.

Rationale

Individuals will be informed in advance of the facilities available and thus can plan their proposed visit and make additional arrangements if necessary.

B. Problem

Difficulty in finding the way around the building or site due to inadequate information and signage. Also problems when approaching the building regarding maintaining the freeway, traffic control, designated parking areas, pedestrian crossings, and appropriate entrances and exits.

Solutions

- a. Liaise with the local authority, the police and the fire service to gain appropriate advice on positioning and number of road signs.
- b. Approved signage and public information symbols should be used only where appropriate, since too much information can be as confusing as no information at all. ⁽⁴⁹⁾

Rationale

The appropriate number and position of road signs will help maintain a free flow of traffic and minimise the risk of accident. Disabled persons and/or their drivers will be able to identify designated parking areas easily.

C. Problem

Difficulty in reaching the building from the car park due to inappropriate parking facilities for disabled people arriving in private cars.

Solutions

- a. All designated parking facilities should be clearly indicated using the approved signage and regularly monitored to ensure they are not used by people who are not disabled. ^(47,49,54,58,62)
- b. The parking facilities should be near an entrance and wherever possible be under cover because of the time that many people with a disability need to transfer from a car to the entrance. ⁽⁶²⁾
- c. The designated parking space should be wider than normal, enabling those people who are frail, elderly, semi-ambulant or wheelchair users to dismount safely. ⁽¹⁰⁵⁾
- d. For preference, designated parking facilities should be on the same side of the road as the building.
- e. All car parks should be constructed using a flat surface. Stone chippings should not be used, as these render people in wheelchairs totally immobile and greatly increase the risk of semi-ambulant people falling. Access to the facility from the car park should be on level ground. A lift must be provided from an internal car park or garage.

Rationale

The adoption of this strategy will minimise the risks of exposure to adverse weather conditions and reduce the possibility of injury.

D. Problem

Risk from traffic due to inadequate and inappropriate arrangements for disabled and elderly people to cross a road.

Solutions

- a. The installation of audible and visual warnings of pedestrian crossings with a delayed timing action will assist all individuals to cross the road. Audible warnings will encourage independence in visually impaired and blind people, and visual warnings will help individuals who are deaf or hard of hearing.
- b. The manual controls which operate the crossing must be at a height that is suitable for disabled people in wheelchairs to operate them independently.
- c. The manual controls should be tactile as well as visual in nature.
- d. The edge of the pavement should slope gently towards the road with no ledge or curb at all, as any height differential is extremely hazardous for wheelchair users. ⁽¹⁰⁶⁾
- e. Tactile markings should be installed in the pavement to warn blind and visually impaired people of the approaching crossing and slope. Modified blister paving should be laid out in accordance with the Department of Transport guidance notes. ⁽¹⁰⁶⁾
- f. “No parking” signs and double yellow lines should be installed for a reasonable distance on either side of the crossing.
- g. Seats should be placed at regular intervals to enable semi-ambulant people to rest and should be recessed wherever possible.

- h. Particular attention should be paid to any item which could be considered hazardous for disabled people. Examples of these include signposts, lamp posts, raised or lowered manhole covers, ducts and grilles, inappropriately positioned litter bins and plant pots, all of which compromise the safety of wheelchair users, people using walking aids and those with a visual impairment.

Rationale

All individuals will be able to cross any road and gain access to the building in safety either independently or with assistance.

E. Problem

Exposure to the weather and excessive external travel distances due to inappropriate arrangements for disabled people to dismount from ambulances, minibuses and other forms of public transport.

Solutions

- a. Designate a dismount area in front of all the relevant entrances.
- b. Install a large canopy over the entrance so that disabled and elderly people can always transfer into the building without being affected by weather conditions.
- c. The canopy should be of sufficient height for good air circulation, to minimise pollution.
- d. The canopy should be of sufficient length to permit dismount from rear and side doors of vehicles.
- e. In new buildings the entrance should be at the same level as the pavement, level being taken to include any gradient less than 1:20.
- f. In existing buildings, a gently sloping ramp should be built for wheelchair users.⁽¹⁰⁷⁾
- g. Steps should be provided as an alternative choice to ramps for the semi-ambulant.⁽¹⁰⁷⁾
- h. Permanent handrails should be fixed on both sides of the steps and ramp, and should extend for 300 mm beyond the top and bottom of steps. This will ensure that individuals are able to select the handrail appropriate for their individual needs.⁽¹⁰⁷⁾
- i. The edge of the steps should be of an integral tactile nature or should be of contrasting brightness so that people with a visual handicap are able to differentiate between each step. The contrasting nosing should extend the full width of each step, to a depth of 50–60 mm on both tread and riser.⁽¹⁰⁷⁾
- j. In extreme weather conditions, the concrete should be checked regularly for ice formation or puddles of rain.

- k. Uneven or broken paving stones should be repaired immediately because of the increased risk of people tripping and falling.
- l. Any structure supporting the canopy should be positioned off the pedestrian route, or should be clearly identified using contrasting banding positioned at eye level.
- m. The approach to each entrance must be well illuminated. Artificial lights should be placed on each side of the approach and on each side of the entrance itself. Artificial light should never be placed at the top of a staircase or ramp as it casts a direct shadow down the stairs or ramp. A shadow makes it virtually impossible for people with any visual impairment to differentiate between each stair or the sides of the ramp.
- n. Corduroy paving should be installed at the top and bottom of each flight, in accordance with the Building Standards (Scotland) Regulations Technical Standards Part T and Access Guide (1993) by Disability Scotland.
- o. The underside of all staircases should be blocked off, to prevent areas of reduced headroom presenting a hazard to pedestrians.

Rationale

Disabled people will be able to gain independent access to a building in safety and comfort.

F. Problem

Inability to gain access through the entrance itself.

Solutions

- a. Install a bell and two-way speaker (including visual indicator of response) immediately outside the entrance, with large instruction signs for its use. There may be occasions when it is impossible for a disabled person to gain access without assistance. A disabled person should never feel abandoned and unable to summon help. The bell should be placed at the correct height for a wheelchair user.
- b. It is important to enable disabled people to move independently, although a video security camera could alert others to people in difficulties.
- c. A readily available portable ramp, which can be utilised immediately, is not an ideal solution and should never be necessary in a new building, but in some older buildings it could be used as a last resort to improve accessibility.
- d. Springs on ordinary doors constitute a major obstacle for most non-ambulant disabled people who do not have the strength to open the door and control the wheelchair at the same time. Where possible, the entrance should have automatic sliding doors. Raised floor fixtures

should be avoided. All entrance doors should work automatically and should receive a pulse from a “magic eye” which is placed sufficiently in advance to operate the doors outwards before an individual reaches them. (It is necessary for the doors to operate outwards in case of a need for rapid evacuation of a building in an emergency situation.) Door edges should be painted in an effective colour tone contrast to minimise the risk of collision for partially-sighted people.

