CHAPTER 2 - PREVENTION OF DISABILITIES

INTRODUCTION

2.1 Preventive services play an important role in reducing the incidence of disabilities and are essential components of the rehabilitation programme. Preventive services can be categorised into three levels -

(a) first-level prevention: equivalent to “primary prevention” and includes measures aimed at reducing the occurrence of impairment;

(b) second-level prevention: prevents the development of disability once an impairment has occurred. It includes what is usually termed “secondary prevention” and involves social intervention and the prevention of additional impairments; and

(c) third-level prevention: prevents the transition of a disability which has occurred and is found to be irreversible into handicap. It includes “tertiary prevention”, plus a wide range of social intervention.

2.2 The objectives of all preventive measures are to reduce the incidence of disabilities and to promote the health of the population. This can be achieved through -

(a) providing screening services for early detection of disabilities by the Department of Health, Hospital Authority and private medical sector;

(b) improving immunisation programmes against communicable diseases by the Department of Health and private medical sector;

(c) conducting health education by government departments concerned, the Hospital Authority, non-governmental organisations (NGOs) and private medical sector;

(d) preventing occupational diseases and promoting occupational health by the Labour Department and other parties concerned;

(e) adopting measures to reduce accidents at work, on the road, at home or during recreational pursuits by all parties concerned;

(f) identifying areas where legislative or planning controls can assist in the prevention of disabilities by all government departments concerned;

(g) promoting the health of the population by the Department of Health, Hospital Authority and other parties concerned; and

(h) minimising the occurrence of disabilities arising from medical illness or accidents by providing appropriate medical service by the Department of Health, Hospital Authority and private medical sector.

2.3 This chapter mainly covers the primary and secondary levels of preventive services including screening services, immunisation programme, health education, safety precautions and legislative measures to prevent disabilities in Hong Kong. The provision of rehabilitation services for individual disability groups are provided in later chapters.
SCREENING SERVICES

Clinical Genetic Service

2.4 The two major components of the Clinical Genetic Service (CGS) are screening and counselling for diseases with genetic or hereditary basis. The Genetic Screening Unit under the CGS of the Department of Health operates two screening programmes for new-borns, namely glucose-6-phosphate dehydrogenase deficiency and congenital hypothyroidism. These procedures are provided free of charge to all new-borns in Hong Kong.

2.5 The Genetic Counselling Unit under the CGS of the Department of Health attends to all referrals with single gene defects, chromosomal aberrations and multi-factorial disorders. Simple genetic counselling is carried out by paediatric units in hospitals. More complicated cases are taken up by genetic counselling clinics of the centralised CGS under the Department of Health. About 1 000 families are referred to these clinics each year. As at December 1998, there were five genetic counselling clinics, with two in the Queen Elizabeth Hospital, one in the Prince of Wales Hospital, one in Arran Street Child Assessment Centre and one in Sai Ying Pun Jockey Club Polyclinic.

2.6 The government expenditure on the CGS in 1998-99 was about $30.51 million. A service brief with details on the objective, programme, staffing level, referral channel and admission criteria of the CGS is at Appendix 2.1. The Department of Health will continue to provide diagnostic and counselling services, through the genetic counselling clinics, to individuals and families at risk of genetic disorders.

Prenatal Diagnostic Service

2.7 Education and counselling on the advantages and possible risks of undergoing prenatal diagnostic tests will be offered to those couples/pregnant women at high risk of having abnormal babies. With their consent, prenatal diagnostic tests like amniocentesis will be offered for detecting abnormalities of the foetuses. In 1998-99, prenatal diagnostic service was available in the Tsan Yuk Hospital, Kwong Wah Hospital and a number of other hospitals of the Hospital Authority.

Perinatal Care

2.8 Perinatal care plays an important role in the prevention of perinatal disorders which may lead to mental handicap, cerebral palsy or other disabilities. Perinatal care is provided at both hospitals and maternity homes, with over 99% of all births delivered in hospitals.