- e. If the doors are constructed mainly of strengthened glass, it is essential to place a diagonal strip of a different material across the door, as glass is an extreme hazard for the visually impaired.
- f. All entrance doors which are manually operated should contain a viewing panel made of strengthened glass. The panel must be positioned for children and wheelchair users as well as adults.
- g. Handrails should be placed on both sides of the doors.
- h. If a manual door is a necessity, install one wide door rather than two narrow doors.
- i. Doors with a single direction of swing should have a contrasting finger plate on the “push” side of the door, and an angled or contrasting handle on the “pull” side (angled or cranked handles are easier for people with limited wrist movement to operate). These should be of sufficient length for a wheelchair user to reach.
- j. Attach “kick-plates” across the bottom of a manual door. Some disabled people find it easier to use their legs than their arms. Fully glazed doors will require a strengthened kick-plate to withstand the impact of a wheelchair footrest.
- k. Avoid the use of raised mats at any entrance because they impede the progress of a semi-ambulant person, they are a hazard to a person with a visual handicap, and they prevent a person in a wheelchair from gaining access at all.

Rationale

Disabled people will be able to gain access on an equitable basis, either independently or with assistance.

4. Getting around the building

Once access has been achieved through the entrance, the next problem that faces everyone is to find their way around the building. Many healthcare buildings are very large, have many floors and have a very complicated internal structure. It is all too easy for staff, visitors and patients to get completely lost and disorientated. It is essential that every effort is made to minimise the problems of access and mobility that an individual may encounter.

A. Problem

Disorientation, confusion and distress due to the main reception being a common activity space which is frequently very crowded with people moving in different directions.

Solutions

- a. The reception area should be a large, open, regular-shaped room. People dependent on the use of wheelchairs require up to five times as much space as an ambulant person in order to move, and up to nine times the space in which to turn around. ⁽³⁶⁾
- b. Information should be available as soon as an individual enters the building. This should be in the form of approved signage ⁽⁴⁹⁾ and verbal instructions which state where the reception desk is situated. A sign which may be obscured in a crowd of people should be attached to the wall above head height so that it is still visible.
- c. The floor covering must be non-slip and of a material which does not impede wheelchair access. The colour should contrast with the walls, and the design should not cause orientation difficulties for visually impaired or confused individuals.
- d. Tubular handrails should be fixed to all walls; they are the preferred option for individuals with a grasp problem. ^(36,71,72) The colour of the handrails should contrast with the walls, as this aids people with a visual impairment.
- e. The reception desk should be situated in a logical location as close to the entrance as possible, on the same level, and should be clearly marked.
- f. If the reception staff are behind a glass screen, a window induction loop should be provided for the benefit of hearing-aid users, or there should be an effective sound transmission system. Information about any loop facility should be clearly displayed. The screen should be free of speak-through grilles or other obstructions that make lip-reading difficult. The

physical barrier of a screen or window prevents tactile communication with a deaf or blind person, and so staff must be prepared to move out from behind the barrier to communicate directly.

- g. The reception area must be well lit. Lighting is very important and should not be installed behind the heads of the receptionists as this places their faces in shadow, making it very difficult for people who have impaired hearing to lip-read. Natural lighting should be used wherever possible. Placing the lights on both sides of the reception desk illuminates the counter and aids individuals with a visual impairment in reading any written instructions they may be given.
- h. At least part of the reception desk counter should be at a level which is low enough for people in wheelchairs, or those with short stature, to reach with ease. The counter should have a horizontal recess beneath the counter top of 400 mm to create sufficient knee space. Care should be taken to ensure that patients or their carers can give personal details to the receptionist in privacy.
- i. The reception desk counter should have a contrasting sightline on the edge to aid visually impaired people, with a textured inlay which acts as an additional gripping support for the infirm.
- j. Seating should be placed near to the reception desk so that people may rest if they wish while queuing for information.
- k. Signage should be installed which indicates where the nearest toilets are situated, where there is an audio induction loop for the hard of hearing and where there are public telephones, most particularly those adapted for disabled people.
- l. The placement of litter bins, plant troughs and other items should be undertaken with consideration of the needs of visually-impaired people. Inappropriately placed low-level items can present major hazards. Loose items should be recessed, boxed in or placed in corners where they will not obstruct circulation.
- m. Fire extinguishers, hose reels and radiators which protrude into a room or corridor may present a hazard to pedestrians. ⁽⁷⁶⁾ Where possible, measures should be taken to ensure that the risk of impact is minimised, for example by softening the edges, boxing in or recessing.
- n. Radiators should have a low surface temperature. ⁽¹⁰³⁾ Elderly people, infirm and semi-ambulant people frequently grasp items such as a radiator to aid their balance. If the surface temperature is too hot, there is a high risk of people burning their hands.
- o. All emergency alarms should have both visual (bright red flashing lights) and audible signals. ⁽⁹¹⁾ Alarms should be situated where they can be seen and heard easily. (Further information regarding alarms is given in the subsequent chapter "Getting out of the building.")
- p. Tactile maps can be placed on walls; these will aid visually impaired and blind people, and should be updated regularly.

Rationale

Independent access and free movement will be possible on an equitable basis for all.

B. Problem

Difficulty in gaining free access to other parts of the building on a horizontal basis.

Solutions

- a. Signage should be placed at every corridor junction, directly opposite and within lifts, at the bottom of staircases, and on every landing.
- b. Signs must be regularly checked and updated. A frequent complaint is that wards and departments are moved to different floors or even buildings, but the signage is not updated to reflect the move.
- c. Corridors must be well lit. Maximise the use of natural light by positioning low windows.
- d. Minimise glare by reducing the light contrast outside/inside through the use of non-reflective glass. Consider the use of blinds or curtains. Tubular fluorescent lamps and fittings should always be fitted with diffusers to minimise glare and reflection. Tubes should be positioned longitudinally down the centre of a corridor, where possible, as this can assist in orientation.
- e. Windows must open outwards and should incorporate a child-proof locking device. They must, however, also comply with the Building Standards (Scotland) Regulations.
- f. Avoid tilt-and-turn windows which protrude into the corridor. These are extremely dangerous for visually impaired or blind people.
- g. Give ample warning of any change in the gradient of the corridor. The warning should be of a visual, tactile and audible kind.⁽⁸⁷⁾
- h. Avoid single steps, as visually impaired people tend not to see these. A single step causes great difficulty for people who use a wheelchair.⁽⁸⁶⁾
- i. Avoid rough wall surfaces. Select wall coverings which avoid excessive reflection of light and sound. Avoid excessively busy patterns on wallpaper. Patterned wallpaper is distracting for people with hearing difficulties who lip-read. The use of a colour contrast dado rail which may be used tactually or visually can be an effective guide for visually impaired people.
- j. Differentiate clearly between the floor, walls and ceiling. Everyone uses the different horizontal planes for reference in order to maintain balance. For elderly, infirm, confused or visually impaired people, difficulty in locating these terms of reference may result in vertigo and a subsequent fall.

- k. Flooring must be non-slip and easy to clean. A noisy, resonant floor is preferred by visually impaired and blind people. People who are hard of hearing prefer a less resonant surface such as carpet. Carpets should not be inset, as the edges tend to get damaged and the rim is an additional danger. If carpet or lino tiles are used, they must be of sufficient thickness to avoid curling at the edges, as this is very hazardous. All flooring should be grease-resistant. Loose mats should be avoided as they may roll up under a wheelchair.
- l. Aim at consistency of colour for public facilities such as doors leading to toilets, bathrooms or stairways. This will help orientate people with learning disabilities or confused patients.
- m. Avoid any sharp angles and, most particularly, identify any overhead obstructions such as staircases which jut out into the corridor. If these exist and cannot be removed, the obstruction should be emphasised as much as possible. This can be achieved by painting the obstruction in a bright colour contrasting with the rest of the decor and by establishing an audible warning system.
- n. Overhead piping and gas lines should be of a sufficient height to avoid contact with people or equipment.
- o. All radiators and fire extinguishers should be recessed. The radiators should have a low surface temperature. If this is difficult to achieve, the radiators should have a protective grille around them.
- p. The use of tactile clues and landmarks will aid visually-impaired people. These may include smell, temperature change and movement. A contrasting sightline placed one metre above ground level will aid a visually impaired person to move independently.
- q. A door should never open directly onto a staircase because of the risk of falling.
- r. Distance between departments can present a problem for elderly and disabled people. Consideration should be given to the location of use-related areas such as A & E, X-ray and haematology clinics. A wheelchair-pushing service should be provided for ambulant disabled who cannot manage the distance.

Rationale

All individuals will be able to access all facilities safely, independently and with the risk of injury minimised.

C. Problem

Difficulty in gaining access to different floors.

Solutions

- a. Lifts should be large enough to accommodate at least one wheelchair, with room for a helper to turn the wheelchair in a complete circle.
(36,54,56,58,62,65,107)
- b. The emergency alarm button should be clearly marked with a tactile warning and should be coloured red. It should be positioned low enough for a person in a wheelchair to reach with ease.
- c. A large, tactile, button telephone should also be positioned at a low level. It should contain an inductive coupler for people who are hard of hearing. Appropriate signage which indicates that the telephone has these facilities should be clearly visible. There should be a visual indication of call response (preferably with text message capability) so that deaf people can be given advice and reassurance.
- d. The call system should be installed low enough for a person in a wheelchair to reach it comfortably. ⁽¹⁰⁷⁾
- e. The call system should have tactile buttons. This will aid people who are visually impaired or blind. ⁽¹⁰⁷⁾
- f. Visual and audible indicators should be installed inside and outside the lifts. The indicators should give information about the floor level reached and also provide a warning of the opening and closing of doors. Lift doors must be slow in closing.
- g. A delayed door timing action is essential for semi-ambulant people and for those in wheelchairs, so that the risk of getting trapped in the doors is minimised. ⁽¹⁰⁷⁾
- h. Mirrors in lifts should generally be avoided as this can cause difficulties for visually impaired, confused or easily disorientated people. However, in small lifts in which wheelchair users cannot turn, the provision of a small mirror at a suitable height can help a wheelchair user to check the proximity of other pedestrians when undertaking a reversing exit from the lift. Unaccompanied wheelchair users should be encouraged to back into a lift. Apart from ease of egress, the person would have easier access to the controls, which are normally located close to the door.
- i. Staircases should be clearly indicated. Stairway falls are one of the most common causes of accidental injury, particularly in the elderly, infirm and disabled population. ^(71,72) A panel of tactile flooring – the standard recognised corduroy profile denotes that the user should proceed with caution – should be installed, measuring 800 mm by the width of the step, set back 400 mm from the first nosing.

- j. Doors leading to stairways should never open directly onto the staircase. A landing should be installed at the top of each staircase, and a rest area at the top of each flight of steps.
- k. Doors should always close automatically at the top and bottom of flights of stairs. The handles should be tubular, lightweight and large; this makes them easy to grip.
- l. Open-tread staircases should never be used. They are dangerous for everyone, as heels can become trapped in the spaces. Individuals who use a walking aid such as a stick can lose the stick through the space and consequently may fall. Open-tread staircases are disorientating for visually impaired or confused people, and transmit inappropriate sounds which may distract people with hearing difficulties.⁽¹⁰⁷⁾
- m. Mirrors or reflective glass should not be installed on stairwells.
- n. Natural light should be used, where possible, to illuminate a staircase. External windows in stairwells should be provided with adjustable blinds to control daylight and help reduce glare; windows positioned in the direction of travel can cause unacceptable levels of glare. Artificial light should be placed at the side of the staircase. The light should not cast a shadow directly down a staircase, as this means that people walk into their own shadow, diminishing any effective light. This causes particular difficulty for people with a visual impairment. A high intensity of light is required for safety; elderly people need three times the level of light as do people of 20 years of age in order to achieve the same level of clarity.^(36,76)
- o. Each stair should have an integral tactile edge. Where tactile edges do not exist, painting the edge of the stair in white will alert people to the change of stair and thus will reduce the risk of falling.⁽¹⁰⁷⁾
- p. Tubular handrails should be installed on both sides of the staircase. This allows individuals who have limited use of one side of their body (people with a hemiplegia, for example) to choose their preferred handrail. The function of a handrail is to stabilise; it must therefore feel comfortable, otherwise individuals will avoid using it.⁽¹⁰⁷⁾
- q. Handrails should be continuous and consistent. They should follow the exact course of the stairway and should extend for 300 mm beyond the top and bottom of the stairs.^(71,72,107)

Rationale

People will be able to move independently and safely between floors with the minimum of disruption and on an equitable basis.