Maternal and Child Health Centres

2.9 Maternal and child health centres of the Department of Health provide a range of preventive services to children and mothers including immunisation, developmental screening, antenatal and postnatal services, and cervical cytology screening. A service brief with details on the objective, programme, staffing level, referral channel is at Appendix 2.2.
Student Health Service

2.10 The Student Health Service is a comprehensive, promotive and preventive service providing periodic screening, medical examination and health education to all pupils from Primary One to Secondary Seven. The Student Health Service was introduced in two phases. Phase I started in September 1995 to cater for primary school pupils, and Phase II in September 1996 for secondary school pupils. A service brief with details on the objective, programme, staffing level and referral channel is at Appendix 2.3. The government expenditure on the Student Health Service in 1998-99 was about $118.55 million. The Department of Health will continue to provide the service and closely monitor the supply and demand situation.

Woman Health Service

2.11 The Woman Health Service provided by woman health centres under the Department of Health is promotive and preventive in nature. The service includes physical examination, health risk assessment, simple screening tests such as cervical smear, special investigation such as mammography, follow-up and referral on a need basis. Health education programmes, individual counselling and various self-help support groups are also organised. A service brief with details on the objective, programme, staffing level and admission criteria is at Appendix 2.4.

2.12 As at December 1998, there were three pilot woman health centres providing services to women aged 45-64. The government expenditure on the Woman Health Service in 1998-99 was about $16.29 million. The Department of Health started a review in 1998 to decide on the future development of the service.

Elderly Health Services

2.13 A total of seven elderly health centres under the Department of Health were established between 1994 and 1997 to promote health and well being of elderly persons living in the community.

2.14 Experience gained from the operation of elderly health centres enabled the Department to map out a new strategy for the provision of primary integrated health services and the new Elderly Health Services was introduced in July 1998. The aims of the new services are to enhance the primary health care to the elderly, improve their self-care ability, encourage healthy living and strengthen family support so as to minimise illness and disability. Services are delivered through elderly health centres and visiting health teams. Apart from preventive and promotive services, the elderly health centres provide curative care from a family medicine perspective using a multi-disciplinary team approach. In addition, there are visiting health teams reaching into the community and residential care setting to achieve wide dissemination of knowledge on elderly health and health care through health education, health-related programmes and support services to the carers of elderly. It is believed that improved self-care and support from carers will, in the long run, enable elderly people to age in place and reduce overall need for higher level and institutional care. A service brief with details on the objective, programme and admission criteria of the new Elderly Health Services is at Appendix 2.5. The government expenditure on the services in 1998-99 was about $90.14 million.
2.15 To enhance the primary health care to the elderly, the Department of Health will provide a total of 18 elderly health centres and set up 18 visiting health teams by 1999-2000.

IMMUNISATION PROGRAMME

2.16 The immunisation programme in Hong Kong protects children against nine common childhood infections, including poliomyelitis, rubella and hepatitis B. The wide coverage of immunisation for infants has succeeded in a significant reduction of the incidence of disabilities caused by poliomyelitis, congenital rubella and other diseases. Immunisation is available free of charge from maternal and child health centres of the Department of Health. Children can also get immunisation from private medical practitioners.

2.17 The immunisation programme in Hong Kong covers over 90% of all children. The Advisory Committee on Immunisation has recently completed a review on the immunisation programme and concluded that it is effective and should be continued.

HEALTH EDUCATION

2.18 In Hong Kong, many disabling diseases, like coronary heart disease and diabetes, are related to unhealthy lifestyles. Through health promotion programmes, the public learn to adopt healthy lifestyles to prevent such diseases. Existing health education activities are organised both in the form of on-going programmes and ad hoc campaigns. Health education messages are conveyed through pamphlets, slide and video shows, talks, exhibitions, announcements of public interest (APIs) on television and radio, etc.

2.19 The Central Health Education Unit and the respective service units such as general out-patient clinics as well as maternal and child health centres under the Department of Health assume an important role in promoting health education. Health promotion with emphasis on healthy lifestyles and self-care is highlighted. Priority areas include smoking, mental health, alcohol abuse, AIDS and sexually transmitted diseases, accidents and injury, diet, regular exercise and drug abuse. A service brief with details on the objective, programme and staffing level of the Central Health Education Unit is at Appendix 2.6. The Department will continue its efforts to promote health and increase health awareness in the community in coming years.