D. Problem

Difficulty in giving and receiving information.

Solutions

- a. Signposts are frequently difficult to read. There may be too much information on each sign, or conflicting information. Signposts are not often updated to reflect any current changes. All signs should be clear and unambiguous, and medical jargon should be abandoned in favour of plain English. They should be directional, locational and informative.⁽³⁶⁾ They should be well lit at all times without any reflective glare. Information on signs must be consistent with other written or verbal guidance for building and department names.
- b. Wherever possible, symbols should be adopted rather than the written word (“← ” for example, rather than “ turn left ”). All signs should reflect the approved international standard. The use of symbols increases the number of people who can understand them.
- c. The RNIB recommends the adoption of signs which have black letters on a gold or orange background, as these are the colours which are most easily discerned by people with a visual impairment.⁽⁸⁶⁾
- d. Aids, such as induction loops for the hard of hearing and Braille plates for blind people, should be installed where appropriate. It is important that these are clearly indicated using the approved international signs (see Appendix B). Induction loops are essential in spaces where patient education takes place.
- e. All waiting areas should have visual, as well as audible, call systems.
- f. Effective sound insulation is important for the hard of hearing. This allows the maximum opportunity to hear and also creates the minimum of disturbance for others. In leisure areas, for example, consideration should be given to reducing noise transfer in the television room.
- g. It is extremely important to maintain privacy and confidentiality. This can be difficult to achieve when holding a spoken conversation with a person who has hearing difficulties. Interview and examination rooms should be sound-attenuated.

- h. Many people have difficulty in reading small print, and a blind person cannot read at all. Written communication is used frequently in healthcare and thus it is imperative that all English language materials are written in plain English and that, wherever possible, alternative strategies are adopted. The Patient's Charter sets a standard which states that a patient can expect to have "menus printed in other languages and large print". With advances in information technology, it is suggested that all other items of patient information should be enlarged in order to aid people with a visual impairment. Large-print consent forms and written explanations of investigation procedures are just two examples of where such a strategy would help ensure equity for all. The Patient's Charter is available as a video in British Sign Language with English subtitles, as an audiotope, and in Braille, large print, and different languages (see Appendix C).
- i. A significant number of people in the UK do not speak English. The difficulties in meaningful communication should not be underestimated. It is recommended that a readily accessible list of appropriately qualified interpreters is maintained. There should be procedures for identifying communication needs in advance of consultations or periods in hospital so that the relevant arrangements can be made.⁽¹⁰⁴⁾ Allowance should be made in appointment schedules for the fact that communication with deaf people, and particularly deaf-blind people, may take considerably longer than with hearing patients.
- j. All telephones should have amplifiers and a raised pip on the "5" button, or raised numbers and letters if the buttons are large enough. All telephones for public use should be equipped with an inductive coupler and controllable amplification. There should be a shelf for portable textphones.
- k. Telephones should be installed at a height where a person in a wheelchair can access the equipment.
- l. Telephone booths should contain a fold-up seat for frail, elderly or infirm people.
- m. All telephones should be installed within an acoustic hood which is low enough for wheelchair users. This helps reduce extraneous noise, which distracts the hard of hearing. Care should be taken to locate hoods so that they do not cause a hazard to visually-impaired people moving through the environment.
- n. It is important to identify employees who are able to communicate with a person who is deaf through signing and/or with people who have learning difficulties using Makaton. If there are no employees who possess these skills, volunteers should be offered the opportunity to learn. All staff who receive external telephone calls from the public should understand the textphone relay service typetalk and be able to use it effectively.
- o. Tactile maps and models can be useful for people who are blind. These must be updated regularly.

- p. TV loop systems/listening devices and teletext televisions should be provided so that TV is equally accessible to deaf, deafened and hard-of-hearing people. Listening devices should also be available for radio.
- q. Maintenance of all communication aids should be completed on a regular basis. One author suggests the adoption of a working manual, which safeguards standards. The manual should record the date of cleaning, polishing, repairs, replacement, adaptations and modifications.

(95)

Rationale

Most individuals will be able to communicate on an equitable basis, through one of the media available, if necessary with additional help. More information and a greater depth of knowledge should be gained by those individuals who have a sensory impairment.

E. Problem

One of the most difficult access problems faced by disabled people is that of an insufficient number of appropriately-designed toilets. Lack of appropriate facilities frequently means that an independent person with a disability must depend on another person for help, or that on many occasions they cannot access a toilet at all.

Solutions

- a. The macro approach in new buildings would be to design all toilets and bathrooms to accommodate the needs of disabled people.
- b. In existing buildings, there should be adequate toilet facilities suitable for disabled people on every floor.
- c. In some instances it may be possible to amalgamate two existing cubicle spaces into one which is wide enough to accommodate a wheelchair.
- d. Unisex toilets are preferred, as these enable a disabled person and, if necessary, his/her carer to access the facilities regardless of gender.
- e. Each toilet should be well signed using the approved international sign. Toilet access doors should be supplied with a tactile embossed pictogram incorporating colour/tone contrast. Directional signs should be placed in all common activity spaces.
- f. All toilets should be accessible without having to ascend or descend steps.
- g. There should be no change of level at the entrance to the toilet cubicle itself.
- h. All toilet cubicles for disabled people should be of a sufficient size to accommodate a disabled person, a wheelchair and a carer.

- i. The door must be able to be closed and locked from the inside in order to maintain privacy and dignity.
- j. The door lock should be capable of opening from the outside in an emergency situation.
- k. Outward-opening, side-hung doors are preferred. This enables access to be gained quickly in the event of an emergency. If a person falls behind an inward-opening cubicle door, it is extremely difficult to reach them without risk of further injury. All side-hung, outward-opening doors must be fitted with rising butt hinges or a door-closing mechanism to prevent doors being left ajar; the most common injury suffered by people who are visually impaired is caused by doors being left ajar.
- l. A kick-plate should be fixed to the bottom of the inside of the door.
- m. The floor and walls of the cubicle should be of a non-slip material and there should be no reflective glare.
- n. The decor should be chosen carefully. The colour of the toilet and/or urinal should contrast with the walls. A visually-impaired person may find it difficult to orientate him/herself.
- o. Hooks and handles should be installed at a low level. This enables a disabled person to store safely any equipment such as a walking stick or walking frame.
- p. An alarm pull/bell should be installed which reaches down to the floor. If a person falls and is unable to get up, he/she can still summon help. The alarm should be visible and audible, in both toilets and bath/shower facilities.
- q. The disabled person and the carer must have sufficient space to move freely without danger of injury.
- r. A disabled person should be able to access either side of the toilet. If this cannot be achieved, consideration should be given to the provision of two cubicles: one offering left-to-right lateral access; the other offering right-to-left. Tubular handrails should be installed on both sides of the cubicle, with horizontal and vertical grab rails, either of which may be pull-down, at both sides and the back of the toilet itself. Some disabled people find it easier to transfer from a wheelchair directly and sit back-to-front on the toilet seat. The handrails at the sides of the cubicle help semi-ambulant people maintain their balance, and they can choose which handrail is the most appropriate for their needs. ⁽¹⁰⁷⁾
- s. The toilet seat and fixings should be robust, as some disabled people have to turn once they are on the seat and some are unable to maintain their own body weight during transfer. A back rest should be provided for the same reason.

- t. A large refuse container should be installed and clearly marked. It must be easy to open and should operate manually and by a foot pedal. Individual disposal bags should be placed at hand height so that any continence aids can be disposed of cleanly and safely.
- u. The installation of a bidet should be considered. This is an invaluable resource for people who experience problems with continence. Alternatively, wet wipes should be available, and a supply of towels.
- v. The toilet flush handle must be within reach after the user has transferred back into the wheelchair.
- w. A low-level wash-hand basin should be installed within the cubicle. A soap dispenser and hand towels should be available. If a hand dryer is provided, this must be located low enough to ensure that water does not run down the user's arms. Spring-loaded taps should be avoided. Toggle-headed or elbow taps are more easily operated. Hot and cold taps should be distinguishable by colour and also have a tactile indication by means of relief symbols.
- x. A large mirror should be provided. This will enable a disabled person to check his/her overall appearance before leaving the cubicle. The mirror should be recessed into the wall in order to minimise the risk of people with a visual handicap or confused people from injuring themselves on the frame.
- y. Maintenance and frequent cleaning of toilets is very important. This is particularly true where the toilet doubles as a baby changing and feeding facility, although such an arrangement should be avoided wherever possible.

Rationale

Individuals will be able to use the facilities either independently, or with assistance, while maintaining their privacy and dignity.

F. Problem

Difficulty in using bath and/or shower facilities.

Solutions

- a. All bathrooms and shower rooms should be large enough to enable people who rely on walking aids to move freely with the door closed and to allow space for a second (shower) wheelchair.
- b. The rooms should be marked clearly with the approved signage. Braille plates could be attached to the doors, and the colour of the door paint should be consistent with other bathroom doors. This will help visually-impaired or confused people to identify a bathroom.

- c. The entrance should be level with the floor, with no step or ledge. This will prevent people with a visual impairment or semi-ambulant people from tripping and falling.
- d. Side-hung doors should open outwards and should have large lightweight tubular handles. This will help frail, elderly and semi-ambulant people, or those with difficulty in grasping, to open and close the door.
- e. The door should be capable of being locked from the inside, but it should also be possible to unlock the door from the outside if an emergency situation arises. A shower room should possess the same privacy arrangements as a bathroom.
- f. The room should be well lit, preferably with natural light through opaque windows. There must be blinds on the window to enable privacy to be maintained if the electric light is used.
- g. The floor should be laid with a non-slip material. Bath mats increase the risk of slipping or tripping and should not be used.
- h. At least one seat with a back should be provided in a bath or shower room. Stools are inappropriate because some people find it difficult to maintain their balance, and the risk of falling to the floor is therefore greatly increased. Hooks and hangers should be readily accessible at an appropriately low level for people in wheelchairs, but ensuring that clothing remains dry.
- i. Where there is more than one bathroom, alternative siting of the baths should be considered. For people who are dependent on others to help them get in and out, the bath should be situated in the middle of the room with access on both sides. This enables a person in a wheelchair to choose the most convenient side of the bath and also reduces the risk of back injury to the assistant. Baths attached to a wall, however, may be the preferred option for people with a hemiplegia or for those with a visual handicap. The wall can be used as an extra means of support.
- j. There should be grabrails on both sides of the bath and at the ends of the bath. This enables individuals to select which rails are most appropriate to their needs.
- k. There should be a non-slip mat fixed to the bottom of the bath.
- l. A shelf should be provided at the side of a bath or a shower. This should be large enough to accommodate all toiletry items with ease. The shelf should be made of a non-breakable material, as there is the risk of a glass shelf being dislodged, falling and breaking. Shelves should not be positioned directly over sinks to avoid the risk of a patient/resident hitting their head when lowering it to rinse their face and raising their head to stand up.
- m. Towel rails should be fixed to both sides of the wall, as close as possible to the bath or shower.

- n. While the bath or shower room must be kept warm, it must also have adequate ventilation, otherwise the increase in humidity may cause either the disabled person or his/her carer to feel unwell and fall. There is a particular danger that a person sitting or lying in a bath could faint, slide under the water and consequently drown. An extractor fan should be installed. Providing there is no danger to the bath or shower users, windows should be opened after the bath or shower room has been vacated.
- o. Shower units should preferably be installed in a small room which does not require a shower cubicle or tray. The room must be long enough, however, to accommodate a person in a wheelchair and his/her carer if necessary. The width of the room should permit an individual to reach out and touch both sides. This helps frail, elderly, semi-ambulant and blind or visually handicapped people to keep their balance.
- p. The selection of wall tiles should be undertaken with care. The tiles should be smooth but non-reflective. Different colour tiles should be used for the wall and floor surfaces; this will aid people with a visual impairment.
- q. Grabrails should be attached on both sides and at the back of the shower. The grabrails should be of a contrasting colour and texture to the wall.
- r. A detachable non-slip mat should be placed on the floor.
- s. A shower unit should be adjustable in height so that people who are unable to stand can still direct the flow of water at the desired height above their head. The shower unit should incorporate a detachable hand spray. It is important to ensure that water temperature is consistent. Many showers can vary in water temperature when water is withdrawn from a tap somewhere else in the system. As many disabled people are unable to get out of a shower quickly if the water suddenly becomes hotter or colder, showers present a health hazard. There are many devices on the market for controlling water temperature.
- t. At least two shelves (in contrasting colours to the walls) should be installed. One of these shelves should be put at a low level for shower users who are unable to stand.
- u. A shower chair should be provided. The chair should be made of a strong, padded, plastic material and should have a back. A stool is not suitable for many disabled people.
- v. Appropriate drainage should be installed which enables the water to drain away immediately, thereby minimising the risk of people slipping and falling.
- w. Where a shower curtain is needed, it should be of sufficient length to reach the floor but should not trail on the floor, as this creates a potential hazard.