2.20 Health education activities including health talks, workshops and prenatal classes specially designed for parents-to-be are available in maternal and child health centres under the Department of Health and obstetric units of hospitals under the Hospital Authority. Topics like prenatal and postnatal care and complications, labour procedures, neonatal care and common neonatal health problems as well as family planning are covered in these activities. Some public hospitals also organise psychosocial programmes in conjunction with NGOs. These educational activities will continue to be organised with a view to catering for the needs of the parents-to-be.

2.21 Mental health education is essential to help the public understand the importance of mental health and promote the integration of ex-mentally ill persons into the community. The Government has been organising a number of public education activities
in this aspect. In addition, APIs and docu-drama series on television and radio as well as printed materials are produced to promote the understanding and acceptance of ex-mentally ill persons by the community. More details on public education activities are provided in the chapter on legislative measures and public education activities.

2.22 The Education Department attaches great importance to the promotion of health education in schools. Knowledge of health education is taught and positive attitudes towards healthy living are developed through formal and informal curricula. At the primary level, General Studies is a core subject introduced in September 1996 with its syllabus covering topics like personal hygiene, common diseases, psychological and social aspects of health, handling accidents, prevention is better than cure, community health, etc. At the secondary level, the concepts in relation to healthy living are taught through various subjects such as Biology, Economic and Public Affairs, Home Economics, Social Studies, etc. To provide teachers with supporting services on health education, educational television programmes and teaching kits such as “Towards a Fruitful Life”, “Health Education”, “Go for a Healthy Diet” and “Fun with Vegetables” for primary and secondary levels have been produced, supplemented by seminars/workshops for school heads and teachers. The Education Department will regularly review the school curricula and make necessary revisions in response to the changing needs.

2.23 NGOs in the welfare sector have been making concerted efforts to promote both physical and mental health in the community through different services/programmes such as children and youth centre services, family life education programmes and elderly services. Activities such as exhibitions, workshops, dissemination of materials and talks are organised to help the general public acquire knowledge about prevention of illness and arouse their awareness of health and importance of healthy lifestyle.

SAFETY AND LEGISLATIVE MEASURES

2.24 Occupational accidents, traffic accidents, and accidents occurring at home and in outdoor pursuits may bring about injuries which may result in disabling conditions, both physically and mentally. The Government has been conducting a number of safety campaigns in the respective target areas. Although it is impossible to measure the success of these campaigns in relation to the number of accidents that might have taken place, the Government will continue to promote the public awareness of the importance to guard against the causes of such accidents. Apart from safety campaigns, legislative measures will also be introduced to help reduce accidents as and when necessary.

Occupational Safety and Health

2.25 Improvement in safety and health standards of workers and progressive reduction in occupational accidents are conducive to the prevention of disabilities. The policy objective of the Government in respect of occupational safety is to foster a safe and healthy working environment by encouraging employers and employees to manage safety in a self-regulatory manner, through education, training, promotion and enforcement. After a comprehensive review on industrial safety in Hong Kong, a new Occupational Safety and Health Branch was set up in the Labour Department in 1996 to provide occupational safety and occupational health services.
2.26 Occupational Safety Officers of the Labour Department inspect construction sites, food catering, cargo and container handling establishments, industrial undertakings and all workplaces, and to prosecute breaches of the relevant safety and health law. The Factories and Industrial Undertakings Ordinance (Cap. 59) and its 27 sets of subsidiary regulations ensure that minimum standards of safe and healthy working conditions in industrial undertakings are maintained. The Occupational Safety and Health Ordinance (Cap. 509), enacted in May 1997, extends safety and health protection to an additional 2.3 million employees in the non-industrial sector. The Occupational Safety and Health Regulation, enacted in June 1997, sets out requirements on safety and health aspects at workplaces including fire precautions, work environment, hygiene, first aid and manual handling operation. Statistics on occupational and industrial accidents between 1994 and 1998 are at set out in Tables 2.1 below.