- x. All bath and shower rooms should have an emergency alarm, both visible and audible, which can be reached by all users. Care should be taken to differentiate clearly between light pulls and the alarm system.
- y. A large mirror should be installed in the bath or shower room.

Rationale

All individuals will be able to enjoy a bath or shower, either independently or with assistance, safely and in privacy.

G. Problem

Limited/insufficient living space in which to move independently and easily.

Solutions

- a. If a disabled person uses a wheelchair, sufficient space should be made available for him/her to move around freely. This is particularly important around the bed area and in common activity spaces such as a dining or sitting room.
- b. An appropriately designed toilet, and a bath or shower room, should be easily accessible from a disabled person's bed.
- c. In a single bedroom, an assessment should be made of the most appropriate place to site a low-level bed. For some disabled people, for example those who are semi-ambulant or hemiplegic, situating the bed against a wall may help maintain the person's independence. For people who need to transfer from a wheelchair with assistance, it will be preferable for the bed to be placed in the middle of the room with access from each side. Some people may need a rope or strap to pull themselves onto the bed, therefore a strong fixing point will be needed on the wall or the bed itself.
- d. The doors should be wide enough to accommodate a wheelchair with ease. In small bedrooms the door should open outwards, in order to maximise the space available within the bedroom.
- e. Call bells and light switches should be within easy reach on the appropriate side of the patient. Sockets and switches can easily be lost against a pale-coloured wall – using darker socket panels against a light background can help. Alternatively, a contrasting finger plate around the perimeter of the socket panel will suffice. Many people with a sensorimotor disability find it easier to operate electric light “rocker” switches, rather than the conventional ones.⁽³⁶⁾ Illuminated light switches aid the visually handicapped. Flat surface switches or ceiling cords are other options to consider.

- f. A good level of natural and artificial light is essential in living and sleeping areas. This enables elderly people, or people with a visual impairment, to read. Fluorescent lights should be avoided as they create a magnetic field which interferes with hearing-aid reception. ⁽⁷⁶⁾
- g. Background noise from air-conditioning units and extractor fans should be minimised, as this will help people with a hearing impairment, and lessen confusion and disorientation in patients with dementia.
- h. Windows should be installed at a level low enough to provide a view for those people who are unable to stand.
- i. The decor should be chosen with care. Contrasting colours and textures aid the blind and visually impaired. Some colour schemes have a therapeutic effect on people who are confused, disorientated, mentally ill, or who have a learning disability. Interior designers will advise on the appropriate schemes.
- j. Curtains and blinds should be operated easily.
- k. A non-slip flooring should be chosen. A carpet which is short-pile, spill-resistant, fire-retardant and of a plain or subtly patterned nature is required in living areas. Rugs and mats should not be used because of the risk of people tripping, slipping and falling. A carpet should not impede the progress of a person using a wheelchair.
- l. Wide, low-level shelving should be installed.
- m. Refuse bins should be made widely available. These must be large, easy to operate and clearly marked.

Rationale

People with a disability will be able to reach their maximum level of independence, moving freely and in safety.

5. Getting out of the building: moving to a place of safety

This SHFN explores issues related to disability access from a variety of sources, and there is not always a consistent view. Although describing some of the elements which may be found in some fire safety systems, this document does not attempt to evaluate the relative merits of any contradictory advice. The definitive guidance on all aspects of fire safety in hospitals is found in NHS in Scotland Firecode,^(63,64) a series of documents produced by NHS in Scotland Estates Environment Forum and kept under constant review to ensure they comply with the latest developments in fire safety.

The need for exemplary planning to protect the lives of people in the eventuality of a fire cannot be over-emphasised. The literature review has revealed that in such a situation, many disabled and frail elderly people are more vulnerable than the rest of the population because their dependency and stress levels increase. Advance planning, the sharing of information, regular rehearsal and the installation of every available aid is essential. The needs of elderly and disabled people should be incorporated into all emergency egress procedures. It is essential that all disabled people know, and are reassured, that their specific needs have been recognised and that additional strategies are in place for their protection if an emergency arises. Disabled people should take whatever action they can to aid their egress if it is necessary, either independently or with assistance. In large healthcare buildings, it is policy to isolate the origin of the suspected fire and then adopt a progressive horizontal evacuation of those patients who are at risk to the nearest horizontal level fire-resistive compartment. In some buildings this may not be possible and a vertical escape route may be the only option.

A. Problem

Uncertainty in a fire situation due to inadequate advance planning for the additional needs of people with specific disabilities.

Solutions

- a. All policies in healthcare establishments should include particular reference to the specific needs of disabled people including staff and visitors.
- b. All fire safety procedures should be pre-planned and based on specialist fire safety advice.
- c. Disabled people, including those with a visual or hearing impairment, must be invited to join planning committees in order to contribute to, and advise on, the formulation of policies, procedures and codes of practice.
- d. Newly-appointed staff must receive information and training in fire procedures. All staff should receive updated information annually.⁽⁶⁾
- e. Fire procedures and emergency evacuation should be rehearsed regularly and evaluated immediately. Any inconsistencies and hazards identified should be amended immediately. The local fire brigade should be informed of the exact time of the rehearsal and invited to participate. The fire drill should include evacuation of people with differing and specific disabilities. Assembly points must be identified and publicised at the planning stage. All staff must have knowledge of the designated assembly points.
- f. Adequate signage should indicate the nearest escape routes and approved assembly points. Symbols should be used wherever possible rather than the written word. The signs should be made from a fire-resistant and low-heat-conductive material. This will minimise injury should a visually impaired person need to tactually examine a sign on a fire door which is containing conflagration.
- g. In all buildings, alternative means of horizontal and vertical escape should be identified.
- h. The adoption of the classification system for disabled people recommended by Shields (1993) could be considered. The classification should include those with a sensory impairment, those who are semi-ambulant and those who are non-ambulant.⁽⁹¹⁾
- i. The early detection of fire and raising of the alarm by staff or automatic detection system are essential in any fire situation. The increased time needed for the movement of disabled people places even greater emphasis on the need for early warning and immediate implementation of the fire plan to ensure that everyone is out of immediate danger.

- j. When installing automatic fire detection, manual alarms, fire extinguishers and blankets, particular account should be taken of high-risk areas, such as kitchens.
- k. Manual fire alarms should be clearly marked, painted red, and should be constructed of easily breakable glass. They should be placed at a level that a person in a wheelchair can reach with ease.
- l. Fire extinguishers and fire blankets should be clearly visible.
- m. Audible and visual warning systems should be installed at appropriate intervals. Visual warning systems are not in widespread use in many hospitals but are used in places where an audible alarm is perceived as more intrusive, for example in operating theatres or intensive care units. Visual warning systems should not be stroboscopic, as confusion and disorientation may be enhanced in some individuals; people who have epilepsy are particularly at risk from strobe lights. Audible systems will not be heard by deaf people or those with a hearing impairment. Many deaf people, however, are sensitive to vibration, and vibrating alarms should be considered as a complement to audible/visual alarms. The RNID offer invaluable advice on the most appropriate devices.
- n. The signage adopted for escape routes must be large and clear enough for people with a visual impairment to see clearly. The signs should be illuminated and there should be no reflective glare.
- o. All escape routes must be kept clear at all times. No equipment should ever be stored, or rubbish placed, in front of any exit, most particularly those exits which are designated for emergency use only.
- p. Wherever possible, emergency exits should be level with each floor and should not incorporate raised thresholds.
- q. Places of refuge should be marked as such with instructions to keep clear, and should be protected by self-closing doors which have at least a 30-minute resistance to a fire condition. This will enable people to rest in safety for a short period of time. A refuge is a protected area which should have an alternative means of escape. People in wheelchairs may wait at a refuge for further assistance. It is essential that people who are using the refuge do not
- r. Automatic release doors must close immediately in an emergency situation. The door seals should be checked and maintained regularly. Doors must open automatically or manually from the escape side. Doors should be lightweight and easy to operate manually. The means of opening must be obvious. No written information or instructions should be necessary.

- s. Under the direction and supervision of a previously designated person there are some circumstances in which it may be appropriate to use a fire-protected-status passenger lift in order to move a non-ambulant person to a place of safety. The status of these lifts should comply with the standards set down in BS 5810 ⁽⁵⁾ and BS 5588, Part 8 ⁽⁶⁾, reference should also be made to NHS in Scotland Firecode Guidance, FPN 3 – Escape Bed Lifts.

Rationale

Developing, rehearsing and evaluating a planned NHS in Scotland Firecode procedure in which the specific needs of disabled people are incorporated will afford people with a disability equal rights.

B. Problem

In the event of a fire condition, disabled people may be unable to move, or have difficulty in moving independently, to a place of safety.

Solutions

- a. In a large healthcare building, for example a hospital, unless people are in immediate danger (when they should be moved immediately through a horizontal escape route to a place of refuge), evacuation is not immediately required. The generic term “healthcare premises” includes smaller isolated buildings such as health centres and day hospitals. In these buildings it may be more appropriate to evacuate the building entirely. Appropriate advice should be taken.
- b. Emergency evacuation should only take place when the risk of fire is greater than the medical risk of moving an ill person.
- c. In other public buildings, disabled persons should start evacuating the premises as soon as the fire is detected. This makes the maximum time available for egress.
- d. Blind and visually impaired people exit a building much more quickly when they are familiar with their surroundings. It is important, therefore, that blind and visually impaired people are encouraged to explore the geography of healthcare buildings, particularly if they are resident or in-patients.

- e. Blind and visually impaired people are most confident on a level surface. The helper should lead, with the blind or visually impaired person holding the helper's arm. If descending stairs, the helper should lead, with the blind or visually impaired person placing a hand on the helper's shoulder. If a guide dog is accompanying its owner, it may follow on the owner's command. If the helper is controlling the dog, it should be held on a lead and not on its harness. Further information is available in a leaflet entitled 'How to guide a blind person' which can be obtained from the Guide Dogs for the Blind Association.
- f. Potential escape routes which are normally designated "out of bounds" to the general public, for example "staff only" areas, should be included as alternative exit routes in an emergency.
- g. In the event of an evacuation some non-ambulant people will need to be carried. If possible, a wheelchair should be used to transport the person. The heavier the person to be carried, the greater the risk of injury to the rescuers. A single rescuer may be able to carry a child or light person safely. In the majority of instances, two rescuers should be involved.
- h. People who normally depend on wheelchairs for mobility should be transported in their own wheelchairs wherever possible. They should be moved to a refuge on a horizontal level if at all possible. If a vertical escape is necessary, assistance will be required to negotiate the steps. The lift should not be used unless a fire-protected-status lift is available. For fully mobile or semi-ambulant people the mode of vertical exit is down or up a staircase. The issues surrounding safe accessibility have been identified in 'Getting around the building'.

Rationale

In the event of a fire condition, disabled people will reach a place of safety either independently or with assistance.

6. Agenda for action

- Ensure that the commitment to equal rights for disabled people is included in all patient's charters.
- Consider the adoption of the disability symbol "Positive about disabled people" (see Appendix A).
- In large units, appoint an "access officer" as recommended in the 'Charter for disabled people using hospitals'. In smaller establishments, identify an individual who will take on this role.
- Consider classifying people with a disability into non-ambulant, semi-ambulant and communication difficulties groups.
- If not previously in existence, convene a working party with the specific remit of examining accessibility, with particular emphasis on the needs of people with disabilities. The designated fire officer, the building officer, and disabled people must be invited to join. It is suggested that a person who depends on a wheelchair, a semi-ambulant person, and people with visual and hearing impairments will be able to present a broad perspective of the problems of access.
- Liaise with national, regional and local organisations who represent the interests of disabled people. The local access officer, and organisations such as LMAs, ADCs and PACTs will offer expert advice.
- All new out-patients, patients being routinely admitted, visitors, and all new employees should be informed in advance of the facilities available for people with a disability. People should be invited to contact a named person if they have additional specific needs.
- Arrange interdisciplinary in-service training days which focus on the needs of disabled people, the problems of access, and equality. The training and resource departments of the regional ADCs and specialist disability organisations would welcome the opportunity to contribute to such a development.
- Identify areas of good practice and reinforce these in other areas.
- Identify areas of poor practice and introduce measures to eradicate or reduce the problems.
- Devise a short-term strategy which can be implemented using a micro approach. The Patient's Charter has set the standard that from April 1995 food menus must be available in different languages and in large print. It is recommended that other documents, for example consent forms and patient information/instruction sheets, should be readily available in large print and different languages.