Table 2.1 - Incidence of Occupational and Industrial Accidents between 1994 and 1998

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<tr>
<td>Number of reported accidents (Fatalities)</td>
<td>64 416</td>
<td>59 375</td>
<td>59 465</td>
<td>62 776</td>
<td>63 526</td>
</tr>
<tr>
<td>Workforce in all economic sectors</td>
<td>2 527 751</td>
<td>2 508 240</td>
<td>2 524 131</td>
<td>2 519 213</td>
<td>2 375 933</td>
</tr>
<tr>
<td>Incidence (per 1 000 persons in the workforce)</td>
<td>25.5</td>
<td>23.7</td>
<td>23.6</td>
<td>24.9</td>
<td>26.7</td>
</tr>
<tr>
<td>Number of reported accidents (Fatalities)</td>
<td>44 164</td>
<td>41 001</td>
<td>40 251</td>
<td>43 305</td>
<td>43 034</td>
</tr>
<tr>
<td>Workforce in industrial undertakings</td>
<td>834 371</td>
<td>787 003</td>
<td>753 302</td>
<td>725 992</td>
<td>664 751</td>
</tr>
<tr>
<td>Incidence (per 1 000 persons in the workforce)</td>
<td>52.9</td>
<td>52.1</td>
<td>53.4</td>
<td>59.6</td>
<td>64.7</td>
</tr>
</tbody>
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**Notes:** * Statistics of the year 1998 were based on the date of injury, as extracted from the employee compensation reports, whereas those of 1997 and before were based on the date of these reports being entered into the computer system.

2.27 The commitment and support of management and employees to manage their own safety and health matter is essential in reducing accidents. In September 1996, the Labour Department, in conjunction with the Occupational Safety and Health Council, published the first Occupational Safety Charter in Hong Kong. It sets out employees’ rights for a safe working environment and obligations to follow safety instructions as well as employers’ obligations to reduce the risk of accidents. The Labour Department is considering the introduction of legislation to require the compulsory setting up of safety committees in large industrial establishments.

2.28 The most effective means to cultivate safety consciousness and self-regulation concept are education and promotion. The Labour Department issues codes of practice to
provide practical guidance in respect of statutory requirements. In addition, the Labour Department and the Occupational Safety and Health Council organise safety training courses and publicity campaigns to arouse the concern of workers and the public. The Department is considering the feasibility of introducing legislation to require mandatory safety training for workers in construction and container handling industries.

2.29 The Occupational Health Service of the Labour Department provides a range of occupational health services in order to prevent and control health hazards at workplaces, and minimise the incidence of occupational diseases. The Occupational Medicine Division undertakes investigation of occupational diseases, medical examinations and assessment for workers in hazardous occupations as well as giving expert comments on employees’ compensation cases. It also runs the Kwun Tong Occupational Health Clinic, gives advice and counselling to injured workers, conducts occupational health talks and provides medical surveillance service. The Occupational Hygiene Division is responsible for identifying occupational health hazards and advising proprietors on improvements to control measures in their workplaces. It also operates an occupational hygiene laboratory and an accredited asbestos laboratory. The Labour Department is planning to introduce new regulation to require mandatory pre-employment and periodic medical examinations for workers exposed to hazardous substances.

2.30 In the next few years, the Labour Department will publish specific compliance standards in the form of pamphlets, guide books and codes of practice for various trades and industries. It will also intensify its publicity efforts to promote occupational safety and health. In addition, the Department set up the second occupational health clinic to cover the West Kowloon and New Territories regions and a pilot occupational safety and health service centre in 1998-99. The pilot service centre provides initial screening service and advice on suspected occupational health problems, disseminates information and provides guidance on safety and health through multi-media booths, provides front-desk enquiry service, serves as a small exhibition venue on topical subjects, etc.

2.31 The Education Department promotes pupils’ awareness of occupational safety and health through both formal and informal curricula. Appropriate safety and health messages are conveyed to pupils through different subjects such as General Studies, Social Studies, Science, Chemistry, Design and Technology, etc. The Education Department also issues booklets such as “Safety in School Workshop”, “Guidelines on Safety for Art and Design” and “Safety in Science Laboratories” to provide guidelines on safety in laboratory and workshop to schools. Teaching kits such as “Occupational Safety and Health” and “Chemical Safety” have been developed to enhance teaching of occupational safety and health in the school curricula. A teaching kit on “Safety with Electricity” is now being developed in joint effort with the Occupational and Health Council and will be distributed to schools in 2000. The Education Department will continue to liaise with the Labour Department and the Occupational Safety and Health Council to further strengthen school education on occupational safety and health when reviewing the curricula in that aspect.

Traffic Safety

2.32 The Road Safety and Standards Division of the Transport Department was set up in 1981 to carry out in-depth accident studies at accident-prone sites and make recommendations on remedial measures. In 1998, 131 sites were investigated and remedial measures were recommended for 101 sites. Statistical studies were also carried out to
identify the most vulnerable groups of road users in traffic accidents. These studies have helped identify target groups for the road safety publicity campaigns and education programmes. The statistics on road traffic casualties by degree of injury from 1994 to 1998 are set out in Table 2.2 below.

Table 2.2 - Road Traffic Casualties between 1994 and 1998

<table>
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<tbody>
<tr>
<td>Fatal Injury</td>
<td>296</td>
<td>260</td>
<td>263</td>
<td>241</td>
<td>221</td>
</tr>
<tr>
<td>Serious Injury</td>
<td>3 703</td>
<td>3 666</td>
<td>3 432</td>
<td>3 599</td>
<td>3 627</td>
</tr>
<tr>
<td>Slight Injury</td>
<td>16 750</td>
<td>15 947</td>
<td>15 447</td>
<td>15 953</td>
<td>15 228</td>
</tr>
<tr>
<td>Total</td>
<td>20 749</td>
<td>19 873</td>
<td>19 142</td>
<td>19 793</td>
<td>19 076</td>
</tr>
</tbody>
</table>

2.33 The law on compulsory wearing of front seat belts was first introduced on private cars in 1983. It was subsequently extended to light buses and taxis in July 1989; goods vehicles in January 1990; rear seats of private cars and middle front seats of private cars, taxis, light buses and goods vehicles registered on or after 1 June 1996; and driver seats of all buses registered on or after 1 July 1997. An assessment of the effectiveness of the compulsory wearing of seat belt in rear seats of private cars has revealed a reduction of about 17% of casualties involving rear-seat passengers.

2.34 Under the Road Traffic Ordinance (Cap. 374), the Commissioner for Transport is empowered to examine vehicles including trailers for the purpose of ascertaining whether the vehicle is roadworthy with a view to reducing traffic accidents due to defects on vehicles. Regulation 53 of the Road Traffic (Traffic Control) Regulations also prohibits the carrying of passengers in the goods compartment of a vehicle except in properly constructed seats secured to the bodywork of the vehicle.

2.35 The drink driving legislation under the Road Traffic Ordinance has been into operation since 15 December 1995. By December 1998, 2452 drivers involved in traffic accidents have been found to have consumed alcohol above the prescribed limit. To enhance road safety, the Transport Department has recommended tightening the prescribed alcohol concentration limit from the current 80 mg to 50 mg/100 ml of blood.

2.36 The Road Safety Council is responsible for co-ordinating the various road safety education and publicity programmes organised by different government departments. These programmes cover a wide range of topics targeting to all road users including pedestrians, drivers and passengers. In addition, road safety campaigns are conducted annually by the Hong Kong Police Force, and the Information Services, Transport and Education Departments. Major publicity campaigns with selected themes like “Do not use mobile phone while driving” are promoted through television, radio or other media and the production of leaflets, posters and stickers. At district level, the Hong Kong Police Force, in conjunction with the District Boards and the Road Safety Association, promote road safety through the launch of various activities like carnivals, variety shows, quizzes, competitions, exhibitions, seminars, vehicle parades, on-street leaflet distributions and selection of model drivers/pedestrians. Other routine campaigns, like video drama for elderly pedestrians, road safety quarterly and road safety display boards, are also organised.
2.37 The concept of traffic safety is important for pupils in preventing traffic accidents. Road safety is taught in primary and secondary schools including special schools.