- Carry out an access audit as a starting point for the preparation of an access plan. This will help to prioritise required improvements and ensure that they are incorporated into maintenance and planned improvement programmes.
- Adopt a macro philosophy towards access for disabled people in long-term planning.
- Explore the possibility of securing monies from the European Social Fund, which would enable a more ambitious project. The regional office of the European Commission can be approached for advice. Further information and advice can be sought from the various professional and voluntary organisations who represent the interests of disabled people (see Appendix C). The Employment Service awards a grant of up to £21,000 over a five-year period to disabled people who require additional modifications and amendments in the workplace (currently not applicable in Northern Ireland). (Contact the regional Ability Development Centre for further information.)

Appendix A: “Positive about disabled people”

“Positive about disabled people”



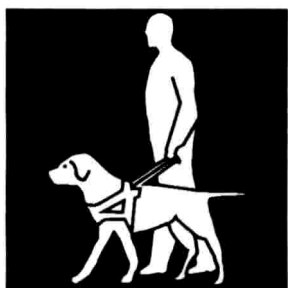
Employers who use the symbol make these five commitments:

- To interview all applicants with a disability who meet the minimum criteria for a job vacancy and consider them on their abilities.
- To ask disabled employees at least once a year what the employer can do to make sure that they can develop and use their abilities at work.
- To make every effort when employees become disabled to make sure they stay in employment.
- To take action to ensure that key employees develop the awareness of disability needed to make these commitments work.
- Each year to review these commitments and what has been achieved, plan ways to improve on them and let all employees know about progress and future plans.

For more details ask your PACT for leaflet SYM10.

Appendix B: Approved international signs for disability access

Approved international signs for disability access



Appendix C: Contact addresses

This list is not definitive. There are many professional and voluntary organisations which offer invaluable help and advice but are not included in this list. The majority of addresses and telephone numbers can be obtained from local telephone directories.

PACT Disability Employment Advisers and the Ability Development Centres

Contact through your local Job Centre

The NHS in Scotland Patient's Charter – Charter for Health

The video in British Sign Language with English subtitles and English commentary, the Braille book, large print book, audiotape and the Charter in different languages are available at no charge from:

The Scottish Office

Department of Health
Health Gain Division
St Andrew's House
Edinburgh EH1 3DG
Tel: 0131 556 8400

Royal Association for Disability and Rehabilitation (RADAR)

12 City Forum
250 City Road
London EC1V 8AF
Tel: 0171 250 3222

Centre for Accessible Environments

Nutmeg House
60 Gainsford Street
London
SE1 2NY
Tel: 0171 357 8182

Disabled Living Foundation

380 – 384 Harrow Road
London W9 2HU
Tel: 0171 289 6111

The Royal Society for Mentally Handicapped Children and Adults (MENCAP)

MENCAP National Centre
123 Golden Lane
London EC1Y 0RT
Tel: 0171 454 0454

Royal National Institute for the Blind

224 Great Portland Street
London W1N 6AA
Tel: 0171 388 1266

Royal National Institute for Deaf People

19 – 23 Featherstone Street
London EC1Y 8SL
Tel: 0171 296 8000 (textphone 0171 296 8001)

The National Association for Mental Health (MIND)

22 Harley Street
London W1N 2ED
Tel: 0171 637 0741

Age Concern Scotland

54A Fountainbridge
Edinburgh EH3 9PT
Tel: 0131 228 5656

Disability Scotland

Princes House
5 Shandwick Place
Edinburgh EH2 4RG
Tel: 0131 229 8632

Enable

6th Floor
7 Buchanan Street
Glasgow G1 3HL
Tel: 0141 226 4541

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Building Sight: Peter Barker, Jon Barrick, Rod Wilson, RNIB 1995. ISBN 1 85878 074 8.

A design guide for the use of colour and contrast to improve the built environment for visually impaired people. Based on research undertaken at the University of Reading. 1997. Copies from Wayne Collins Associates, Devon House, 171-177 Great Portland Street, London W1N 6NY.

In addition

The ADAPT Trust has issued a Guidance Pack “**Adaptations to Access Ability**”.

Local Authority Guidance was issued by the former District Councils of Edinburgh, Glasgow and Aberdeen and the former Regional Councils of Fife and Central.



Other publications in this series

SHFN 14 – Disability access

SHFN 20 – Access audits of primary healthcare facilities

Abbreviations

ADA	Americans with Disabilities Act
ADC	Ability Development Centre
BCODP	British Council of Organisations of Disabled People
CCA	Compliance Cost Assessment
CEDP	Committee for the Employment of Disabled People
CORAD	Committee on Restrictions Against Disabled People
DEA	Disability Employment Adviser
DLF	Disabled Living Foundation
EC	European Commission
ECHR	European Convention for the Protection of Human Rights and Fundamental Freedoms
HELIOS	Handicapped People in Europe Living in an Open Society
ICCPR	International Covenant on Civil and Political Rights
ILO	International Labour Organisation
LMA	Local Model Activity
MENCAP	Royal Society for Mentally Handicapped Children and Adults
MIND	The National Association for Mental Health
NACEDP	National Advisory Council on Employment of Disabled People
NHS	National Health Service
NVQ	National Vocational Qualification
OPCS	Office of Population Censuses and Surveys
PACT	Placing Assessment and Counselling Team
RADAR	Royal Association for Disability and Rehabilitation
RNIB	Royal National Institute for the Blind
RNID	Royal National Institute for Deaf People
RoSPA	Royal Society for the Prevention of Accidents
TEC	Training and Enterprise Council
TIDE	Technology Initiative for Disabled and Elderly People
UNESCO	United Nations Educational, Scientific and Cultural Organisation



VOADL Voluntary Organisation for Anti-Discrimination Legislation
Committee

WHO World Health Organisation