**Home Safety**

2.38 The organisation of home safety campaigns and the inclusion in the school curriculum the importance of accident prevention can help reduce potential accidents at home. Home safety is taught in primary and junior secondary schools including special schools. Educational television programmes on the safe use of electricity and home first-aid information have also been produced. Teaching kit on “Electricity and Living” is also distributed to schools to support the teaching of the related topics. The Education Department will continue its effort in designing and producing teaching materials for schools.

2.39 Even though “Home Safety” has not been a major campaign theme since 1990-91, the Government has continued its efforts in educating the public on ways to prevent accidents at home through other related campaigns such as fire prevention and electrical product safety campaigns. Publicity materials including posters, leaflets and APIs on both television and radio are produced for public education purposes. APIs on television are provided with subtitles for the benefits of hearing impaired persons. The Internet would be used as an additional channel to approach the target audience.

2.40 At secondary prevention level, domiciliary visits and home safety/home modification advice provided by therapists of hospitals and community organisations can make useful contributions to the prevention of home accidents in high risk groups such as physically handicapped persons and frail elderly.

2.41 The Agriculture and Fisheries Department has produced pamphlets on safety at sea for people working or living on fishing vessels.

**Safety in Outdoor Pursuits**

2.42 The two Provisional Municipal Councils publish and promote safety codes for various outdoor pursuits through their on-going activities. In order to arouse public awareness of safety in water, the two Councils produce large quantities of posters, leaflets, bookmarks and magnetic stickers for display and free distribution in district offices and venues under the Regional Services Department and the Urban Services Department during swimming seasons. The Provisional Urban Council, in collaboration with the Hong Kong Life Saving Society, will continue to organise the Water Safety Campaign. The Provisional Regional Council will also organise a variety of activities to promote water safety.

**Pollution Controls**

2.43 The correlation between disability and pollution is less obvious but the unsatisfactory condition of the environment may have adverse effects on our health. Continual exposure to unacceptably high levels of noise will impair hearing ability and may adversely affect the mental state of the person hearing the noise. High levels of air pollution will result in increased incidence of respiratory illness, aggravate the condition of those already suffering from such illness and contribute to the onset of chronic conditions. As
mentioned in the White Paper on Pollution published in June 1989, the Government would spend $20 billion on combating pollution.

2.44 The most significant controls on environmental noise are contained in the Noise Control Ordinance (Cap. 400) which was introduced by stages during 1989. The main provisions control noise from domestic premises, public places, piling, general construction work, industrial, trade or commercial premises and individual products such as motor vehicles, intruder alarms, jack hammers and compressors. Other legislative controls are contained in the Civil Aviation (Aircraft Noise) Ordinance (Cap. 312) and the Road Traffic (Construction and Maintenance of Vehicles) Regulations. Apart from legislative measures, noise is controlled through the planning process and remedial programmes. The Environmental Protection Department provides advice on all traffic noise problems, building locations, orientation and designs so as to achieve the required standard. To avoid creating unnecessary noise or reduce existing noise levels, remedial measures such as insulation to affected noise sensitive buildings, noise barriers, re-surfacing of noisy roads and route alignment variations are being implemented in stages.

2.45 Air quality is improved by implementing legislation and through environmental planning. The Air Pollution Control Ordinance (Cap. 311) and regulations under the Road Traffic Ordinance aim at introducing statutory controls to reduce the amount of air pollutants from stationary and mobile sources. Legislation introduced recently includes the control of low sulphur industrial and vehicle fuel, prohibition of open burning, control of construction dust, introduction of unleaded petrol and emission standards for imported vehicles as well as dark smoke from vehicles. The Environmental Protection Department also advises on planning matters according to standards and guidelines set against air pollution.